

National Commission on Forensic Science

Meeting Summary

August 26-27, 2014

**Office of Justice Programs
810 7th Street NW, Washington, DC**



NIST
**National Institute of
Standards and Technology**
U.S. Department of Commerce

National Commission on Forensic Science

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Executive Summary

The third meeting of the National Commission on Forensic Science (NCFS) was held on August 26 – 27, 2014 in Washington, D.C. The agenda included presentations and discussions on cognitive bias and human factors, automated fingerprint identification systems (AFIS) interoperability, and the role of accreditation in forensic science. A new Subcommittee on Human Factors and Cognitive Bias was formed with Judge Bridget Mary McCormack and Professor Troy Duster volunteering to serve as co-chairs. The other six NCFS subcommittees provided updates on their progress including the status of work products. Andrew Rennison, the outgoing Forensic Science Regulator for the United Kingdom, shared some lessons learned over the past six years in that role. The Commission voted on and passed a directive recommendation for the Attorney General to direct the Bureau of Justice Statistics to develop a proposal for developing a national representative survey of forensic units within law enforcement agencies. The BJS proposal will be presented to the Commission at the October meeting. Finally, NCFS co-chair Deputy Attorney General James Cole charged the Commission with including digital evidence in its deliberations, and co-chair Acting NIST Director Willie May provided a brief update on the status of the Organization of Scientific Area Committees (OSAC) and announced the establishment of a NIST Center of Excellence in Forensic Science.

Tuesday, August 26

1:00 p.m.: Meeting was called to order by **Brette Steele**, the Designated Federal Official (DFO).

Welcoming Remarks and Meeting Objectives

Vice-Chair Nelson Santos, Department of Justice (DOJ) welcomed the group. He articulated goals and objectives for the third meeting including Subcommittee reports and reviewing topics and issues surrounding human factors, automated fingerprint identification systems (AFIS) interoperability, and accreditation in forensic science as requested by the Commission. He also provided guidance for the voting process scheduled for Wednesday, August 27 regarding the first Directive Recommendation for the Attorney General (AG).

Vice-Chair John Butler (NIST) also welcomed group and webcast audience and moderated an example vote using the new electronic voting system. Additionally, he announced there would be a review of the current bylaws and their changes. He finished his introduction by reviewing the two-day agenda. The Subcommittee Chairs will lead panel presentations and facilitate discussions among the Commission, as part of their Subcommittee business.

Review of Amended Bylaws

Available at <http://www.justice.gov/ncfs/docs/ncfs-bylaws.pdf>

Presentation and Discussion

Facilitator: Nelson Santos

Department of Justice (DOJ)

VC Santos outlined amended Bylaws.

Questions from Commission Members on Bylaw Amendments

A number of clarifying questions were posed by the Commission, including the steps or process for Recommendations to come before the Commission. The revised procedure was reiterated that at least 15 days prior to a meeting, work products will be provided to the Commissioners and the public. During the Commission meeting, work products will be deliberated. For minor comments/edits, a vote can be called by a Vice Chair. For major comments/edits, it can be suggested the work products be tabled to allow for further consideration. It was suggested that it be clarified that work products are presented to the Commission in writing and it was clarified that the Subcommittees are established and dissolved on an *ad-hoc* basis. Finally, it was articulated that the revised bylaws were approved by the Deputy Attorney General and do not require voting by the Commission.

Voting Process

Facilitator: John Butler

National Institute of Standards and Technology (NIST)

VC Butler demonstrated the process of using the new voting hardware in a test vote. The votes and results will be taken and displayed in real-time. The final votes will be included in the minutes.

VC Butler also previewed the vote to be taken on Wednesday, August 27, regarding the Directive Recommendation.

Other Announcements

1. There will be only one Public Comment period for this meeting, which is at the end of the first day.
2. Additional staff has been added to the Commission Staff office to assist with the Commission activities.

Panel: Cognitive Bias and Human Factors in Forensic Science

Dr. Itiel Dror

Cognitive Neuroscientist, University College London and Cognitive Consultants International

Dr. Dror presented slides and a technical presentation entitled “Human Factors and Forensic Science: A Lot of Talk, Not Enough Action”. He emphasized that we need a measured response to the problem. His presentation included topics such as:

1. Efforts to Improve Forensic Science
2. Understanding the Potential Problems of Error and Bias
3. Results Based on Data and Serious Scientific Research
4. Acknowledgment of Issues is Not a Sign of Weakness
5. The Human Forensic Examiner is the Instrument for Many Forensic Disciplines
6. Psychological, Cognitive and Brain Research

Dr. Dror provided his list of actions/recommendations for the community:

1. Context Management
2. Training
3. Research

Dr. Dror provided printed copies of his slides to the Commissioners; an electronic copy of his presentation was provided after the meeting and loaded onto the NCFS website.

Dr. Prof. William Thompson

School of Social Ecology, University of California, Irvine

Dr. Thompson presented slides and a technical presentation entitled “Minimizing Contextual Bias in Forensic Science”, which is available at <http://www.justice.gov/ncfs/docs/thompson-nat-comm.pdf>

As part of his presentation, Dr. Thompson provided his list of actions/recommendations for the community:

1. The Commission should issue a statement of principles on the issue of contextual bias.
2. The Commission should suggest to the Forensic Science Standards Board (FSSB) of the Organization of Scientific Area Committees (OSAC) with advice from its Human Factors Committee to work with its Scientific Area Committees to implement the principles articulated by the Commission on determining task-relevant information, determining best ways to shield task irrelevant information, and developing standards and model protocols.
3. The Attorney General could issue guidelines on human factors similar to those issued regarding witness identification.

Questions from Commission Members for All Panelists and a Summary of Responses

Concerns and questions were raised about how to expand information on cognitive bias to the broader community, including decisions about what information is task irrelevant, the need for medical examiners to know case information to avoid potential malpractice concerns, and how defense experts can avoid having access to task irrelevant information in their evaluations of forensic evidence.

The presenters proposed that properly trained case managers could control access to task relevant information. It was recognized that these decisions will often be difficult and that in the example of medical examiners, there are broader legal issues to be considered and therefore require access to different information. It was noted that the fact that defense experts may not always be able to conduct blinded reviews is not an excuse for crime laboratory analysts having access to too much information while they are first working their case.

There was some discussion regarding race and the impact on outcomes of criminal cases (e.g., white suspect with black victim versus black suspect with white victim). It was articulated that some implicit bias exists and can be very powerful and that we do not want those biases influencing the work being conducted in forensic laboratories.

The topic was raised of having information at a crime scene and how this may be helpful so that valuable evidence is not lost. Some tests performed in the laboratory may not be probative. Can we identify areas where training is needed? The panelists responded that training by itself will not be enough, that there are procedures that can be put into place to ensure information is not lost while mitigating cognitive bias. For example, the order in which data are processed in the laboratory can make a significant difference. It was noted that cognitive bias is not unique to forensic settings. People

all bring assumptions to their work. We need tests to evaluate assumptions. We need real-world settings to test hypotheses.

It was pointed out that a lot has changed in the last five years. Forensic practitioners are open to training and research. However, a mechanism should be developed to mask case data so people don't know they are being tested. Many laboratories have backlogs and don't want to take on additional work to perform research, however, laboratories are looking for guidance on next steps. We need to address this problem carefully as cognitive bias is an important issue for forensic science.

A concern was raised that we have an implementation challenge to ensure that we do not overburden laboratories recognizing that likely it is a small percentage of casework that would require protections related to negatively biasing vulnerabilities. Specific solutions could be developed by the Organization of Scientific Area Committees (OSAC). We can consider manageable solutions in the short term and more complex procedural/organizational changes in the long term developed as a result of research findings.

In response to a question about whether true blind verification would improve quality with fingerprint examinations, it was noted that we only need to do blind verification in the "danger zone" with low quality data. Some practitioners currently only verify identifications with latent prints. Negative controls are needed. Some non-identification results should be put into the verification stream to test the system. Few practitioners verify every result.

A concern was raised that more consistency should be implemented on relevant scientific tasks. If a particular task is introduced to a dozen labs, these labs would likely have differing views on what is task-relevant. Also what should be done with evidence after task relevant information is revealed? It was noted that most labs are looking at source or activity level information. Contextual information could be relevant to one and not another. Information could be shared once analysts issue their report.

Population of the Human Factors and Cognitive Bias Subcommittee

VC John Butler (NIST)

A call was made to identify members and Co-Chairs of the newly created Human Factors and Cognitive Bias Subcommittee by **VC Butler**. Judge Bridget Mary McCormack and Professor Troy Duster volunteered to serve as Co-Chairs of the Subcommittee.

VC Butler put out an additional call for subcommittee members to the Commission and the public. Those interested are encouraged to send recommendations or self nominate to Robin Jones (Robin.W.Jones@usdoj.gov), by COB on September 9, 2014.

Subcommittee Reports and Discussion

Reporting and Testimony Subcommittee

Judge Jed Rakoff and Matt Redle, Co-Chairs

The subcommittee has divided its focus into five topics and working groups:

1. Report Content
2. General Issues of Terminology
3. Probabilistic Statements
4. Problematic or Misleading Terms
5. Legal Issues Inherent in Reporting

It is a goal of the subcommittee to have working group written reports to the subcommittee by September 1 for discussion. A conference call in September will be scheduled to merge all the working group reports/recommendations into one coherent output. An entire report from the subcommittee will be made available for the next Commission meeting in October.

Report Content – Work Group leader: Julia Leighton

This working group used the White House Subcommittee on Forensic Science report writing information as a baseline and starting point. They have reviewed this report to identify the items that the working group agreed or disagreed on and why. There are 30 areas of agreement that will be merged into one coherent output. The items that were not agreed on will be discussed and addressed within the working group.

General Issues of Terminology – Work Group leader: Pam King

This working group is developing a Views document to consider if terminology should be made uniform, is it possible, and how it should be pursued. Three separate questions posed to the group were:

1. Can we create uniform terminology?
2. Is it possible to have standardization and usability in different forensic disciplines?
3. Doing so, would it make it difficult to demonstrate new and emerging science/technology?

The working group is also looking at other organizations that have looked at these issues or questions. The goal is to create a lexicon that would address why terms are problematic.

Probabilistic Statements – Work Group leader: Stephen Feinberg

This working group is addressing recommendations for the use and expression of probabilistic statements in testimony and reports. They have drafted a document that captures elements that would cut across multiple forensic domains. The working group has used examples of types of forensic evidence where probabilistic statements might be made about them, such as DNA, shoe marks, and fingerprints. They have looked at similar and dissimilar elements across the domains to frame issues and possible recommendations into what should and shouldn't be done.

Problematic or Misleading Terms – Work Group leader: Jules Epstein

The working group has recorded some initial consensus from the subcommittee, such as that there should be uniform definitions of some terms across disciplines and that some terms should no longer be used or used only with clarifications. A draft report was circulated in June. It was suggested that a working definition of PROBLEMATIC and HELPFUL be established. The working group will insert their suggested definitions as part of their report. The working group created a table of Problematic Terms, which will be added into the report. Additionally, the working group will provide proposed policies and/or directives in their working group report to the subcommittee chair.

Legal Issues Inherent in Reporting/Testifying About Forensic Science or Discovery – Paul Giannelli

The working group is working on two areas:

1. Pre-trial discovery-exchange of information
2. The presentation of expert testimony

As part of the discovery-exchange discussion, the working group is reviewing the rules for criminal vs. civil discovery. For the presentation of expert testimony, there is a concern with experts testifying beyond the laboratory report, testing being conducted beyond the laboratory protocols, and lawyers encouraging the expert to push the envelope in terms of what is said in court. Concern has also been raised about potential misstatements by lawyers at the end of trial.

Scientific Inquiry and Research Subcommittee

Susanne Bell and Jeff Salyards, Co-Chairs

This subcommittee's goal is to have a product for consideration at the next Commission meeting. Efforts are focused in three areas:

1. The quality of the forensic science literature
2. Transition of research (not just dissemination of information) into laboratory practice
3. Education – is there value having a Ph.D. in forensic science?

The subcommittee is working on developing a views document to state what is valued, valid, and useful in the forensic literature and what is not. More specifically, defining what is foundational literature. Additionally, a directive may be drafted out of the views document. The subcommittee is also considering developing a survey or query instrument to poll the labs of why they have not or how have they adopted research in their environment. In the third area, the subcommittee is considering the educational advocacy for a Ph.D. in Forensic Science.

Review and Discussion on Recommended Directive

Facilitator: Nelson Santos

Department of Justice (DOJ)

VC Santos brought forth a recommended directive for comment and discussion prior to voting on it on August 27. The proposed language for the Recommended Implementation Strategy is:

{draft text for discussion} The Attorney General should direct the Bureau of Justice Statistics (BJS) to develop and conduct a nationally representative survey within the next two years to determine forensic capabilities within federal, state, and local law enforcement agencies. The survey instrument should be developed in collaboration with the International Association of Chiefs of Police, the Major Cities Chiefs Association, the National Sheriff's Association, and the American Academy of Forensic Science, among other relevant stakeholder organizations.

Discussion on the Recommended Directive

It was suggested that BJS inform the Commission about how they would go about performing the data gathering. It was also recommended that this directive include the Medical Examiners and Coroners into a BJS survey. The purpose of collecting information from law enforcement forensic units was to allow the Commission to be aware of these stakeholders since the policies we create will flow down to them. A primary goal of this survey is to identify the stakeholders in forensic science since we currently do not know the entire universe of forensic science service providers. Without the data, we will not know if our concepts or recommendations are feasible.

A number of Commissioners echoed the importance of this survey being conducted and expressed interest in reviewing the survey before it is deployed. The desire was expressed for the data call to be much broader in order to add more groups, larger labs, and private labs as this data will be a baseline for the Commission. For example, prosecutor's offices also fall within the law enforcement arena.

It was noted that we should consider being very focused in the beginning rather than expanding the scope of the survey so that it does not become too burdensome. In the past, the American Society for Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB) conducted a survey, but ASCLD/LAB could not get the data and responses back from law enforcement forensic units. The suggestion was made to keep this survey streamlined and recommend that the AG encourage responses.

The revised language for the directive recommendation was read in preparation for the vote on Wednesday morning. Commissioners were also emailed the revised language to prepare for tomorrow morning's vote.

Some further discussion was had on the process for bringing topics and work products to the Commission. It was emphasized that members of the Commission must adhere to the 15-day window, when submitting materials and topics for discussion at the upcoming Commission meetings. This allows proper time for the Commission members to review the material prior to the Commission meetings. It was also noted that some subcommittee work products would benefit from additional public comment. If we think there needs to be more feedback from the public on a particular document, there is nothing stopping us from putting the document out more than 15 days before it is discussed by the Commission. Because the Commission is a Federal Advisory Committee, the public needs to have access to the dialogue that occurs as the full Commission discusses a document under review. For this reason, Stephen Fienberg's email to the Commission regarding the potential BJS survey was posted on the NCFS website for everyone to see. However, private comments and conversations can be made within subcommittees.

When Commission meeting agendas are being developed, we will do our best to consider having time built in the agenda for open discussion and dialogue separate from the issue of voting.

Public Comment

Facilitated by **Brette Steele**, Designated Federal Official

Mark Frankel from the American Association for the Advancement of Science (AAAS) mentioned the Arnold Foundation funding efforts to AAAS that are beginning in order to provide a review of annotated bibliographies provided several years ago to the White House Subcommittee on Forensic Science Interagency Working Groups by a number of the Scientific Working Groups. This review is intended to investigate scientific foundations for ten of the forensic disciplines to determine what is reliable and valuable. In studying each discipline, the AAAS study will involve one forensic scientist and multiple other scientists external to the discipline. AAAS has contracted with a science writer to put the information learned into a format that can be understood by the public at large. They plan to select three fields as a starting point based on input from an advisory group.

Kenneth Martin, as an International Association for Identification (IAI) representative with 30 years of experience in the Massachusetts State Police with impression evidence, spoke on the challenge of

obtaining information from law enforcement forensic units. More than two-thirds of latent print examiners occur outside of traditional forensic laboratories. Massachusetts was never able to get a full count of those performing latent print examinations in their state. We need to do a nation-wide count to know who we need to help with training and other aspects of quality control. We should focus on getting data on those doing work with latent prints. Getting a count of those doing crime scene processing will be even more difficult.

Wrap-up

VC Santos discussed the goals of tomorrow's meetings and the presentations by the Commission subcommittees.

The meeting adjourned at 5:30 p.m.

Tuesday, August 27

The meeting was called to order at 9:00 a.m. by **Nelson Santos**.

Announcements

Vice-Chair Nelson, Santos (DOJ)

VC Santos reminded the Commission and the public that interest in participating the Human Factors and Cognitive Bias Subcommittee should be directed to Robin Jones by September 9. The subcommittee co-chairs will review the nominations with the Commission members on the subcommittee. **VC Santos** also briefly outlined the day's agenda.

Membership Vote

Vice-Chair John Butler (NIST)

VC Butler called for a vote on the directive recommendation discussed and revised at the end of yesterday. Commissioner Matt Redle made a motion for a vote that was seconded by Troy Duster.

VC Butler read aloud the revised language.

Directive Recommendation:

The Attorney General should direct the Bureau of Justice Statistics to create a proposal for the development of a nationally representative survey to determine forensics capabilities for those who write reports and offer testimony within federal, state, and local law enforcement agencies and for medical examiner and coroner offices. The survey instrument should be developed in collaboration with relevant stakeholder organizations by the next Commission meeting.

The final vote count was:

1. 93% YES
2. 0% No
3. 7% ABSTAIN

Twenty-eight (28) Commissioners voted "Yes". The two (2) Commissioners abstaining were Jules Epstein and Peter Neufeld. Paul Giannelli did not vote. The directive recommendation, which needed a two-thirds majority, passed.

Post-meeting addition: The directive recommendation was provided to Attorney General Eric Holder who on September 8, 2014 approved moving forward with this recommendation. DFO Brette Steele will follow up with the Bureau of Justice Statistics in order to have them prepared to present at the next Commission meeting.

Latent Print Automated Fingerprint Identification System (AFIS) Interoperability

Facilitator: Austin Hicklin, Fellow, Noblis

Melissa Gische, Physical Scientist/Forensic Examiner, Latent Print Operations Unit, FBI Laboratory

Ms. Gische presented slides and a technical presentation entitled “Introduction to Latent Fingerprint Analysis”. The slides as presented can be found at: <http://www.justice.gov/ncfs/docs/melissa-gische.pdf>.

Austin Hicklin, Fellow, Noblis

Mr. Hicklin presented slides and a technical presentation entitled “Interoperability, Defined”. The slides as presented can be found at: <http://www.justice.gov/ncfs/docs/hicklin-afis-interop.pdf>.

Lauren Reed, Director, U.S. Army Crime Laboratory

Ms. Reed presented slides and a technical presentation entitled “Federal Interoperability Issues”. The slides as presented can be found at: <http://www.justice.gov/ncfs/docs/lauren-reed.pdf>.

David Russell, Director, Northern Virginia Regional Identification System (NOVARIS)

Mr. Russell presented slides and a technical presentation entitled “State and Local Interoperability Issues”. The slides as presented can be found at: <http://www.justice.gov/ncfs/docs/david-russell.pdf>.

Mark Green from the National Institute of Justice (NIJ) discussed a recently completed Latent Fingerprint Interoperability Survey. More information on this survey is available at <http://www.nij.gov/topics/forensics/evidence/impression/pages/survey.aspx>. This survey asked 272 questions and full responses were obtained from 48 states and 78 local jurisdictions.

10:30a.m.: Morning meeting break

Questions from Commission Members for All Panelists and a Summary of Responses

Questions were raised regarding blind verification, the possibility of optical data scanning instead of having to manually re-code latent print minutiae, handling and reporting partial prints, and the issues associated with coordinating vendors and policy makers.

It was noted that the community needs technical solutions that AFIS administrators can provide but getting the vendor to turn on a feature of their software is a problem if the requesting agency does not initially ask for it. The leverage of requiring interoperability as a special condition for federal funding will be a problem as only a fraction use federal money to purchase their AFIS systems.

Interoperability comes with big price tags. It was noted that there will be more reports to write when there are more hits made. There needs to be outcome data on success rates but a standard way to review data is necessary first. Besides standards for reporting, incentives are needed so that we can collect meaningful data. There is frustration with trying to implement uniform standards within the current environment due to variability of vendors and software versions being used (developed by the same vendor).

Discussion on AFIS Interoperability Issues

Facilitators: Dean Gialamas and Peter Neufeld

Backlogs were discussed and the need to make decisions about candidate lists and how far down to go on these lists in investigating potential fingerprint matches. A study from DoD found that there is a cost/benefit for how deep to go with the candidate list (\$962 per match in investigating the first 10 candidates versus about \$47,000 per match for following up on individuals 11-20 in the list). There are decision trade-offs between risk of missing someone and the cost of following up on individuals in the candidate list. It was noted that having three or four vendors can be a good thing due to different search algorithms but that proprietary interests can impede interoperability. Education is an important part of interoperability. An AFIS system is treated as a black box to people purchasing the system. People need to ask vendors to have expanded capabilities for their AFIS systems. This is financial issue as agencies make decisions to purchase a new system or to continue to upgrade a current AFIS system. Different versions of the software even from the same vendor may not be interoperable. While AFIS interoperability may not always involve technical issues, policy, financial, and educational challenges exist.

Several recommendations were provided by **Mr. Hicklin** and **Ms. Reed** including making federal funds available, pushing standards for data collection in order to have standard ways of reporting, educating decision makers and practitioners to better know the capabilities and limitations of their AFIS systems, and developing pilot studies to collect operational data.

A views document may be developed further by the Interim Solutions Subcommittee to help the Commission move this issue forward. There will be a report on AFIS interoperability challenges and potential solutions that should be released by the White House Office of Science and Technology Policy likely before the next Commission meeting.

11:45a.m.: Brief break before lunch

Working Lunch: Lessons Learned from the United Kingdom

Mr. Andrew Rennison, Forensic Science Regulator, The Home Office, Government of the United Kingdom

Mr. Rennison presented slides and a technical presentation entitled “Lessons Learned from the United Kingdom”. The slides as presented can be found at: <http://www.justice.gov/ncfs/docs/andrew-rennison.pdf>. Following Mr. Rennison’s remarks, a brief question and answer session was facilitated by **VC Butler**.

The Role of Accreditation in Forensic Science

Facilitator: Linda Jackson

Ms. Beth Mishalanie, Senior Chemist and Quality Manager, Office of Criminal Enforcement, Environmental Protection Agency

Ms. Mishalanie presented slides and a technical presentation entitled “The National Enforcement Investigations Center Quality Management System and Accreditation Status”. The slides as presented can be found at: <http://www.justice.gov/ncfs/docs/beth-mishalanie.pdf>.

Lieutenant Ross Randlett, Prince William County Police Department

Lt. Randlett shared his prepared remarks, which are available at: <http://www.justice.gov/ncfs/docs/ross-randlett.pdf>.

Dr. Roger Klein, Medical Director, Molecular Oncology, Section of Molecular Pathology, Robert J. Tomsich Pathology and Laboratory Medicine Institute, Cleveland Clinic

Dr. Klein presented slides and a technical presentation entitled “Accreditation in the Clinical Arena”. The slides as presented can be found at: <http://www.justice.gov/sites/default/files/9-klein-clinical-laboratory-accreditation.pdf>.

Questions from Commission Members for All Panelists and a Summary of Responses

Facilitators: Patricia Manzollilo and Linda Jackson

There was a discussion of the positive outcome from the National Academy of Sciences 2009 report on forensic science for the Prince William County Police Department. Their police department became more efficient from having their forensic unit become accredited to ISO/IEC 17025. Potential cognitive bias issues with having a police department being connected to the crime scene unit were raised. It was noted that permissions can be set up in laboratory information management systems to restrict access to specific files and that there are tracking systems to see who has looked at each file. One of the biggest challenges that was suggested is protecting the process of latent print analysis from the case agents/investigators. Costs of overseeing the accreditation process, if it were required in police forensic units, were discussed and the potential impact on management and practitioners.

Proficiency tests were discussed and the availability of proficiency testing results. It was noted that while it is required to treat proficiency test samples the same as patient samples in clinical labs, it is very difficult to mask that analysts are being given a proficiency test. The value of CLIA (Clinical Laboratory Improvement Amendments of 1988), which governs clinical laboratories in the United States, was discussed.

Concerns were raised over the independence of accreditation assessors, how case files were selected for review, and proficiency testing pass rates.

The Accreditation Subcommittee is planning an in-person meeting for September 9-10. They have three subgroups preparing (1) a high-level accreditation policy recommendation for discussion by the Commission at the October meeting, (2) a views document covering issues of proficiency testing and differences in terminology, and (3) a views document outlining critical steps or pathways to achieving accreditation.

2:45p.m.: Afternoon meeting break

Subcommittee Reports and Discussion

Training on Science and Law Subcommittee

Judge Barbara Hervey and S. James Gates, Co-Chairs

The subcommittee had an in-person meeting the morning of August 26 and there was a great exchange of information. There was consensus among the group that there would be tremendous value in standardizing forensic science training for the judiciary. The subcommittee is preparing two recommendations for the Commission.

1. For the Commission to authorize the subcommittee to establish a working group to develop a Science-Based Common Core Curriculum to be made available to all interested parties. The curriculum would include ideas such as basics on the scientific method and understanding the gate keeping role of judges. It was noted that judges tend to gravitate toward a more intrinsic training environment, but they would certainly benefit from interaction with other groups. There will be a need for individualized and group training.
2. Development of an action committee to determine the best delivery systems for the delivery of training to scientists and members of the legal community (in-person, on-line, etc).

The subcommittee will have future discussions about educating scientists. The subcommittee is requesting input from the Commission on training delivery mechanisms for this group of practitioners as well. Additionally, the subcommittee's goal is to avoid mandated training.

The subcommittee also points out that there is asymmetry between the defense and the prosecution, but does not include the Judges. It is encouraged that the Commission recognizes this issue broadly.

Additionally, there is an issue of the effective delivery device for disseminating new or novel information out to the legal and scientific community. Is there an opportunity for a digital IT workflow system that can benefit the dissemination of this information?

It was noted that while the curriculum ideal appears elementary, a working group within the subcommittee could bring in outside expertise to populate and assist with development this core curriculum, especially given some of the efforts currently being undertaken by the National Judicial College, for example. Ideas the working group are floating include:

1. College – bring together the thought leaders, educate them, filter back out
2. Individualized training for the Judges
3. Online or similar delivery system
4. Research for an education organization to deliver the curricula

It was noted that the Human Genome Project provided some set-aside funds to train judges in the ethical issues. There was an outcome report that might be beneficial for the subcommittee to review as a model.

Interim Solutions Subcommittee

Dean Gialamas and Peter Neufeld, Co-Chairs

The subcommittee is working toward addressing issues that can be dealt with quickly.

The subcommittee has held two conference calls and one in-person meeting. The in-person meeting focused on AFIS Interoperability, so they are setting a goal to have a work product for the next Commission meeting.

Another area is Core Definitions. The subcommittee is looking to provide a definition for what a Forensic Science Service Provider is and what it encompasses. Additional terms are customer, result, conclusion, and opinion.

A third area is Misleading Terminology. The subcommittee is proposing a recommendation to eliminate such terms as zero error rate and 100% accuracy. In addition, there are phrases/terms that when used without explanation or justification can be misleading. Along those the lines, the subcommittee was looking to limit conclusions and opinions language. However, this is an overlap of another committee and so is on hold until that subcommittee reports. It was recognized that a similar effort is being pursued by a work group of the Reporting and Testimony Subcommittee and coordination will occur between the two Subcommittees on this issue.

A fourth area is Root Cause Analysis (RCA) to discuss a concept of a RCA. Questions being considered include: What is a trigger point for a RCA? What kind of event would necessitate that activity? What are the principles of an audit? What can we learn from it? The RCA consequences will be considered as well.

A fifth area is Reporting Requirements, dealing with report content. The subcommittee is putting it on hold as the other subcommittee is moving forward more rapidly.

A sixth area is Code of Ethics or Code of Professional Responsibility. The work group considering this issue is starting with the ASCLD/LAB document. The document is out for review within the work group. The work group is also considering possible mechanisms for enforcement of ethics violations.

A seventh area is Enterprise-Wide Proficiency Testing Program within Federal labs. The work group on this topic is conducting research to determine the best way forward, possibly using the current Commission members who work in Federal laboratories.

An eighth area is Transparency of Quality Records. The Interim Solutions subcommittee is going to move forward with this task concurrently with the other issues.

Three primary topics were identified as priorities after the subcommittee report: (1) transparency of quality records, (2) the definition of forensic science service provider, and (3) relationship of the Interim Solutions Subcommittee to other subcommittees.

It was noted that quality records including standard operating procedures are continually evolving and thus it can be a challenge to keep these documents up to date and the most recent versions available (on a website, for example). One laboratory director shared that their lab does put some of these documents up on their website and tries very hard to keep them current. They have a dedicated staff member to keep the process going. However, they still get discovery requests for documents that were relevant at a specific time that a case was examined. Initially there was some skepticism about putting their documents online, but to-date there has not been any negative feedback from doing so. In fact, this information seems to be a valuable resource for other laboratories who are establishing their own quality system. It was noted that there are some files not available online but that would be available through discovery.

A comment was made that for those that provide these documents online, they are used as a marker for the expectations of what is conducted in the lab. It is very helpful to have this information so readily available and easily retrieved for discovery. Lawyers also use these materials as valuable learning tools to assist them in better understanding what is going on in the laboratory. It was noted that questions raised about protocols that are posted on-line have sometimes prompted the laboratory to revise and improve the way things are written in order to describe what is performed.

Caution was raised that some documents might only apply to one discipline, but could inappropriately be assumed to apply to other disciplines, or units within a laboratory. Additionally, version control is very important for protocols, procedures, etc.

Discussion ensued on the need for the Commission and the community to have a clear definition of a Forensic Science Service Provider. The definition that is being worked from currently is that originally developed by the Subcommittee on Forensic Science Interagency Working Groups:

“A Forensic Science Service Provider is defined as having at least 1 full-time analyst, however named, who examines physical evidence in criminal or investigative matters and provides reports or opinion testimony with respect to such evidence in United States courts of law.”

It was noted that this is a working definition and provides a framework to start from. The definition has to encompass the individual practitioners and the agencies doing the work. The exposure needs to be to the population that is providing forensic services. Concern was raised that the definition does not include the methodology or expectation of science. Another comment was made that science does not create certainty but rather it minimizes uncertainty. In the context of forensic science, the goal is to minimize uncertainty and if you are a prosecutor, the goal is to get beyond the reasonable doubt for a standard of proof. There was a suggestion that caution should be used and defense and prosecution should be considered.

The final topic of discussion with the Interim Solutions Subcommittee was the relationship of this subcommittee with others. The reason this subcommittee was created was because some items are time-sensitive while some of the work that is being done in the other subcommittees would require longer term implementation strategies. The Interim Solutions Subcommittee was encouraged to reach out to co-chairs of the other subcommittees on the status of their work products that might overlap. By the next Commission meeting, the co-chairs will determine which items are going to move forward through the respective subcommittee or the Interim Solutions Subcommittee.

Medicolegal Death Investigation Subcommittee

Vincent DiMaio and John Fudenberg, Co-Chairs

The subcommittee has had two conference calls and an in-person meeting is potentially being planned for October, in conjunction with the next Commission meeting. The primary issue is how to increase coordination and standardization between Coroner and Medical Examiner offices.

The subcommittee devised an internal process to move work documents through the subcommittee efficiently and effectively. The subcommittee has decided to divide their work into project ideas, with work group leaders who will present material to the subcommittee through the defined work flow process.

The subcommittee's priority areas:

1. Certification and Accreditation
2. Networking Medicolegal Offices
3. Increasing the Supply of Pathologists

After discussions with the Accreditation/Certification Subcommittee, it was decided that the subcommittee will address the certification/accreditation issue specifically for Medicolegal Death

Investigators (MDIs). A goal is to have a formal consideration proposal for the next Commission meeting. The subcommittee is working with the CDC (Centers for Disease Control and Prevention) and other organizations along with their sharing efforts to compliment the subcommittee's efforts.

The subcommittee has identified that our Nation is lacking forensic pathologists to conduct the work of forensic autopsies.

There are an estimated 500 board certified pathologists which practice in the US. There are 36 programs that train forensic pathologists with 78 training physicians. Only 54 are funded programs. The average number of students going into the field each year is around 41. There are approximately 10-15 retirements each year. Of those that do complete the training, 67% will practice full time; 21% never practice. Of those that do work, 71% obtain boards certification. Of those that do complete the training work in the field but do not complete the board certification and 44% still practice without certification. The drop out rate is 21%. These are the best numbers we have because they don't have data that articulates the full landscape of the community.

The subcommittee would like to do more research to determine why some practitioners go into forensic pathology, why they leave and why they don't get board certified? Are these due to experience, training, salary, rotations, residency, research, mentors, promotions, judicial interference, etc.?

The National Association of Medical Examiners and the College of American Pathologists are also researching these issues. The subcommittee would like to continue to do additional research and inquiries.

Conclusion

VC Santos mentioned that the next Commission meeting will be a slightly different format, to include less report outs from the subcommittees and more deliberation on work products. If there are briefings, work products, or scheduled speakers that the subcommittees require, it was requested that Commissioners work with Robin Jones to schedule or arrange for this.

The fourth Commission meeting will be October 28-29, 2014. Any documents to be considered at the next Commission meeting, should be sent in by October 13, 2014, as per the bylaws.

The fifth Commission meeting will be January 29-30, 2015.

The sixth Commission meeting will be April 30-May 1, 2015.

The Commission Charter is set to expire at the end of April 2015 unless it is extended.

It was noted that all materials presented and discussed are available from the Commission website: www.justice.gov/NCFS.

Commission Co-Chairs

James Cole, Co-Chair (DOJ) and Willie May, Co-Chair (NIST)

VC Santos introduced the Commission's subcommittee co-chairs to provide remarks.

Co-chair Cole showed his appreciation for the Commission's efforts.

Co-chair Cole charged the Commission to address the topic of Digital Evidence. Focus areas in the Digital Evidence community may include:

1. Material for use in the courtroom

2. Barriers and hurdles
3. Promote the cause of justice and science
4. Products that allow the system to work

Co-chair Cole requested that the Commission consider the work that has been done by the Scientific Working Group on Digital Evidence (SWGDE) and emphasized that any recommendations that could be adopted by the Department of Justice could also influence practitioners in the state and local domains to implement the recommendations as well.

Co-chair May showed his appreciation for the Commission's efforts.

Co-chair May provided a brief update on the Organization of Scientific Area Committee (OSAC) staffing and task assignments. NIST has and will continue to commit the resources to further the mission of the OSAC. **Co-chair May** announced that the OSAC-Forensics Science Standards Board (FSSB) has been established and that the FSSB held their first in-person meeting on August 7. Additionally, the OSAC Resource Committees were announced on July 16. The rest of the OSAC organization is taking shape and should be completely built out by the October Commission meeting. NIST plans to be prepared to present the entire compilation of the OSAC by the next Commission meeting.

Co-chair May announced the establishment of a NIST Center for Excellence for Forensics. The focus will be probabilistic methods for pattern evidence and digital evidence. The center will also house a training component, which NIST may provide some of the trainings. The grant is proposed to be up to \$20M for 5 years to the winning institution(s). The Commission is encouraged to announce this grant opportunity to their communities. There will be additional announcements and a webinar on September 25.

The FORENSICS@NIST 2014 symposium, which is a biannual event, will be held in December at NIST in Gaithersburg. The event will be webcast as well.

Finally, there will be an International Symposium on Forensic Science Error Management: Detection, Measurement, and Mitigation in July 2015 in Washington, DC.

Co-chairs Cole and May answered questions regarding digital evidence, the process for informing or collaborating between the Commission and OSAC, and how much the Commission can recommend to the Attorney General in terms of funding to support implementation strategies.

5:20 p.m.: Meeting was adjourned by **Brette Steele**, the Designated Federal Official (DFO).

List of Attendees

	First Name	Last Name	Type	Title/Role	Organization
1	Bell	Suzanne	Commissioner	Associate Professor	West Virginia University
2	Bieber	Frederick	Commissioner	Professor	Harvard Medical School
3	Crouse	Cecelia	Commissioner	Crime Laboratory Director	Palm Beach County Sheriff's Office
4	Czarnopys	Gregory	Commissioner	Deputy Assistant Director	ATF
5	Denton	M. Bonner	Commissioner	Professor	University of Arizona
6	DiMaio	Vincent	Commissioner	Private Consultant	Bexar County, Texas Medical Examiner (Retired)
7	Duster	Troy	Commissioner	Professor	University of California
8	Epstein*	Jules	Commissioner	Professor	Widener U. School of Law
9	Ferreira-Gonzalez	Andrea	Commissioner	Professor and Chair	Virginia Commonwealth University
10	Fienberg	Stephen	Commissioner	Maurice Falk University Professor of Statistics and Social Science	Carnegie Mellon University
11	Fudenberg	John	Commissioner	Asst. Coroner	Clark County Office of the Coroner/Medical Examiner
12	Gialamas	Dean	Commissioner	Asst. Division Director	Los Angeles County Sheriff's Department
13	Hervey	(Judge) Barbara	Commissioner	Judge	Texas Court of Criminal Appeals
14	Howley	Susan	Commissioner	Public Policy Director	National Center for Victims of Crime
15	Huestis	Marilyn	Commissioner	Chief, Chemistry and Drug Metabolism	National Institute on Drug Abuse
16	Hunt	Ted	Commissioner	Chief Trial Attorney	Prosecuting Attorney's Office, Kansas City, MO
17	Jackson	Linda	Commissioner	Laboratory Director	Virginia Department of Forensic Science
18	Kacavas	John	Commissioner	United States Attorney-District of New Hampshire	United States Department of Justice
19	King	Pam	Commissioner	Assistant Public Defender	State of Minnesota Public Defender
20	LaPorte	Gerry	Commissioner	Director, Office of Investigative and Forensic Sciences	National Institute of Justice
21	LeBeau	Marc	Commissioner	Senior Forensic Scientist	Federal Bureau of Investigation
22	Leighton	Julia	Commissioner	General Counsel	Public Defender Service (PDS)

23	Manzollilo	Patricia	Commissioner	Laboratory Director	U.S. Postal Inspection Service
24	McCormack	(Judge) Bridget Mary	Commissioner	Justice	Michigan Supreme Court
25	Neufeld	Peter	Commissioner	Co-Director	The Innocence Project
26	Pulaski	Phil	Commissioner	Retired Chief of Detectives NYPD	NYPD (Retired)
27	Rakoff*	(Judge) Jed	Commissioner	U.S. District Judge	U.S. Courts
28	Redle	Matthew	Commissioner	Sheridan County Prosecuting Attorney	Sheridan County & Prosecuting Attorney's Office
29	Salyards	Michael (Jeff)	Commissioner	Executive Director	Defense Forensic Science Center
30	Schrotter	Frances	Commissioner	Sr. VP & COO	American National Standards Institute
32	Weiss	Mark	Commissioner	Division Director	National Science Foundation
33	Cole	James	Co-Chair	Deputy Attorney General	U.S. Department of Justice
34	May	Willie	Co-Chair	Acting NIST Director	NIST
35	Steele	Brette	Designated Federal Official	Designated Federal Official	U.S. Department of Justice
36	Jones	Robin	NCFS Program Manager	NCFS Program Manager	U.S. Department of Justice
37	Butler	John	Vice-Chair	NIST Fellow & Special Assistant to the Director for Forensic Science	NIST
39	Santos	Nelson	Vice-Chair	Deputy Assistant Administrator	Drug Enforcement Administration
38	McClesky	Edwin	Proxy for Tom Cech	Senior Scientific Officer	Howard Hughes Medical Institute
39	Motta	Gregg	Proxy for David Honey		Federal Bureau of Investigation
40	Becnel	Adam/Charles	Subcommittee Member	Manager	Louisiana State Police Crime Laboratory
41	Hollway	John	Subcommittee Member	Associate Dean and Executive Director	University of Pennsylvania Law School
42	Harle	Sid	Subcommittee Member	Judge	226th District Court of Bexar County
43	Johnson	Pat / Dennis	Subcommittee Member	Deputy Assistant Director	Texas Department of Public Safety
44	Marchand	Michael	Subcommittee Member	President	The Center for American and International law
45	Scheck	Barry	Subcommittee Member	Co-Director	Innocence Project
46	Humphreys	Rob	Subcommittee Member	Judge	Court of Appeals of Virginia

47	Word	Charlotte	Subcommittee Member	Consultant	Human Identification Testing Consultant
48	Kimball	Donna	Note taker	Office of the Associate Director for Laboratory Programs	NIST
49	Hicklin	R. Austin	Speaker	Fellow	Noblis
50	Itiel	Dror	Speaker	Cognitive Neuroscientist	University College London (UCL) and Cognitive Consultants International
51	Klein	Roger	Speaker	Medical Director, Molecular Oncology	Cleveland Clinic
52	Mishalanie	Beth	Speaker	Quality Manager/Senior Chemist	U.S. Environmental Protection Agency
53	Randlett	Ross	Speaker	Lieutenant	Prince William County Police
54	Reed	Lauren	Speaker	Director, USACIL	U.S. Army Criminal Investigation Laboratory
55	Rennison	Andrew	Speaker	Forensic Science Regulator	Forensic Science Regulation Unit, Home Office, Government of United Kingdom
56	Russell	David	Speaker	Director	NOVARIS
57	Thompson	William	Speaker	Professor, School of Social Ecology	University of California, Irvine
58	Gische	Melissa	Speaker	Physical Scientist / Forensic Examiner	FBI Laboratory
59	Greene	Mark	Speaker	General Engineer	National Institute of Justice
60	Cavanagh	Richard	Public	Director of the Office of Special Programs	NIST
61	Chu	Sarah	Public	Senior Forensic Policy Advocate	Innocence Project
62	Easthope	Lucy	Public	Senior Lecturer, Forensic Science	University of Lincoln, UK
63	Gerhardt	Laura	Public	Intern	White House Office of Science and Technology Policy
64	Hamlin	Troy	Public	Accreditation Program Manger-Testing	ASCLD/LAB
65	Herman	Martin	Public	Senior Advisor for Forensics and IT	NIST
66	Hood	Taylor	Public	Doctoral Student	University of Maryland
67	Huffman	Katharine	Public		The Raben Group LLC
68	Isenberg	Alice	Public	Section Chief	FBI
69	Jones	John Paul	Public	Associate Director of OSAC Affairs	National Institute of Standards and Technology
70	Mayes	Mark	Public	Commander, Western Laboratory Branch	Kentucky State Police

71	McCleary	Nicole	Public	Associate Director	RTI International
72	Moloney	Megan	Public		Federal Bureau of Investigation
73	Montgomery	Madeline	Public	Forensic Toxicologist	Society of Forensic Toxicologists
74	Motta	Thomas	Public	Senior Science & Technology Advisor	Assigned to ODNI ADDNI Dr. David Honey
75	Muse	Roger	Public	Director	ANSI-ASQ National Accreditation Board
76	Simoncelli	Tania	Public	Assistant Director for Forensic Science	White House Office of Science and Technology Policy
77	Stolorow	Mark	Public	Director of OSAC Affairs	NIST
78	Sudkamp	Laura	Public	Laboratory Director	Kentucky State Police
79	Thomas	Misty	Public	Director	American Bar Association
80	Triplett	Jeremy	Public	Forensic Laboratory Supervisor	Kentucky State Police Forensic Laboratories
81	Van Veen	Elsbeth	Public		University of Bristol, UK
82	VanGelder	Jay	Public		Prince William County Police Department
83	Wilson	Justin	Public		The Raben Group LLC
84	Wulff	Paula	Public	Assistant General Counsel	FBI
85	Ambrosino	Michael	Public	AUSA	USDOJ
86	Brown	Catherine	Public		Collaborative Testing Services (CTS)
87	Burrill	Julie	Public	Forensic Scientist	The Public Defender Service
88	Frankel	Mark	Public	Director, Scientific Responsibility, Human Rights and Law Program	AAAS
89	Hurf	Lindsay	Public		National Association of Criminal Defense Attorneys
90	Leben	Deborah	Public	Laboratory Director	U.S. Secret Service
91	Levick	Sandra	Public	Chief, Special Litigation Division	The Public Defender Service
92	Marone	Peter	Public	CSFO	Consortium of Forensic Science Organization
93	Martin	Kenneth	Public	Past President, CFSSO Representative	International Association for Identification
94	Runkle	Deborah	Public	Senior Program Associate	AAAS

95	Schechter	Marvin	Public	Criminal Defense Attorney	
96	Taylor	Melissa	Public	Forensic Science Program	NIST
97	Tulley	Jason	Public	Special Council to the Director	The Public Defender Service

*Jules Epstein and Judge Rakoff participated by phone the first day