

National Commission on Forensic Science

Meeting #10

June 20–21, 2016

**Department of Justice, Office of Justice Programs Building
810 Seventh 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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June 20-21, 2016
Department of Justice, Office of Justice Programs Building
810 Seventh Street, NW, Washington, DC**

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1. Introduction

The tenth meeting of the National Commission on Forensic Science (NCFS) was held on June 20-21, 2016 in Washington, D.C. The meeting began with opening remarks from Victor Weedn, Senior Forensic Advisor to the Deputy Attorney General, and John Butler, Special Assistant to the NIST Director for Forensic Science. Both of the NCFS Co-Chairs, Deputy Attorney General Sally Q. Yates and NIST Director Willie E. May, were unable to participate in this meeting. New commissioners were introduced: (1) Rebecca Ferrell from the National Science Foundation (NSF) to replace *ex-officio* NSF member Mark Weiss, and (2) Sergeant Troy Lawrence of the Ft. Worth Texas Police Department as the digital evidence representative to replace Bill Crane. Leadership from the Department of Justice's Office of Legal Policy discussed the draft methodology for the Forensic Science Discipline Review (FSDR) and Designated Federal Official (DFO), Jonathan McGrath, reviewed activities of the Subcommittee on Procedures and Operations (SPO). During the SPO update, the reconciled views documents regarding Accreditation of Medicolegal Death Investigation Offices and Certification of Medicolegal Death Investigators were unanimously adopted by the Commission. The proposed Views and Recommendations Work Product *Notes* as well as the proposed Bylaws amendment were sent back to the SPO for further consideration and revision.

On June 20, a certification and licensing panel provided perspectives from the North Carolina State Crime Laboratory (Director John Byrd), the International Association for Identification (Director of Professional Programs Robert Garrett), the American Board of Criminalists (Accreditation Manager Gretchen Lajoie), and the Texas Forensic Science Commission (General Counsel Lynn Garcia). On June 21, a digital and multimedia evidence panel shared the challenges and considerations related to digital forensics processes. Presentations were given by James Emerson (Chair of the International Association of Chiefs of Police Computer Crime and Digital Evidence Committee), James Dibble (President of the International Association of Computer Investigative Specialists), William Eber (Chief Technology Officer for the Department of Defense's Cyber

Crime Center), and Carl Hoecker (Inspector General for the U.S. Securities and Exchange Commission).

Subcommittees meetings, which were closed to the public, were held during the afternoon of the first day (June 20). Day two (June 21) involved reports from each of the five subcommittees: (1) Reporting and Testimony, (2) Human Factors, (3) Accreditation and Proficiency Testing, (4) Scientific Inquiry and Research, and (5) Medicolegal Death Investigation. A number of draft work products, which were open for a 30-day public comment period on Regulations.gov, were introduced. On Day two (June 21) of NCFS Meeting 10, six documents were voted on and all but one of them (Recommendations on Technical Merit Evaluation of Forensic Science Methods and Practice) achieved the required two-third majority vote. The summary of the voting results are outlined in Section 4: Voting Results. The Recommendations on Technical Merit Evaluation of Forensic Science Methods and Practice did not achieved the required two-third majority vote and was sent back to the subcommittee on Scientific Inquiry and Research for further consideration and revision.

No public comments were made during the open public comment periods on Monday, June 20 or Tuesday, June 21.

Meeting materials including pdf files for presentations slides, Initial and Final draft documents, public comment adjudication summaries, and subcommittee reports may be found on the NCFS website at <https://www.justice.gov/ncfs/meeting-materials-term-2#m10>. Archived videos from the webcast of the entire meeting are available for viewing at <http://www.nist.gov/forensics/national-commission-on-forensic-science-webcast-10.cfm>.

2. Agenda



NATIONAL COMMISSION ON FORENSIC SCIENCE



June 20 - 21, 2016

Department of Justice, Office of Justice Programs Building
810 Seventh Street, NW, Washington, DC 20531, Main Ballroom, Room #3101

AGENDA – MONDAY, JUNE 20, 2016

- 9:00 a.m. – 9:30 a.m. **Call to Order/Opening Remarks**
Victor Weedn, M.D., J.D., Senior Forensic Advisor to the Deputy Attorney General
Willie May, Ph.D., Director, National Institute of Standards and Technology
- 9:30 a.m. – 10:30 a.m. **Forensic Science Discipline Review Methodology Presentation**
Office of Legal Policy, U.S. Department of Justice
- 10:30 p.m. – 11:00 p.m. **Subcommittee on Procedures and Operations Status Report**
Jonathan McGrath, Ph.D., Designated Federal Official
- 11:00 p.m. – 11:30 p.m. **BREAK**
- 11:30 p.m. – 1:00 p.m. **WORKING LUNCH: Certification and Licensing Panel**
John Byrd, Director, North Carolina Department of Justice/North Carolina State Crime Laboratory
Robert Garrett, Director- Professional Programs, International Association for Identification
Gretchen Lajoie, Accreditation Manager, American Board of Criminalistics
Lynn Garcia, General Counsel, Texas Forensic Science Commission
- 1:00 p.m. **Public Comment Period**
Commission Meeting Adjournment
- 1:00 p.m. – 5:00 p.m. **Subcommittee Meetings (Closed to public)**
-

AGENDA – TUESDAY, JUNE 21, 2016

- 9:00 a.m. **Call to Order**
- 9:00 a.m. – 10:15 a.m. **Reporting and Testimony Subcommittee Report**
Judge Jed Rakoff and Matt Redle, Co-Chairs
Final Document for Vote: Recommendation on Pretrial Discovery; Views Document on Judicial Vouching; Views Document on Notice and Demand Provisions
Introduction of Draft Work Products Open for Public Comment: Recommendation on Documentation, Case Record and Report Contents; Views Document on Report and Case Record Contents
- 10:15 a.m. – 11:00 a.m. **Human Factors Subcommittee Report**
Justice Bridget McCormack and Professor Jules Epstein, Co-Chairs
Introduction of Draft Work Products Open for Public Comment: Views Document on Optimizing Human Performance in Crime Laboratories through Testing and Feedback
- 11:00 a.m. – 11:30 p.m. **BREAK**
- 11:30 a.m. – 1:00 p.m. **WORKING LUNCH: Digital & Multimedia Evidence Panel**
James Emerson, Chair, International Association of Chiefs of Police Computer Crime and Digital Evidence Committee
James Dibble, President, International Association of Computer Investigative Specialists and Special Agent, Washington State Gambling Commission
William Eber, Chief Technology Officer, Department of Defense Cyber Crime Center (DC3)
Carl Hoecker, Inspector General, U.S. Securities and Exchange Commission
- 1:00 p.m. – 2:00 p.m. **Accreditation and Proficiency Testing Subcommittee Report**
Linda Jackson and Patricia Manzollilo, Co-Chairs
Introduction of Draft Work Products Open for Public Comment: Views Document on Accreditation and Recognition of Forensic Science Certification Bodies; Views Document on Certification of

Forensic Science Practitioners; Views Document on Accreditation Program Requirements; Recommendation on Proficiency Testing

2:00 p.m. – 2:30 p.m.

BREAK

2:30 p.m. – 3:30 p.m.

Scientific Inquiry and Research Subcommittee Report

Suzanne Bell, Ph.D., and Jeff Salyards, Ph.D., Co-Chairs

Final Document for Vote: Views Document on Technical Merit

Evaluation of Forensic Science Methods and Practice;

Recommendation on Technical Merit Evaluation of Forensic

Science Methods and Practice

3:30 p.m. – 4:30 p.m.

Medicolegal Death Investigation Subcommittee Report

Vincent DiMaio, M.D. and John Fudenberg, Co-Chairs

Final Document for Vote: Recommendation on National Disaster

Call Center

Introduction of Draft Work Products Open for Public Comment:

Views Document on Next of Kin Communication and Interactions

during Medicolegal Death Investigations; Recommendation on

Formation of a National Office for Medicolegal Death

Investigation

4:30 p.m. – 5:00 p.m.

Wrap-Up

5:00 p.m.

Public Comment Period

Commission Meeting Adjournment

3. Meeting Summary

Monday, June 20, 2016: The meeting opened at 9:00 AM and adjourned at 1:00 PM.

Forensic Science Discipline Review Draft Methodology

The DOJ Office of Legal Policy presented the proposal draft methodology to review the forensic testimony presented by FBI examiners for a variety of disciplines for cases between 2008-2012. The full text draft methodology will be posted for written comments. OLP anticipates presenting the final methodology at the September NCFS meeting. A Statistician Roundtable will be held to involve the statistics aspect. Documents on the Uniform Language for Testimony and Reporting (ULTR) for seven disciplines are posted for public comment, and additional ULTRs will be posted later in the summer. Commissioners discussed issues and considerations for this review, including, independence of the review, institutionalizing the process, consistency with scientific principles and limitations, examination of attorney testimony questions, and downstream effects of the review.

Subcommittee on Procedures and Operations Status Report

During the SPO update, the reconciled views documents regarding Accreditation of Medicolegal Death Investigation Offices and Certification of Medicolegal Death Investigators were unanimously adopted by the Commission. The proposed Views and Recommendations Work Product *Notes* as well as the proposed Bylaws amendment were sent back to the SPO for further consideration and revision.

Certification and Licensing Panel

This panel was hosted by the subcommittee on Accreditation and Proficiency Testing to provide perspectives on professional certification as NCFS considers the work products on Certification. The panel consisted of representatives from two forensic science certifying bodies, the International Association for Identification (IAI) and the American Board of Criminalists (ABC), who discussed certification program requirements, testing processes, costs, maintenance requirements, and plans to achieve accreditation to international standards for certifying bodies (ISO 17024). The panel also included presentations on state legislation, requirements, implementation, and impacts for mandatory certification and licensing for forensic scientists in the states of North Carolina and Texas. Commissioners discussed issues such as psychometrics for test development, tracking certification/licensing of analysts who move between jobs, and re-licensing/re-certification requirements.

Tuesday, June 21, 2016: The meeting opened at 9:00 AM and adjourned at 5:00 PM.

Reporting and Testimony Subcommittee Report

The subcommittee introduced three Final Draft work products for Commission vote: Recommendation on Pretrial Discovery, Views Document on Judicial Vouching, and Views Document on Notice and Demand. All three documents achieved the required two-third majority vote for Commission adoption. The subcommittee introduced two Initial Draft work products: Recommendation on Documentation, Case Record and Report Contents, and Views Document on Report and Case Record Contents.

Human Factors Subcommittee Report

The subcommittee introduced one Initial Draft work product: Views Document on Optimizing Human Performance in Crime Laboratories through Testing and Feedback, which included a presentation by subcommittee member Bill Thompson. The subcommittee also discussed the current status of a forthcoming work product on Checklists, the development of a work product on possible biasing information in medicolegal death investigations, and an update on the lab questionnaire to survey processes used to mitigate cognitive bias.

Digital and Multimedia Evidence Panel

This panel was hosted by the Accreditation and Proficiency Testing subcommittee. This panel included representatives from the International Association of Chiefs of Police (IACP) Computer Crime and Digital Evidence Committee, International Association of Computer Investigative Specialists (IACIS), Department of Defense Cyber Crime Center (DC3), and the Inspector General, U.S. Securities and Exchange Commission, who shared the challenges and considerations related to digital forensics processes. Commission discussions included the role of accreditation, differentiation between investigative and scientific processes.

Accreditation and Proficiency Testing Subcommittee Report

The subcommittee introduced four Initial Draft work products: Views Document on Accreditation and Recognition of Forensic Science Certification Bodies, Views Document on Certification of Forensic Science Practitioners, Views Document on Accreditation Program Requirements, and Recommendation on Proficiency Testing. The subcommittee indicated that it will continue to revise the draft work product on the Recommendation for the Accreditation of Digital and Multimedia Forensic Science Service Providers, as the Initial Draft work product received several public comments and the new digital commissioner is joining the subcommittee.

Scientific Inquiry and Research Subcommittee Report

The subcommittee introduced two Final Draft work products for Commission vote: Views Document on Technical Merit Evaluation of Forensics Science Methods and Practice, Recommendation on Technical Merit Evaluation of Forensic Science Methods and Practice. The Views document achieved the required two-third majority vote. The Recommendation document did not receive 2/3 majority and it was sent back to the subcommittee on Scientific Inquiry and Research for further consideration and revision. A discussion occurred prior to the meeting adjournment regarding the reasons for the “no” votes and the Commission deliberated potential changes that might be acceptable. The Commission generally agreed with the content of Recommendation #1 and #2, however, the main disagreement was over the content of Recommendation #3.

Medicolegal Death Investigation Subcommittee Report

The subcommittee introduced one Final Draft work products for Commission vote: Recommendation on National Disaster Call Center. This document achieved the required two-third majority vote for Commission adoption. The subcommittee introduced two Initial Draft work products: Recommendation on Formation of a National Office for Medicolegal Death Investigation, and Views Document on Next of Kin Communication and Interactions during Medicolegal Death Investigations.

4. Voting Results

Vote	Document or Vote Question Asked*	NCFS Business (<i>ex-officio</i> voted)	% Yes	% No	% Abstain	Total Votes	# Yes	# No	# Abstain	Comments
June 20, 2016										
1	Accreditation of Medicolegal Death Investigation Offices - Views	-	100	0	0	36	36	0	0	No response: Suzanne Bell, Arturo Casadevall, Linda Jackson, and Stephen Feinberg.
2	Certification of Medicolegal Death Investigators - Views	-	100	0	0	35	35	0	0	No response: Suzanne Bell, Arturo Casadevall, Linda Jackson, Fred Bieber, and Stephen Feinberg.
June 21, 2016										
3	Pretrial Discovery - Recommendation	--	78	18	3	32	25	6	1	No: Cecelia Crouse, Nelson Santos, Ted Hunt, Dean Gialamas, Deirdre Daly, Greg Czarnopys; Abstain: Phil Pulaski
4	Judicial Vouching of Experts - Views	--	90	10	0	31	28	3	0	No: Vince Di Maio, Greg Champagne, Jim Gates; No response: Marc LeBeau
5	Notice and Demand Provisions - Views	--	94	3	3	31	29	1	1	No: Marc LeBeau; Abstain: Sunita Sah; No response: Suzanne Bell
6	Technical Merit Evaluation of Forensic Science Methods & Practices - Views	--	83	13	3	30	25	4	1	No: Greg Czarnopys, Marc LeBeau, Ted Hunt, Greg Champagne; Abstain: Judge Hervey; No response: Jim Gates, Suzanne Bell
7	Technical Merit Evaluation of Forensic Science Methods & Practices - Recommendations	--	52	42	6	31	16	13	2	No: Cecelia Crouse, Fred Bieber, Matt Redle, John Fudenberg, Vince DiMaio, Greg Champagne, Ted Hunt, Marc LeBeau, Phil Pulaski, Dean Dialamas, Deirdre Daly, Greg Czarnopys, Linda Jackson; Abstain: Troy Lawrence, Nelson Santos; No response: Suzanne Bell
8	National Disaster Call Center - Recommendation	--	93	7	0	30	28	2	0	No: Vince Di Maio, Peter Neufeld; No response: Suzanne Bell, Jim Gates

* 2/3 majority affirmative vote from regular Commission members is required for adoption of Commission work products.

5. Attendee List

10th meeting of the National Commission on Forensic Science June 20-21, 2016			
Full Name	Title	Company	Attendee Type
Albright, Thomas	Professor	The Salk Institute	Commissioner
Ambrosino, Michael	Special Counsel for DNA and Forensics	U.S. Attorney's Office, D.C.	Subcommittee member
Antell, Kira	Senior Counsel	Department of Justice, Office of Legal Policy	Speaker
Bell, Suzanne	Professor	West Virginia University	Commissioner
Bieber, Frederick	Professor	Harvard Medical School	Commissioner
Bruck, Andrew	Senior Counsel to the Deputy Attorney General	U.S. Department of Justice	Commission staff
Butler, John	Vice-Chair, NCFS	National Institute of Standards and Technology	Commissioner
Byrd, John	Director	North Carolina State Crime Laboratory	Speaker
Cariola, Michael	General Manager	Bode Cellmark	Subcommittee member
Carriquiry, Alicia	Distinguished Professor	Iowa State University	Subcommittee member
Casadevall, Arturo	Professor and Chair	Johns Hopkins Bloomberg School of Public Health	Commissioner
Celeste, Eleanor	Policy Analyst for Medical and Forensic Sciences	Office of Science and Technology Policy	
Chu, Sarah	Senior Forensic Policy Advocate	Innocence Project	Subcommittee member
Cole, Simon	Professor	University of California, Irvine	Subcommittee member
Czarnopys, Gregory	Deputy Assistant Director Forensic Services	Bureau of Alcohol, Tobacco, Firearms, and Explosives	Commissioner
Daly, Deirdre	U.S. Attorney	US Department of Justice	Commissioner
Denton, M. Bonner	Professor	University Of Arizona	Commissioner
DePalma, Lindsay	Contractor	National Institute of Justice	Commission staff
DePaolo, Frank	Deputy Commissioner for Forensic Operations	Office of Chief Medical Examiner, City of New York	Subcommittee member
Dibble, Jim	President	International Association of Computer Investigative Specialists	Speaker
DiMaio, Vincent			Commissioner
Downs, Jamie	Coastal Regional Medical Examiner	Georgia Bureau of Investigation	Subcommittee member
Drosback, Meredith	Assistant Director for Education and Physical Sciences	Office of Science and Technology Policy	
Eber, William	Chief Technology Officer	Dept. of Defense, Cyber Crime Center	Speaker

10th meeting of the National Commission on Forensic Science June 20-21, 2016			
Full Name	Title	Company	Attendee Type
Emerson, James	Chairman, Computer Crime and Digital Evidence Committee	International Association of Chiefs of Police	Speaker
Epstein, Jules	Professor	Temple Beasley School of Law	Commissioner
Ferrell, Rebecca	Program Director	National Science Foundation	Commissioner
Fienberg, Stephen	Maurice Falk University Professor of Statistics and Social Science	Carnegie Mellon University	Commissioner
Fudenberg, John	Coroner	Clark County Office of the Coroner/Medical Examiner	Commissioner
Garcia, Lynn	General Counsel	Texas Forensic Science Commission	Speaker
Garrett, Bob	Director, Professional Programs	International Association for Identification	Speaker
Gaskins, Shimica	Acting Deputy Assistant Attorney General	Department of Justice, Office of Legal Policy	Speaker
Gates, Jr., S. James	Professor	University of Maryland	Commissioner
Gialamas, Dean	Chief	Los Angeles County Sheriff Department	Commissioner
Hervey, Barbara	Judge	Texas Court of Criminal Appeals	Commissioner
Hoecker, Carl	Inspector General	Securities and Exchange Commission	Speaker
Hollway, John	Associate Dean & Executive Director	Quattrone Center for the Fair Administration of Justice at Penn Law	Subcommittee member
Honey, David	Director, S&T	Office of the Director of National Intelligence	Commissioner
Howley, Susan	Public Policy Director	National Center for Victims of Crime	Commissioner
Huestis, Marilyn	Professor	University of Maryland School of Medicine	Commissioner
Hunt, Ted	Chief Trial Attorney	Jackson County (Kansas City) Prosecutor	Commissioner
Jackson, Linda	Director	Virginia Department of Forensic Science	Commissioner
Kafadar, Karen	Professor	University of Virginia	Subcommittee member
Kassirer, Jerome	Distinguished Professor	Tufts University	Subcommittee member
King, Pam	Judge	Minnesota 3rd Judicial District	Commissioner
Kontanis, Elias	Coordinator - Medicolegal Operations	National Transportation Safety Board	Subcommittee member
Lajoie, Gretchen	Accreditation Manager	American Board of Criminalistics	Speaker

10th meeting of the National Commission on Forensic Science June 20-21, 2016			
Full Name	Title	Company	Attendee Type
LaPorte, Gerry	Director, Office of Investigative and Forensic Sciences	National Institute of Justice	Commissioner
Lawrence, Troy	Sergeant	Fort Worth Police Department	Commissioner
Leben, Deborah	Laboratory Director	U.S. Secret Service	Subcommittee member
Leighton, Julia	General Counsel	The Public Defender Service for the District of Columbia	Commissioner
Manzollilo, Patricia	Laboratory Director	US Postal Inspection Service	Commissioner
McCormack, Bridget Mary	Justice	Michigan Supreme Court	Commissioner
McGrath, Jonathan	Designated Federal Official, NCFS; Senior Policy Analyst	National Institute of Justice	Commission staff
McShane, Thomas	President, Monitoring and Investigations	Guidepost Solutions LLC	Subcommittee member
Motta, Greg	Senior Science & Technology Policy Advisor	Federal Bureau of Investigation	Proxy Commissioner
Neufeld, Peter	Co-Director	Innocence Project	Commissioner
Philpott, Kate	Independent consultant	Self-employed	Subcommittee member
Pulaski, Phil	Chief of Police	Muttontown Police Department	Commissioner
Rakoff, Jed	U.S. District Judge	U.S. District Court, S.D.N.Y.	Commissioner
Redle, Matthew	County and Prosecuting Attorney	Sheridan County and Prosecuting Attorney's Office	Commissioner
Risinger, Michael	John. J. Gibbons Professor of Law	Seton Hall University School of Law	Subcommittee member
Roberts, Toni	Research Program Manager	Federal Bureau of Investigation	Proxy Commissioner
Sah, Sunita	Assistant Professor of Management and Organizations	Cornell University, Johnson Graduate School of Management	Commissioner
Salyards, Jeff	Executive Director	Defense Forensic Science Center	Commissioner
Santos, Nelson	Vice-Chair, NCFS; Deputy Assistant Administrator	DEA	Commissioner
Scanlan, Timothy	Deputy Chief	Jefferson Parish Sheriff's Office	Proxy Commissioner
Scheck, Barry	Co-Director	Innocence Project	Subcommittee member
Schrotter, Frances	Sr. Vice President & COO	American National Standards Institute	Commissioner
Scott, Kevin	Director, Policy Analysis Unit	Department of Justice, Office of Legal Policy	Speaker
Spriggs, Jill	Laboratory Director	Sacramento County District Attorney's Office Crime Lab	Subcommittee member
Sudkamp, Laura	Laboratory Director	Kentucky State Police	Subcommittee member
Thompson, William	Professor	University of California, Irvine	Subcommittee member; Proxy Commissioner
Tomberlin, Jeffery	Associate Professor	Texas A&M University	Subcommittee member

10th meeting of the National Commission on Forensic Science June 20-21, 2016			
Full Name	Title	Company	Attendee Type
Turman, Kathryn	Assistant Director	Federal Bureau of Investigation	Commissioner
Weedn, Victor	Senior Forensic Advisor to the Deputy Attorney General	Department of Justice	Commission staff
Weiss, Danielle	Contractor	National Institute of Justice	Commission staff
Wroblewski, Jonathan	Principal Deputy Assistant	Department of Justice, Office of Legal Policy	Speaker
Wulff, Paula	Unit Chief - Forensic Science Law Unit	Federal Bureau of Investigation	Subcommittee member
Yeatman, Dustin	Chemistry/Toxicology Manager	PBSO	Subcommittee member

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6. Transcript

NCFS DAY #1, MONDAY, JUNE 20, 2016

PART 1

JONATHAN McGRATH: Good morning, everyone. It looks like everyone is at the table. My name is Jonathan McGrath. Welcome to the Tenth Meeting of the National Commission on Forensic Science. I'm the designated Federal Official.

Before we get started, I'm going to read a couple of housekeeping items. Just in case of emergency evacuation, we are in the Main Conference Room. In the unlikely event requiring emergency evacuation of this building, the following procedures should be followed.

If you hear an alarm from anywhere in the building, you should begin evacuation. Stay calm and gather any personal belongings. Do not take any food/beverages with you when you leave; please leave them behind. Unless otherwise directed by a stairwell monitor, exit through the door in the back of the room located over here. Do not exit using this door through which you entered the room. Exit in a calm, orderly manner. You will exit the building onto I Street. Move away from the building. Follow instructions from OJP-designated employees, who will be wearing orange vests. And designated employees will notify you when an "all clear" has occurred to return to the building.

With that being said, I'm going to turn over the opening remarks to Dr. Weedn and Dr. Butler.

NELSON SANTOS: I'm not a doctor, so I guess I get forgotten. [Laughter]

JONATHAN McGRATH: Sorry.

NELSON SANTOS: Anyhow, good morning, everyone. I just want to welcome you formally to our Tenth Meeting, also to the folks on the webcast. Also a belated Happy Father's Day to those fathers in the room, and I apologize for those who had to travel. Anyhow, let's start the meeting.

Just a couple of notes before I turn it over to John – first of all, thank you for working so hard over the last 90 days to actually accomplish quite a bit. I believe we have nine work products to vote on and several others that are going to be introduced. So I don't know if that had anything to do with the presentation I gave last time, but I'm very happy on the progress that we're making; and I think we're very close to meeting our goal.

As you can see, just very quickly, today is primarily presentations on a variety of topics; and tomorrow is a lot of the business of the Commission that we need to get done. So I ask you folks to please, if you haven't looked at the documents carefully, be ready to discuss them tomorrow because we have a lot to go through; and we're not going to get to everybody's questions, as you know. So hopefully we can address these things quite efficiently so we can get through them tomorrow. Like I said, tomorrow is just going to be a busy day, from nine to five, just going over work products.

So with that, again, welcome; and I'll turn it over to John for some comments.

JOHN BUTLER: Just wanted to review the outline for the day quickly. We have Opening Remarks from DOJ that Victor Weedn will give on behalf of DAG Yates. Willie May has unfortunately just gotten back from a

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trip and is unable to be here, so I'll give the opening remarks for NIST. Then we'll have the Office of Legal Policy; we'll talk about the Forensic Science Discipline Review, and then we'll take questions at that point.

Then Jonathan McGrath will review the SPO, the Subcommittee on Procedures and Operations Status Report. We'll have a working lunch on Certification and Licensing Panel, and then we'll have the Public Comment Period. Then this afternoon will be the closed-to-the-public Subcommittee Meetings.

With that, I'll turn it over to Victor Weedn.

VICTOR WEEDN: Welcome. The Deputy Attorney General, Sally Q. Yates, wishes to express her regrets in not being here personally. But she has a scheduling conflict and has asked that I speak for her today.

Before I begin with my remarks, I want to pause to recognize the horrific events that happened in Orlando. On behalf of the Deputy Attorney General and everyone at the Department of Justice, our hearts go out to the families of those who have been killed; and our prayers are with the wounded and the families and friends of the victims.

As the Deputy Attorney General said, the full resources of the Department of Justice, including the FBI, the ATF, the National Security Division, and the U.S. Attorney's Office for the Middle District of Florida, are supporting the ongoing investigation.

I also want to recognize the efforts of one of our own Commissioner's, Kathryn Turman, who serves as the Director for FBI's Office of Victim Assistance. She's on the ground in Florida, as we speak here now today; and we're grateful for her work during this challenging time.

I want to begin by introducing myself and the DOJ team that supports this Commission. In the past meetings, Dag Yates has spoken about the importance of building a team of experts at DOJ to support and strengthen forensic science policy. And I'm pleased to be a part of that growing group of individuals.

DAG Yates introduced me at the last meeting; I am Victor Weedn, and I have been detailed from the George Washington University to the Department of Justice as the Senior Forensic Advisor to the Deputy Attorney General. As many of you know, I recently completed a term as President of the American Academy of Forensic Sciences; and it is a pleasure to be with you all here today.

Jonathan McGrath, you had opened the session.

You probably noticed that Jonathan has replaced Andrew Bruck as the Commission's Designed Federal Officer. Dr. McGrath serves as a Senior Policy Analyst with the Department's National Institutes of Justice Office of Investigative and Forensic Sciences in Washington DC, and has been supporting the Commission's activities since joining the Department in March of 2015.

Prior to joining DOJ, he served eight years with the U.S. Customs and Border Protection Laboratories and Scientific Services, first as a Forensic Scientist at the CBP Southwest Regional Science Center in Houston, Texas, and then as a Science Officer at the CBP Laboratories' Headquarters Office in Washington DC.

Dr. McGrath has a B.S. in Chemistry, a Master's of Science in Forensic Science, and a Ph.D. in Analytical Chemistry. Dr. McGrath has been working closely with all of you for several months, and we are appreciative

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that the NIJ has permitted him to serve as the DFO for this group. We believe there is no one better suited for this position.

And the DAG personally thanks you, Jonathan, for taking on this challenge.

Lindsay DePalma – is she here? There's Lindsay.

Can you raise your hand, please?

Lindsay DePalma serves as the NCFS Program Manager. Ms. DePalma works as a Technical Consultant to NIJ's Office of Investigative and Forensic Sciences and has previously supported many of NIJ's DNA initiatives. She holds a Bachelor's Degree from James Madison University in Integrated Science and Technology and a Master's Degree in Biotechnology from Johns Hopkins. She worked at a private biotechnology company overseeing gene therapy trials before coming to NIJ.

Andrew Bruck is behind me.

Do you want to raise your hand, Andrew?

Andrew Bruck is now serving as DAG Yates' Acting Chief of Staff, and he will continue to work with me and others on the forensic science issues. The DAG personally thanks him for his past and continuing efforts.

Please also allow me to reintroduce Jonathan Wroblewski and Kira Antell and Shimica Gaskins – there's Shimica – all of the Office of Legal Policy. They are a dedicated and talented team. They figure prominently in DOJ's forensic science efforts and the responses to this Commission. They also were key to the developments of the Uniform Language for Testimony and Reports in the Forensic Science Discipline Methodology that I will return to.

We have two new Commissioners with us today.

Rebecca Ferrell, would you raise your hand?

Ex-Officio NSF Representative, Dr. Rebecca Ferrell.

Mark Weiss recently has retired and requested to step off the Commission. To take over his role as our Commissioner is Rebecca Ferrell, Ph.D. Dr. Ferrell is currently the Program Director of the Biological Anthropology Program at the National Science Foundation, where she also serves as Co-Lead of the NSF's forensic science efforts. Dr. Ferrell specializes in skeletal and dental anthropology; and since arriving at NSF in 2014, Dr. Ferrell has managed a diverse research portfolio. She is currently working with colleagues across the NSF and at other agencies to identify and cultivate basic research with relevance to forensic science and to launch a forensic science industry university cooperative research center.

Troy Lawrence, would you raise your hand?

Digital Evidence Commissioner Sergeant Troy Lawrence.

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As you may recall, Bill Crane recently took a new job overseas and resigned his Commissioner's seat representing the digital evidence community. To fill his seat, the Attorney General has appointed Sergeant Troy Lawrence.

Supervisor of the Digital Forensic Laboratory in Fort Worth, Texas, the Police Department there, Sergeant Lawrence is a 28-year veteran of the Fort Worth Police Department. He began his forensic career in 2000 and developed the Fort Worth PD's Digital Forensic Lab, which started as a one-person, part-time position and now currently maintains six examiners who process computers, mobile phones, and forensic video.

He is the Director of the training for the International Association of Computer Investigative Specialists, a Certification Body, and has previously served as a peer review coach, certification regional manager, Chairman of the Recertification Committee, and Secretary on the IACIS Board of Directors. We're pleased that Sergeant Lawrence can provide the perspective not only of the digital forensic county, but also the views of the state and local law enforcement community, which is so crucial to the work that we do.

It's a busy time for forensic science at the Department of Justice. We have several projects in development or underway, and I thought it would be helpful to provide an update. In the last few months, we've been particularly active in examining how forensic science evidence is described in the courtroom. We have two projects, one forward-looking and one backward-looking, that we're developing simultaneously. They are distinct projects but closely related.

The forward-looking project involves the proposed uniform language for testimony and reports, which we simply call the ULTRs or the Uniform Language. As I'll explain more in a moment, this is an extension of the FBI's multi-year effort to develop standards for testimony and reporting for a variety of forensic science disciplines. We anticipate that once finalized and adopted, the uniform language documents will govern what DOJ's forensic examiners can and cannot say when testifying in court or drafting a report. The first batch of proposed Uniform Language documents were released for public comment two weeks ago, and we anticipate another round later this summer.

The backward-looking project is the Forensic Science Discipline Review or FSDR. As you'll recall, Jonathan Wroblewski presented a framework for the FSDR at the March NCSF meeting; and you'll be hearing a more detailed overview of the proposed methodology later today. This project is designed to examine historical cases in a manner similar to a quality assistance review. Later this week, we expect to release a written summary of the proposed methodology for public comment, which we plan to review and incorporate before presenting again to the Commission at our September meeting.

These two efforts, the Uniform Language and the FSDR, are part of DOJ's ongoing effort to ensure that the practice of forensic science is grounded in sound science and presented to judges and jurors in a scientifically-valid manner.

Although DOJ is spearheading these efforts, we are working hard to ensure that the broader community, scientific and legal communities, are involved throughout the process. That includes scientists and practitioners, academics and advocates, and our partners in state and local law enforcement. DAG Yates has made clear that the development of both the Uniform Language and the FSDR should occur in a thoughtful, transparent way.

At each step of the process, we have sought and will continue to seek public comment not because we are required to but because we genuinely believe that input from others makes our work stronger. There may be

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occasional disagreements over substance, but we can always agree on the value of an inclusive, collaborative process.

Let me provide a bit more detail about the Uniform Language project. Earlier this month, DOJ announced the release of the first batch of proposed Uniform Language in the Federal Register, which are now open for your comments and input.

As I mentioned before, the proposed Uniform Language specifies what Department forensic experts can and cannot state in laboratory reports and courtroom testimony based upon sound science for seven forensic science disciplines; specifically, fiber, footwear and tire treads, general chemistry, glass, latent prints, serology and toxicology.

Later this summer, we plan to post another batch of proposed Uniform Language documents for other forensic science disciplines including firearms, explosives, DNA, hair analysis, and handwriting. After reviewing and responding to public comments, DOJ hopes to finalize and approve these documents later this year. Once issued, the Uniform Language will apply to all DOJ forensic examiners at the FBI, ATF, and DEA.

The Uniform Language is based on the FBI's Approved Standards for Scientific Testimony and Report language, or ASSTRs, which the FBI has been developing over the past several years, and which DAG Yates and others have discussed in the past. Earlier this year, we decided to broaden the scope of this effort so that the standards would apply not only to the FBI but also to our other investigative agencies as well. In addition, we decided that before adopting these documents as final we would seek input from this broader community.

Although the Uniform Language documents, as approved, will apply to Justice Department personnel, the Department nonetheless decided to release the proposed documents for public comment. As the documents make clear, the Uniform Language documents are not intended to serve as precedent for other forensic laboratories and do not imply that statements by other laboratories are incorrect, indefensible, or erroneous.

These documents are now available for public comment through midnight on Friday, July 8th. Copies of the proposed Uniform Language documents are available for review at www.justice.gov/forensics. And public comments may be submitted online through www.regulations.gov. Please note that all comments will be made public.

At the last Commission meeting in March, the Department's Office of Legal Policy presented a very general framework for forensic science discipline review and then asked for public comment. DOJ received thoughtful comments from many stakeholders. You'll hear more from OLP shortly when they present further details on our current thoughts on the FSDR methodology. But I want to emphasize that the review of testimony is intended to provide a Department-level review and feedback mechanism for the status of forensic testimony and not because there is any indication of systemic issues. The actual proposed FSDR methodology will be posted later on our website, www.justice.gov.

I hope that you will provide us with significant input on this important effort, also through the www.regulations.gov website during the public comment period.

I'd also like to provide updates on Commission activities. At the March meeting, we had a very productive discussion about prioritizing the most important issues to maximize our efforts before the NCFS Charter expires next April. As we have said in the past, we are hopeful that the Commission continues in the future; but we cannot predict whether the next Administration will decide to renew the charter or not.

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It's also important that we prioritize our efforts during this difficult budget environment. DOJ is eager to support a broad array of efforts to strengthen forensic science, but we must be aware of our finite resources. As you may know, Congress is currently working through appropriation bills for the upcoming fiscal year, which starts in October. It's worth noting that the current House Bill would eliminate funding for this Commission for the next fiscal year, which is an important reminder of the challenges we face.

Last week, we circulated the Attorney General's Memo responding to NCFS work products adopted two meetings ago at the December 2016 (sic) meeting: Recommendation to Develop a Forensic Science Curriculum.

The Attorney General, Loretta Lynch, agrees that additional comprehensive and balanced forensic science curricula could improve the legal practice related to forensic science. DOJ will transmit the NCFS's Recommendation on Forensic Science Curriculum Development to appropriate researchers, statisticians, scientists, and legal organizations and ask the individuals and organizations to consider developing responsive training.

She has directed Department litigating entities to review the forensic science training available to Department prosecutors to determine if new training should be developed or if training protocols should be instituted. And she has directed components to explore where there are opportunities to further distribute existing Department-generated forensic science training materials or where it may be able to support the creation of new responsive training materials.

The Views Documents – The Commission also voted to adopt two Views Documents, one on forensic analysis based on task-relevant information; and the other on documentation, case record, and report contents. In accordance with Commission bylaws, the Department will not respond to them.

Medical/Legal Death Investigation – You may recall that the AG referred previous recommendations on Medical/Legal Death Investigation to the White House Office of Science and Technology Policy or OSTP. An OSTP fast-tracked action committee on strengthening the Medical/Legal Death Investigation System had previously formed and recently issued a draft report for public comment in improving MDI data systems.

The OSTP is following that effort with a new MDI working group that I will co-chair with Chris Jones of the DHHS and Eleanor Celeste of the OSTP. This is an area that has captured the attention of the White House, and the MDI recommendations will be considered there.

The amount of work products produced by this Commission is increasing. At the March meeting, eight documents were approved, half of which were Recommendations and half Views Documents, some of which involved more deliberation than others. Please recognize that processing these recommendations in a timely manner is a priority; but the complexity of the March recommendations, combined with the Department's forensic focus on development of the SDR methodology and the Uniform Language process, creates a challenge to us. We will continue to work to review and respond within six months.

Future of the Commission – The House, Commerce, Justice, Science and Related Agencies Appropriations Committee has issued a budget that does not include funds for this Commission and remarks that the Administration's Forensic Science's initiative lacks the involvement of state and local practitioner community. I would point out the following. While the Department estimates that funds are currently available to hold

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quarterly NCFCS meetings until the completion of the current Commission charter in April 2017, the Commission's continuation beyond then will depend upon support from a new Administration.

We appreciate your valuable efforts to improve the forensic sciences in this country. Thank you.

JOHN BUTLER: I have just a few slides to share, if I can get my slides back.

As a NIST update, as I remarked earlier, Willie May unfortunately is unable to be here today and sends his regrets for not being able to speak. So I just wanted to share some of the slides that we planned.

Tomorrow afternoon, the Scientific Inquiry and Research Subcommittee is going to discuss the documents that have been prepared by the Subcommittee. And NIST, about six weeks ago, provided some input to the Subcommittee; and I want to just mention that.

The first bullet I have up there is that the ISO/IEC 17025 just points out that validation is the confirmation by examination. So it requires you to use data, of course, to define the capabilities and limitations of the new measurement methods.

NIST does not plan on trying to provide a detailed evaluation of every forensic method or practice; that was never what we had the capability to be able to do. So what we've talked about is that we would initiate a series of invited reviews written by NIST scientists or others that could help with examining the scientific underpinnings of select forensic disciplines. This is what has been discussed before, and it's part of the MOU that we look at select forensic disciplines.

One of the things that's been discussed as part of that is that we'd have with the publication of resource documents that would discuss these things looking at the scientific validity of different methods. It could also be a companioned with some judicial training to go with that. Details on how that worked out – right now, it's just concepts.

So what we proposed back to the Subcommittee is that we would focus efforts in three areas: bite marks, which NIST doesn't have any experience in but would work with others on that; firearms and tool marks; and DNA. So those are the three pilot proposals that were given back to the Subcommittee.

The other thing just to point out is that if you look at the overall process in terms of forensic investigation from the point of collection of evidence all the way to testimony, NIST expertise of course lies in measurement science. So the expertise relies mainly in the detection and analysis phase, a little bit into interpretation. In order to be able to do these things, that's why we proposed doing some pilot projects looking at what are some of the challenges of even producing these types of documents.

To do this in more detail in more disciplines would require some funding and resources to be able to do that, but this is what has been just described back to the Subcommittee.

In terms of how information would be shared, these are some of the ideas we're looking at – whether it be a book chapter, which is what Willie May described last time, or a NIST report in some format or the Journal of NIST Research. And we've provided back to the Subcommittee this kind of outline where we have introduction of the scope of the evidence types and conditions; what would be measured and compared; what's the parameter to be analyzed, the nature of the features being compared; and then what are the current approaches for repeatability and reproducibility.

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Another option we've been looking at is the *Journal of Metrologia*, which is an international journal for measurement scientists, a metrology journal. We've talked to the editor of this journal, and this is another option to put things out on an international scale. So we're just looking at ways that once these types of documents are written up, how can we share them with the community.

Other discussions that NIST has held – we went up to the Innocence Project at the beginning of May and met with them and talked about some of the issues and challenges we face. Also the President's Council of Advisors on Science and Technology invited several NIST people to participate in a May 20th meeting and talk about some of the issues with evaluating forensic disciplines. So we just wanted to make you aware of some of those discussions.

Another point is with OSAC, last time there was some discussion about the OSAC Registry and the growing pains, some of the lessons learned with this. There's a lot that's been learned as we've looked into what was mentioned at the last meeting -- the ASTM E2329, the Seized Drug Standard. One of the things we've been looking at is a review of the ASTM balance requirements and try to improve stakeholder participation, some of the challenges that happen with the interconnectivity of many standards that are in play, and then the need to get more researchers and metrologists and statisticians involved. And so a lot of outreach has gone on trying to get more people involved.

On this Wednesday, on June 22nd, there's going to be a meeting – a focus group from the OSAC participants – to try to strengthen the OSAC processes and communication. So these are some of the things we're looking at; of course strengthening the technical merit checklist; regularly convening the NIST experts to look at documents; and a statistician, a task group, weighing in on their options and opinions.

The next meeting, the NCFS Meeting 11, will be held at NIST in Gaithersburg; and so we're excited to hold that there. As part of that we'll be doing a few tours, probably at the end of the Subcommittee time period is what we're looking at on the first day; but to be able to have the opportunity for you to see a little bit of the NIST campus so you get a perspective of some of the things NIST is working on.

Just last week, we actually opened a museum exhibit on some of the early forensic science work that was done back in the '20s, '30s, '40s and '50s at NIST; and so that will be something you can see as well when you come to Gaithersburg. So we're excited to have you there.

And the last thing is just at the end of this calendar year in November, there will be a Forensics at NIST Conference; and so there will be an opportunity to showcase the research that NIST is doing, as well as hearing from the NIST Forensic Science Center of Excellence and the efforts they're doing.

So those are the prepared slides we had, and I can help with answering questions later after the OLP talks.

NELSON SANTOS: Okay, let's move into the FSDR presentation.

JONATHAN WROBLEWSKI: Good morning, everybody.

The slides? We don't know? While we're waiting, maybe I should just introduce myself and our team that's working here on the Forensic Science Disciplinary Review.

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My name is Jonathan Wroblewski, and I am the head of the Office of Legal Policy. And I'm very, very fortunate to have a wonderful team that's participating with me.

First, to my right, is Shimica Gaskins, who is the Acting Deputy Assistant Attorney General for Policy. Next to her is Kevin Scott, who is the head of our Data Analysis Unit -- our very, very small Data Analysis Unit. And next to him is Kira Antell.

Also, I just want to mention Jon Gould, who just joined our office, who is on the faculty at American University, who is also participating.

So we're very, very glad to be back here before the Commission to update you on the FSDR and the work that we've been doing over the past few months.

Before I start talking about the FSDR, I want to thank those of you who commented on the framework that we presented last time. The comments were very, very helpful. If you haven't had a chance to look at those comments, please do because it gives you a little bit of preview of the different perspectives that I'm sure we're going to hear. We already began hearing back in March on different aspects of the methodology to be used as part of the FSDR.

What we'd like to do today first is to present what we've been up to, with a focus on the methodology development. Kevin will then outline for you our Draft Methodology, and we'll also lay out our path forward. And of course after we're done talking, we'd very much like to get your comments on all of this.

So there's our team. We're having trouble moving the slides.

Okay, so here's a little outline of the presentation. I will first start with giving some background on the Forensic Science Discipline Review. Kevin will then lay out a little bit about our draft methodology, and we'll also talk about some other elements for comment.

As Victor mentioned, and as you probably all recall, back in February the Deputy Attorney General announced that we would be undertaking this review. It came as a result in part of concerns that were raised with testimony related to microscopic hair analysis. As Dr. Weedn said, our goal here is to ensure that forensic science used in the courtroom is consistent with scientific principles and just outcomes. And what we're trying to do here is to learn and understand how testimony is being presented in court in recent cases, and then to facilitate any necessary steps to ensure that, in fact, expert forensic testimony is consistent with scientific principles and just outcomes.

Over the last several months, we have been doing a whole lot of outreach; and we've met and spoken with many of you. We have been speaking mostly with experts outside the Justice Department. We have spoken and spent a lot of time with our colleague at the National Institute of Justice and the Bureau of Justice Statistics. We have also spoken with folks from NIST, from CSAFE, the Innocence Project, NACDL, the National District Attorney's Association, the forensic community and many, many others.

We have also undertaken a literature review to understand previous reviews that have been done of forensic testimony. And from all this, we're working towards our proposal and our methodology. And as of now, our proposal is to review forensic testimony presented by FBI examiners in a variety of different forensic disciplines in state and federal cases over a five-year period from 2008 to 2012. The reason we selected this particular five-year period is, again, our goal is to try to learn what's going on in the courtroom now. And we

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don't want to get in the way of cases that are ongoing, and that's why we didn't go as late as 2016. On the other hand, we don't want to go much further back than 2008. And so tentatively, we are looking at examining testimony from the period 2008 to 2012.

The disciplines that may be involved in the review are listed up here on the slide. As Dr. Weedn said, the choice of disciplines to review is not based on any particular specific concerns about any of those disciplines. However, these disciplines were identified in the National Academy of Science's report a number of years ago and have also been identified by a variety of folks whom we have spoken with.

Now, as I've said, we've consulted broadly since our last meeting. But we want you to know that any and all comments are welcome. We encourage all of you, whether we've spoken with you or we haven't, to review the Draft Methodology and to provide written comments.

Our objective in developing the methodology is, number one, transparency. We think that to make all elements of the methodology fully available for review and public comment is going to lead to a better review and is also going to lead to greater public trust and confidence in the review.

As Dr. Weedn mentioned, we hope by the end of this week to post the Draft Methodology online -- that's the full text of the methodology, not just the slides that we're presenting today -- and to have a period of public comment from 30 to 45 days.

We also want to be, in putting together both the Draft Methodology and all the work around the FSDR, as independent as we can possibly be within the Justice Department. And so our team has been working independent of the labs and federal prosecutors. We think that's the best way to avoid or to minimize any bias.

We also, again, want to bring to you, to this Commission, for review and consultation, all of our steps on the way to beginning this review, including our Draft Methodology, our framework. And then our hope is to present a final methodology to you in September so we can get going with all of this.

Here is where we've been. In March, we presented the framework. We received comments through May, which very much informed our development process. We have been working over the past several months to develop a Draft Methodology, which we are going to be presenting now.

Moving forward, later this week we hope to post the Draft Methodology for public comment. We are then planning to hold what we're calling a Statistician Roundtable. We have heard from many stakeholders, a very, very keen interest and a desire to have statisticians involved in many, many different aspects of this review; and we want to do that. The way we've proposed to do that, initially anyway, is to have this roundtable; and we've begun inviting statisticians to spend a full day with us in July to go over various aspects of the methodology; the Uniform Language, the language that we will be using as standards for this review; and other issues related to the review.

Following the roundtable and the comments on the Draft Methodology, we're planning to revise our methodology and present to this Commission in September what we hope will be a final draft of the methodology for review and comment and consultation with this Commission. And it's our hope, once we've finalized the methodology to begin the FSDR review, either later this year -- I think more likely, beginning next year.

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As Dr. Weedn mentioned and as you all know, the Department published the Uniform Language for Testimony and Reports. These are standards for use prospectively in testimony. They were based on the FBI ASSTRs; and, as Dr. Weedn said, we have published seven different disciplines. They're out for public comment, and more Uniform Language documents will be coming later this summer.

Now, one thing I do want to mention is that the standards that we're going to be using for this retrospective review, the FSDR standards, will likely, in some cases, be different because the science has been changing. We're not sure; we think that the Uniform Language will form the starting point for the FSDR standards, but there may be some tweaking. And our expectation is that at least one FSDR testimonial standard can be presented to this Commission in September and other standards to be presented to the Commission in subsequent meetings.

With that, let me turn it over to Kevin, who can begin walking you through the Draft Methodology.

KEVIN SCOTT: Good morning.

In addition to OLP staff, research experts from the National Institute of Justice, and the Bureau of Justice of Statistics, both of the Department's Office of Justice Programs participated in the development of this Draft Methodology. OLP particularly thanks Chris Tillery, Joel Hunt and Linda Truitt of NIJ and Matthew Durose of BJS for their participation.

The FSDR seeks to assess how closely FBI examiner Statements of Relationship in the selected disciplines conform to FSDR adopted testimonial standards. Jonathan has already touched on discipline selection and on the FSDR standards, so I'd like to start with a discussion of Statements of Relationship.

Because the interest of the FSDR is a general one and not driven by a concern with a particular discipline, we believe it appropriate to look at all statements that expressed a relationship between a piece of evidence whose origin is known and a piece of evidence whose origin is unknown or two pieces with unknown origin.

Those statements can take three general forms: statements of association, where the examiner concludes that the known and the unknown pieces of evidence have the same source; statements of exclusion, where the unknown is determined to have come from a difference source than the known; and then inconclusive statements, where the examiner cannot determine if the known and unknown evidence have the same source.

Our focus on all Statements of Relationship is one important distinction between the FSDR and previous reviews. And our work here was informed by the FBI's Microscopic Hair Comparison Analysis, the work of the Texas Forensic Science Commission, and the work of the New York Commission on Forensic Science. These reviews focusing on hair evidence have generally focused on both reports and testimony, and have been restricted to cases where there was a positive, probative association and where the defendant was convicted.

The FSDR, on the other hand, proposes to look at all testimony; all Statements of Relationship, not just positive associations in those testimonies; look at all cases between 2008 and 2012, regardless of the outcome of the case. We believe these choices best reflect the goal of the FSDR that Jonathan outlined earlier.

One thing I want to note here is that we plan to look at testimony both in federal court and state court by FBI examiners.

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Next slide, please.

KIRA ANTELL: I think when we first came, when we talked about the FSDR framework, we thought we were going to be doing sampling. And I think this slide is probably a surprise for many of you. We made a determination that sampling was unnecessary because of the low numbers of cases in which FBI examiners did testify. You see they sort of range from a high of 132 in latent prints to really a low of 17 in paints and polymers, and sort of range across there.

I think whenever you're given an option with reasonable number of cases to look at a whole population, it makes sense to try to look at that whole population. I want to note, this information was provided by FBI; but we also really want to make sure that we're looking at the whole population and that we're not missing cases. You see there where's a crowd sourcing request; that's going to be forthcoming. Once we've established which discipline that we are going to start with, we're going to put the word out; and we will ask people to send us information about cases they know of where FBI examiners did testify so we can reconcile our list and try to make sure that we have the actual population of cases.

KEVIN SCOTT: Perhaps the key question in review of testimony is the level of that review. Such a review can range from looking at individual statements and evaluating them without any broader context to looking at the entire testimony and attempting to determine if the testimony, as a whole, was problematic.

The FSDR, informed by the academic literature on how testimony on pattern evidence is perceived by triers of fact proposed to adopt a methodology that is a hybrid of these two approaches. We propose to break a given testimony into what we're calling "threads," which are defined on the screen as "complete, even if not continuous, discussion of a piece or pieces of evidence that has at least one Statement of Relationship.

KIRA ANTELL: You have an example in front of you. I think we'll also get it on the screen. One thing I just want to note on this attempt to thread – and we're really interested to hear what you have to say about this, and we're interested in your feedback. I think the threading is really an attempt to try to get at what testimony in a courtroom actually winds up being, like where you might talk about one piece of evidence early on in direct, and then it gets picked up later in the direct, and then it's talked about on cross. It's an attempt to sort of group all of those together in a single thread so that we can look at that as one continuous item.

KEVIN SCOTT: So what we're doing with threading is, as Kira indicated, we're trying to preserve the relevant context while excluding irrelevant information to that piece of testimony. Relative to evaluating the whole testimony, which may be appropriate given a different goal – if that goal, for example, is to determine how consequential that testimony was in determining the guilt or innocence of the defendant, threading requires less judgment on the part of the evaluator and preserves the focus on the examiner statement which is, again, consistent with the goal of the Forensic Science Discipline Review.

You should all have handouts in front of you, in case you don't want to squint at the screen. If you want to squint at the screen, feel free to do so. The handout you have helps just give a very basic illustration of what we conceive of by threading.

The first block of text, which is highlighted in green, refers to 32 casings. And there is no Statement of Relationship in the green block of text. However, if the testimony had never broken down those 32 casings and there was a Statement of Relationship, we would call that one thread. But what you'll see as soon as you get to the yellow highlighted text is that the prosecutor breaks 21 of the 32 casings out and will, in the balance of the testimony, only talk about those 21 casings as a group.

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In what's highlighted on the screen, there are two Statements of Relationship – one where the prosecutor asks the examiner a question; and the examiner answers by saying, "That's correct." But then the examiner goes on to make an independent statement of what we call a Statement of Relationship.

You can continue the same example. The second thread, highlighted in blue, is about 9 of the remaining 11 casings. There are three Statements of Relationship in this thread.

The final thread, with two Statements of Relationship, refers to an additional two casings that the examiner in this case could not say if they were fired from the known weapon and could not even determine if they had been fired.

The idea behind threading would then be to collect and thread all subsequent mentions of these three groups of casings across direct examination, cross-examination, redirect, and recross, and so on throughout the examiner's testimony and to aggregate those into a thread for analysis by coders.

The final major component of the proposed FSDR methodology is how to actually conduct the review. We essentially propose an academic research model to develop a validated protocol to code the Statements of Relationship and then train coders to apply that protocol to the threads that we identify. We plan to ensure consistency by assigning the same thread to multiple coders and collecting data on inter-rater reliability. We can also use these data to assess the accuracy of our training codes.

We also plan to pilot in order to refine our protocols. So we'll identify a set of cases that occur outside of the FSDR frame, and we'll use those to develop the validated protocol and to train the coders who we would have do the task of evaluating the customer.

As we've mentioned, we will be posting a research proposal later this week for public comment. We're interested in the views of the Commissioners and other stakeholders generally, but we wanted to mention a few items on which we are specifically seeking comments.

First, we believe that Statements of Relationship can be coded on where in the testimony they occurred. So did they occur in direct, did they occur on cross, and so on? Who spoke the words that were the Statement of Relationship; what those words were, the type of relationship – again association, inconclusive, exclusion; whether the statement was subsequently bolstered; and whether the statement was subsequently qualified?

KIRA ANTELL: And we're of course interested to see if there are other aspects of Statements of Relationship that could be evaluated.

One thing that I want to note is about who spoke the words that were affirmed by the examiner. So in order for a statement to become a Statement of Relationship, it does have to be affirmed by the examiner. But I think we know often that question or statement can be made by a prosecutor or a defense attorney, by the Court; and then a simple, "Yes, that's correct," might be the affirmation from the examiner. We're interested in looking at those, as well as just the language that came out of the examiner's mouth.

KEVIN SCOTT: We've also kind of conceived of this notion of Statements of Relationship and threads and testimony, and we hope to tap the expertise that's available to us to help us determine how best to understand and report the data that we collect. We know that threads will vary in the number of Statements of Relationship that they contain. We know that testimonies will vary in the number of threads that they

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contain. We know that as we adopt these FSDR standards they may, from discipline to discipline, identify statements that are acceptable in some disciplines, that are not acceptable in other disciplines.

These factors require that we account for them as we aggregate and analyze the data. Our intuition, our belief, is that the best approach is to conduct exploratory data analysis once we have the data. But we're interested to see if there is a statistical model well-suited to these issues that we can use as a starting point.

KIRA ANTELL: I think, again, one of the things that we talked about in March was that we thought we were going to be looking at a sample. And so we thought there would be a sample and potentially a secondary review, depending on what was shown in that sample. Because we're looking at a full population of cases, the utility of sort of a secondary review following a review of population doesn't make as much sense; it's not really clear exactly what that would look like. That said, there could be outcomes that we see as we observe the data where it's appropriate for the Department to consider looking at other cases or other sets of cases; and we've listed a couple there.

We're also interested in what you have to say about what some of those examples might be. Again, some of them might be that testimony earlier in the time frame has less conformity with the standard – perhaps a particular discipline. Or perhaps we find that a particular examiner – we will obviously have that variable and be able to determine conformity with the standard across examiners.

JONATHAN WROBLEWSKI: We also recognize that when we find nonconformities that it may trigger legal or ethical obligations for us to notify defendants. And we're very much interested in comments from the Commission and from the public about what is the threshold that needs to be met before some type of nonconforming statement that may exist in a variety of different threads triggers any of these legal or ethical obligations.

And specifically, also we're curious as to your thoughts about if we use, as part of our FSDR standard, something that's different from the Uniform Language because the science has been changing or the information available to our experts has been changing, whether there's any sort of difference that may occur in terms of, again, our legal and ethical obligations in terms of notification.

With that, let me just remind you. So there is comment on the Uniform Language in the seven disciplines that have been published; that's open through July 8th. We anticipate, over the course of the next weeks or month or so, additional Uniform Language documents to be posted; and we anticipate that comment period to run into July and probably into August. The comment on the FSDR Draft Methodology, again, that's going to open shortly, as soon as we publish that on the website. And that will run for a period of 30 to 45 days.

So again, back to our process, we introduced the framework back in March. We've been working on the methodology over the course of the last several months. We have presented the Draft Methodology to you in this presentation. We'll be publishing the full text of the Draft Methodology in the next week or so. We'll be holding the Statistician Roundtable next month. And we intend to present what we hope is a final revised methodology to this Commission for your review, consultation and comment.

And then once we have the methodology finalized, as well as a standard by which we're going to compare and review the testimony, we hope to begin FSDR implementation.

You should know that in parallel, obviously we have the ULTR process going in parallel with the methodology. At the same time, we're also putting together a budget and trying to find the money to do this. This is going to

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take millions of dollars. It's probably going to take at least a year, and probably longer; and so we're doing that also in parallel.

And so with that, I think we'll take any comments. We'll try to answer any questions that you might have, and I think we can go for half an hour or so. Anyway, we're happy to be here and answer any questions and hear any comments that you have.

KIRA ANTELL: I think we knew who our first question would be from – please.

STEPHEN FIENBERG: I'd like to begin with some comments, and then I actually do have some questions.

In the initial filing in the Federal Register, several of us submitted a joint set of comments; and it had three components. And I just want to read a couple of sentences from that because it's a precursor to my observations regarding the presentation today.

And we began by saying that we believe that the design and implementation of the proposed review should be done by an organization or group that is independent of the Department of Justice. That is not happening. And we went on to explain why an arm's-length evaluation, independent in arm's length, was so essential both for transparency and for public trust in the outcome of the review and that these could be assured only by an independent process.

We outlined some of the statistical issues that would be associated with creating a methodology, and we noted that the expertise to do the design that we outlined and to carry out the review does not exist within the Department of Justice.

Everything I've heard today suggests that our advice is being ignored. And I want to point out that each of the steps, while laudatory in some sense, is moving the entire review down a pathway that ultimately is going to leave it open to major challenges. So the choice of methodology affects the outcome of what's going to be reported.

Uniform Language coming from the FBI Lab is terrific because it gets the FBI Lab actually thinking about what its analysts should be saying. But are those the standards by which any independent review should actually be carried out? I would argue, no. And if you look in detail at some of the statements, I would argue that they are not scientific statements.

Selection of cases – the time frame is an essential component of that. The presentation said you have a rationale for that, but it's the Department of Justice's rationale and not an independent one.

Are 132 latent print testimonies appropriate for evaluation in the large of what's gone on? I don't know because it requires looking at the entire database and asking a relevant set of questions.

Is the threading the appropriate dataset to look at? I would argue heartily not; it's the tip of an iceberg. But what are the real data that undergird the statements in the testimony? Will they be on the table? Are we looking at this backwards?

So I think that there are many questions. And I believe that the process that your group is going through is not in the best interests either of DOJ or of the FBI laboratories in the long run, and that there's a great need to

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step back and to assure that an independent group is actually looking at this and judging the relevance of the statement.

What does "association" mean? You presented that as if this common language, both around this table and within the FBI Lab and in any other lab around the country with regard to how that relates to the evidence that the examiner is describing. I'm not sure that we have such agreement; indeed, I suspect if we went around this table, there would be 33 different statements about what association means. I'm a statistician, and I can tell you what it means to me.

JONATHAN WROBLEWSKI: Dr. Fienberg, I'd like to respond a little bit.

First, I just want to assure you that the comments that you submitted on behalf of CSAFE, with your colleagues from CSAFE, are not in any way being ignored. Your comments -- and the comment period ran through the middle of last month -- we have taken your comments, and there are a variety of aspects, including the independence and whether this should be done independently of the Justice Department, will all be reviewed, will all be considered. And there will be some decisions made within the Justice Department that will be presented here at the September meeting.

You mentioned a whole number of different aspects of the methodology. And if you read the other comments, you'll know that we heard very many different conflicting views on aspects of the methodology. And nothing that we've presented here today suggests that these are sort of firmly decided by the Justice Department. They are draft elements of the methodology that we very much want your comments.

And so when you talk about, for example, do we have the time frame right, we're not sure we have the time frame exactly right. And we hope that you and the other members of the Commission and the members of the public will tell us what you think the appropriate time frame is and why you think that time frame is the appropriate one.

Kevin laid out for you the way we look at this using an academic model and that we're talking about using professional coders. Now, we know that we've heard already -- again, as part of the comments from the framework that we've presented -- many, many different views about who should be involved in it. And as you know in the New York review and in the Texas review and in the FBI Microscopic Hair Review, they were not independent coders. They were members of the Defense Bar; they were FBI Lab technicians who were involved; in some of them, there were prosecutors involved.

So we're not suggesting that we know in absolute terms that we have it right. We are laying out a draft -- whether it's on time frame or the standards to be used, the types of coders, and all the various aspects of the methodology -- we're laying out as a draft for people to submit comments. So we want those comments; they will be reviewed. There will be discussions both within the Justice Department, outside the Justice Department, about how this should be conducted and all the aspects about how it should be conducted, starting with whether it should just be done by an outside group as you've suggested.

If it's not done by an outside group, who should be involved in the coding? Should we be using threads, or should we be using individual statements? Should we be using the Uniform Language or some different language as the standards by which to compare the testimony?

There are enumerable questions. And as I said in the beginning of my presentation, the comments from the framework give us a preview or a view into all the different views and the conflicting views that we, I'm sure,

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will hear from around this table about who should be doing the review and how it should be done and the various aspects of the methodology.

So what we are presenting to you today is a draft. And the questions that you raise are important questions; but what we're looking for, to be perfectly frank, what we're looking for in your comments are your suggested answers. We know that there is no certainty about 2008 to 2012. We know there is no certainty about this threading because we've looked at the literature when we've looked at the past experience.

We want statisticians to be involved; we're suggesting the roundtable. Maybe that's wrong; maybe there are other ways that statisticians should be involved that we don't have right. Please let us know. Let us know here right now; let us know in the written comments. We will then be looking at all of those written comments.

Yes, we will be consulting internally. This is a Department of Justice project that we want to have the trust and confidence of this Commission and, frankly, of the public. And so that's why we're presenting it to you in March, in June, in September. Hopefully, we can find a way forward that this Commission can support. That's our intent. We're not intending to tell you this is the way we're going to do it; take it or leave it. We're looking for comments on all the various elements of the methodology.

SHIMICA GASKINS: And if I could just add, Stephen, in terms of the standards, I think you mentioned in your comments whether the ULTR is at the right standard and whether those words that are currently written in them would be used.

And I think what we're trying to make clear here is that we don't perceive it as being the standard for the FSDR; and, in fact, we're very cognizant of making sure that the Uniform Language was put out before so we have the benefit of this body and the public in understanding what those right words and those associations should be, and that that could be used to inform the FSDR standard which we really, truly believe probably will be slightly different or much more different.

And you have the opportunity again here, once we have one that we think the community has consensus around to look at and decide is this appropriate for the FSDR. They're proceeding in parallel; we consider them very separate, but we are trying to use them to inform each other.

KIRA ANTELL: Thanks, I think we have a question from Jim Gates and then Peter.

JIM GATES: Thank you. First of all, I'd like to thank the briefers on the panel for a very informative set of statements.

My question is actually sort of in the weeds but something I would propose for you to think about. These sorts of exercises are likely, in my opinion, to be something to continue into the future. And if that's the case, not only is the direct product that you have in your foreground important, but there's something else that I think is really critical to this; namely, that you set a template for something that could be used broadly in the future, which requires that you document what you're doing extraordinarily well.

One thing that occurred to me is I'm totally in the dark about where is information technology being used in this because one could imagine that if you document things well enough, part of this scaling up – because I would expect it to be needed to be scaled. I heard my colleague here asking about where are you going to get all the time for doing this? And that's certainly the right question. Taking advantage of computer technology, artificial intelligence seems to be one way to leverage that creation of extra time.

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And so I hope and would encourage this group to keep us informed about the outer realms of what you're doing in terms of technology, in terms of the product, beyond the actual outcome – something that then becomes a tool that the Department could use in the future to delve into more broad cases. So if you could respond to that, we'd like to hear.

JONATHAN WROBLEWSKI: First of all, I think the comment is very, very helpful; and thank you for it. You should know that we received from comments on the framework a number of suggestions about institutionalizing this process so that it's not a one-off but it's something that will continue within the Justice Department and perhaps be extended beyond testimony. I know there were comments back in March about extending this to reports, to statements of counsel. You could go with the jury instructions; you could do all kinds of things in terms of a review.

One of the things in terms of putting together our budget is to make sure that we have the money so that we have the information technology systems, first, just to keep track of everything as you said. It's recordkeeping; it's making sure that this – because frankly, whoever does this, whether it's the Justice Department or an independent group that's going to be doing this, it is going to be scrutinized and it is going to be looked at, potentially, to be used going forward. It seems to me, having read through our own literature review, that there is no certainty about exactly how to do this.

So, yes, we're thinking about it. We have to find the money to make sure that we have the information technology and then to be able to use various technologies to be able to do this in a more efficient and effective way going forward. So, yes, we're thinking about that.

JIM GATES: I'm sorry, may I add also partnering outside the Department is going to be absolutely critical. So at some point we on the Commission – at least I know I personally -- would like to know who your partners are in this process.

KEVIN SCOTT: A couple of points – obviously, we benefit from a close relationship with NIST; obviously, we have some in-house expertise within the Department.

One of the things that we think about as we kind of embarked on this is there is an opportunity here for something like natural language process or something like that. That requires a lot more data than we're looking at right now. But that doesn't mean that as these datasets don't build that you can train something to kind of look into the future and take advantage of enhancements in technology and processing power as you kind of move forward. And we'll attempt to be cognizant of that.

PETER NEUFELD: Good morning.

Just two points I wanted to make. One is a point of clarification, and the second one is a question. The clarification is only because this is a public meeting, and so what's said is sort of thought to be of biblical significance. You commented that you were trying to compare what you wanted to do here with what the Texas Commission did and what the New York Commission did.

So just to set the record straight, as much as I'd like the legend to be printed and not the fact, the fact is there is no New York hair review at all. In fact, notwithstanding the fact that eight other states have embarked on the state hair review and notwithstanding the fact that the Director of the FBI recently wrote letters to all those governments, including New York's last week, urging them to conduct a hair review, the New York

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Commission, frankly, wussed out. Somebody thought that they lacked the capacity to do this kind of review, and so they didn't do it. It's very, very disappointing. It's actually typical.

As much as I'd like to defend my home state, we have many more reforms being implemented around the country and other places on ID. The Federal Government has done great things recently on recording interrogations. New York, unlike 23 other states, declined the opportunity to mandate recording. And so with the hair review, they've also decided to pass.

But you can look at other states besides Texas. Virginia is doing one; North Carolina is doing one; Massachusetts announced their intent to do one. Iowa, the Governor announced that they're going to be doing one. And we probably expect after the recent letter from the Director of the FBI that more states will be joining the ranks of state reviews.

The other question, though, is more directed at something you said this morning because it raises a very serious question. You said that the actual test that you will utilize to analyze testimony will be whether or not it was consistent with scientific principles and whether it was consistent with just outcomes.

Now, I guess I could understand, at least in the abstract, how you evaluate whether something is consistent with scientific principles. But I don't know how you are going to evaluate it in terms of just outcomes. One of the concerns that's been repeatedly articulated in this Commission is, for instance, in the pattern and impression disciplines, that it's not enough to simply say that something creates a positive association or that something could have come from a defendant based on our analysis. But it's incumbent upon the examiner to affirmatively state what the limitations are of that discipline, how much uncertainty there is, what's the error rate, and all those kinds of limiting statements so as not to mislead the factfinder – very, very critical -- and that it be done proactively by the expert who is testifying.

So whereas you might look at a statement and say all he said was it could have come from the defendant. He didn't say it did; he didn't say it to the exclusion of the rest of the world; he only said that. But if you only don't affirmatively add limiting language, if you don't affirmatively put out the disclaimer, if you don't affirmatively express uncertainty or error, then you will be misleading the factfinder, or at least there's a great danger of misleading the factfinder, and you will not have a just outcome – you won't.

And so it's very, very important when you think about whatever methodology you intend to use that it's not good enough if somebody says something that is simply, on its face, not untrue, if in effect it will still have the consequence of misleading the factfinder.

Because the one thing that we have found at the Innocence Project when we looked at approximately 50% of the wrongful convictions where the misapplication of forensic science played a role in the initial wrongful conviction was, generally speaking, it was the failure of the analyst to place limitations on his conclusions, to express uncertainty, to express and communicate error rates. It's all those failures which lead the factfinder to exaggerate the probative value of the evidence that was given. It's not necessarily that the underlying bench science was fundamentally flawed. It's that the way the person chose to communicate it was a partial picture but not the whole picture.

So you have to think about a way that you're going to have language that not only is consistent with certain scientific principles; it should be consistent with all those principles, but also be communicated in a way that's not misleading and will generate a just outcome.

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JONATHAN WROBLEWSKI: Peter, thank you so much for that comment. Obviously, it's going to be absolutely a critical part of the methodology – what are we comparing the testimony to. And I think that's what you're talking about and what it goes to. So we're looking forward to your comment and for other folks' comments, obviously, on the ULTRs that are out there which lay out the standards for testimony, as well as some of the aspects that you talked about just now.

KIRA ANTELL: Thanks, I think we'll start with Dean and then work our way around the table.

DEAN GIALAMAS: Good morning.

First, I wanted to thank you all very much for the presentation this morning. And I actually wanted to offer a compliment to what you put together because I can only imagine the amount of detail and opinions and thoughts that you had from so many people to structure something. And I think what you have is a great start. So I don't want that lost in the discussion, at least from my perspective this morning.

I know there have been some excellent questions. I know Stephen has brought up some significant concerns that do need to be addressed, and I think it can. But the point I really wanted to stress today, and it seems to be buried, is I think working through the methodology will be fine. I think you'll find an outcome. And whether it's this is Phase I of many phases or additional work, whether it's the complete work, as perhaps what Stephen is suggesting as being done, I'll leave to you to decide.

My concern is about – and you mentioned very briefly – the legal obligation because I really think the ultimate impact of this entire review is going to hinge on what happens after you have your results. That, to me, is the most significant issue that's going to come about in this project; and I think that's the area where I'd like to see for myself the biggest focus and attention to make sure that we're doing a very complete work in this review.

And I'll leave it just very briefly by saying there is concern, question, and even review about exaggerated opinion. I just want to make sure that we don't exaggerate the impact by being premature about releasing information. I think as you go through this project, you need to make sure that before the impacts are delivered, spoken, issued, that you've thoroughly vetted what those are because I think the impact to the field of forensic science, to the criminal justice community, and ultimately those that we're protecting – whether holding those accountable or exonerating those who are innocent, those are the ones who are going to suffer the most, have the greatest impact if that's the case.

So I just want to make sure that that's not lost in the discussion of reaching about do we do x or y, when ultimately we need to consider the downstream impact. Thank you.

JONATHAN WROBLEWSKI: Yes, well, as I mentioned at the end of the presentation, we're very much thinking about the downstream decisions that have to be made. And, again, we're looking for comment on that.

And I just hope you're right – that getting through the methodology will be no problem at all. [Laughter]

JULIA LEIGHTON: Thank you.

I really do appreciate that what you're doing is extraordinary on the one hand and, gosh, why wouldn't we do it on the other. I realize it's extraordinary in this environment, and so I thank you for that. But, gosh, why wouldn't we? And why wouldn't we always be doing this, and why didn't we do it sooner?

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I also am concerned about this – I appreciate the idea of transparency is to invite all comments. But in the end, I get lots of opinions about what my house should look like that I'm building; but I get a contractor to build it. I think that I worry that in this process, you are not going to the experts. Why not own it? Go to the experts; that's who you're going to ask to do it. And I agree; those experts should be independent of the Department of Justice.

And part of the reason I think it's important that you do that is at some point you also need to pay these people to do this. There's a lot of relying on the good will of people that have day jobs, other research, other experience, other reasons to be focusing their research somewhere else, to pay attention to this issue. And it's amazing that they do as much as they do; but, in the end, it's not theirs, and you're just bringing them in and it's exhausting, right?

I think at some level, I think it replicates this Commission. We all have day jobs. We do what we can here; we contribute as much as we can; but we're not staffed for this. And I think you need to think about hiring the experts and letting the experts be sufficiently staffed to do the work.

I don't know quite what we're going to do with this – I wish the screen was still up there – this just outcome and scientific accuracy, I think was what the two were. We're really stuck until you come up with a language. I mean, again, I agree with Steve. The language I've looked at for some of these standards is so vague and so without rigor. It's "sufficient" this, "sufficient" that.

One, I don't think that's scientific. So I think you've got two questions to ask yourself. Are we really trying to find out whether or not people testified accurately as a matter of science, in which case much research needs to be done to get to that; or are we just trying to figure out if they followed the rules that were in place or that are now in place? And those are very different questions. And I think you have to be honest about which question you're asking.

Are you really asking for scientific rigor? And with the standards that I see here from so many of them, I don't think so. Or are you asking if they're following the rules? And to the extent that they're following the rules, when I look at some of the Uniform Language here, I think, how are you going to define the rule? "May do x if sufficient y" is what is in so many of these standards, and what does it mean to violate that?

And I also think it's not just just outcomes that are impacted by the whole context of it. Even if, for example, the analyst follows all of the rules, it's how it's argued. It not only impacts the just outcome, but it impacts the science. What was the ultimate overall presentation of the science to the jury? Was it accurately presented? And part of that presentation is how people argue it. So I don't know that you're going to be able to evaluate either question really, science or the outcome, if you don't look at how it's argued.

Anyhow, I look forward to seeing more details and more opportunities to comment. I do think this is terribly important; but including the noise you may ultimately hear from lawyers, at some point you've got to strain that out and start listening to the experts and bring the experts in, in a way that keeps them engaged throughout.

JONATHAN WROBLEWSKI: Julia, if I could just react to just a couple of things that you said. First of all, on the experts, we are reaching out to the experts as best we possibly can – whether, again, that's from NIST or CSAFE or others. And as I said, we will tee up for others within the Justice Department whether this should be sent out completely to somebody else. Of course, it will only be sent out to somebody else; it won't be

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presented to lots and lots of other somebody elses. And those people will also make decisions -- which gets me to the second point, which is there are difficult decisions to be made.

And ultimately, at bottom, it seems that we're struggling. And we talked about this – Jules, I know, mentioned it back in March. The difference between validation of the science and understanding the presentations that are going on in courtrooms now and have been going on for years, and there's a distinction there. And we're trying to keep those things separate to some extent and also focus on, at least initially, are the presentations being done in a way that is consistent with whatever science we know, given the limitations on the validation, as well as leading to just outcomes.

Those are difficult questions. And you point out the things that we're struggling with -- and we're asking you to struggle with – which is, okay, there are words on the page. That's why we put the transcripts up there in the presentation and we sent them to you. Ultimately, this comes down to comparing words on a page to something that we're calling a standard. That's just a difficult thing. What should be the standard?

Peter mentioned some things that he would like to be in the standard. You've mentioned some things, others - - but ultimately, that's what we're being asked to do. And we're struggling with how to do that – whether to look at it line by line, threading, what is the standard we're comparing it to. So we encourage you, again, struggle with that with us and present what you think we should be doing, what comparison we should be making.

We've presented some initial ideas for you to react to, but that's ultimately what we're asking from you and the rest of the Commission.

ARTURO CASADEVALL: I totally agree that this is incredibly important. And thank you for asking our advice.

Mine is short and to the point. I strongly support what Dr. Fienberg says – basically, independent review at some level. And there has to be a lot of effort into designing a rigorous study from the beginning, potentially vetting it through outside people.

Do you want linguists in here? This is the level also that you want to look at this. But it seems to me, and to echo the words of Dr. Fienberg, this study will produce information that will be used and consumed by the DOJ. Is it in the long-term interest that this be done within the Department or whether it would be done with an entity that is recognized to have outside autonomy.

And I leave you with just one thought experiment. In science, we do a lot of thought experiments. Would the National Academy Report on Forensic Science have had the impact that it did had it come from inside the DOJ and said the same thing? Would this Committee exist? Thank you.

KIRA ANTELL: We'll go to Judge Hervey and come back to Phil.

PHIL PULASKI: Once again, I'd like to also compliment you for what you're doing. I think you're probably going to suffer from the "no good deed goes unpunished" syndrome. I'm getting that feeling for some reason sitting here.

But I have a question that might have been covered; I'm not sure it was. I think it's similar to what Julia said. And that is, having testified – both direct and cross and Grand Jury and trial and EBTs – your testimony is

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bounded by the question. And so analysts are sitting there, and you're looking at what they said and you're looking at the question. Obviously, you're looking at a transcript which can be significantly different from what actually goes on in a courtroom. And I'm hoping that some standards come out – "standard" is probably the wrong word – some guidance comes out on how to have a direct and a cross. And if it's adversarial, it's a whole different ballgame.

So I'm just a little concerned that kind of the analyst is the sole focus of this and that the attorneys, who are participants in some instances in drawing out information that may be misleading or may be inaccurate, that they too bear the burden or the court judge – the focus is on them also, not just on the analyst. It seems like the analyst is always bearing the burden. I may be a little sensitive in that regard, but I'm just hoping that that doesn't happen in this study.

And once again, great work in moving forward with what you're doing and the criticism you're going to face notwithstanding, the great work you're doing.

KEVIN SCOTT: Thank you. And what you point out is one of the things that we've noticed, looking through testimony, is it matters who asks the question and how the question is asked and then how the question is answered. And our belief is that that's something that we need to collect the data on and, before drawing conclusions on how to move forward, analyze that data and then kind of move forward from there.

Again, we're open for comment; and we want to stress that we value, as much as possible, the comments that we get as we develop this methodology.

KIRA ANTELL: Because I think what you're talking about is a really, really interesting question – a really important question. It may be that we are finding more instances where statements that are not consistent with a standard come from prosecutors or defense counsel or from the judge trying to rephrase something that the examiner had said. That informs training for examiners; that informs training for defense counsel and for legal practitioners. This is all super, super important information.

So we are hopeful that this approach enables us to get at some of that, and we look forward to hearing more comments.

JONATHAN WROBLEWSKI: And that underlies, of course, the idea of threading and of coding. Where did this particular nonconforming statement come from, and all of the different aspects of the way we're trying to collect the data from all of this.

BARBARA HERVEY: I was going to say – see, Phil, we think the same way. I was going to comment on some of the things that Peter said because we can't just put this on the scientists. If the lawyers don't do their job in following up and asking about the stats or asking about nonconformities, then part of it's on them as well.

But I also wanted to make a comment – or I have a question rather. Everybody is talking about money; and, obviously, this project would be expensive. And to do it to the extent that we should for transparency and as many disciplines as we can, I'm kind of curious why you would include in your review cases that had no convictions because that would cut down on the cost.

I assume you've got the chart, and I've got to brag. The Texas Forensic Science Commission is doing a great job with their hair review. They've done a great job with the DNA situation we've got. They do a great job on

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everything, in my opinion. But that seems to be something that I'm curious about -- why you would look at those if there's a money issue.

SHIMICA GASKINS: Thank you for your comment; we appreciate it.

I think because what we are really trying to do here is evaluate the testimony of the examiners, we are not focused on the outcomes of it. It's quite different than the way the hair reviews are coming at it. We already knew there was an issue there. And we haven't identified issues with these particular disciplines. And we really want to focus on how the examiners are testifying, and so that gives us some leeway to be able to look at a broader range of cases.

And I think, as you see from the numbers, because they aren't as astronomical as we thought they would be, it gives us a little bit comfort that it's not going to take that much more work.

KIRA ANTELL: Jules?

JULES EPSTEIN: Good morning and thanks.

I'd like to go, if this is the right time, to the original published proposed Uniform Language Standards and really ask a question about them.

I had the privilege of making some comments already; but the question I have is in reading them, who wrote them? And I'm referencing in particular the suggested language for forensic examination of footwear and tire impression evidence. And it says, for example, a person may state his or her opinion that the shoe or tire is the source of the impression. And it goes on and says it requires that the two, the known and the questioned one, correspond in class characteristics and also share one or more randomly-acquired characteristics.

And I couldn't figure out if there's any science behind that whatsoever. And I just wanted to know who wrote it. Was this done by scientists? Was this done by lawyers? Was this done by practitioners? And as we say, I'll take my comments off the air.

KIRA ANTELL: So these documents, as I think we've indicated in the Federal Register Notice, are based on the FBI ASSTRs, which were primarily drafted by FBI Laboratory staff. They were turned into Uniform Language documents through a collaborative process with participation from other department analysts and laboratory scientists. And you raise a really interesting question, and we look forward to seeing it in the comment period.

So if there are no other original -- we'll come back -- if there are no other people who haven't yet spoken, we'll go to Peter and then Julia.

PETER NEUFELD: Judge Hervey, I'd hoped that if I complimented Texas and disparaged my own state that I wouldn't get any pushback on my comment about where the issue lies in the courtroom; but so be it. Texas does deserve to be complimented on its work and its Commission's work; and New York does deserve the criticism, but moving on.

Although I agree with you that training of lawyers is extremely important to do their job, one of the things that is unquestionably at the center of wrongful convictions over the last 30 years is the realization that we need upstream fixes. The reason that an expert witness is allowed to give his or her opinions is because a judge has

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determined that the subject matter is beyond the ken of jurors. And it's often not just beyond the ken of jurors; it's beyond the ken of lawyers because lawyers are lay people just like jurors, and they may not have done their homework. They may not fully understand it.

And so we have decided to place more responsibility, if you will, on the experts themselves because they should know better. And that's why we say it's not enough to say something that is technically correct if it's very clear, or should be clear, that you will mislead the factfinder.

There was a case tried last week in New York State.

John Butler, you might be interested in the case because the DNA analyst tried to do DNA testing, did DNA testing, but got no results. Assume they got no results; there wasn't enough material there – they got no results. The prosecutor then asked the analyst on examination, "So would it be fair to say that you couldn't exclude the defendant?"

Now, obviously, if the analyst responded, "That's correct," that might be technically true; but there's no question it's misleading – no question at all. And it's also no question that that's an inappropriate answer. And there's no question that even if a defense lawyer is too stupid to object to it and explain why it's inappropriate, it's still wrong for the analyst to give that kind of answer.

The analyst has an affirmative duty that if somebody asks an inappropriate question like that – because he or she knows the science, not the lawyer – to set it straight. And that's why I'm saying there's an affirmative obligation to put in that limiting language.

There's an affirmative obligation at every bend in the road to include the expressions of uncertainty – or for instance, hair. It wouldn't be enough to say that – saying that the hair could have come from John is not like saying it's to the exclusions of the rest of the planet unless you also say all it means is that he is a member of a pool of people the size of which is unknown because unless you affirmatively add that other language, you will mislead the factfinder.

And we can't simply say that, well, it's up to the lawyer to do that.

Phil, when you say the problem is the question, I disagree with that. That's always been the approach in forensic science that, hey, my hands are tied. The lawyer just asked me this very narrow question, and so I had to answer it. That should not be the principle that we want to be part of this culture going forward.

The principle that we want to be at the center of this culture going forward is that you, as an expert with special scientific knowledge, intend to give that to the jury – completely, with appropriate limitations – and not simply be bound by the question.

PHIL PULASKI: In response, I just said it was *part* of the overall picture – not *the* picture. And I don't know the context in which in the case that Peter just cited, the question was asked. I don't know what the experience of the analyst was – the first time they testified? I don't know if they were prepped to say that or just, *boom*, it just came at them like a deer in the headlights.

So I don't know what happened in that particular case. And I think it illustrates my point even more that as you look at the transcripts, you don't know whether this was a deer-in-the-headlights case. And it's part of the mix, not the sole component of the mix.

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KIRA ANTELL: Great, thank you. It looks like Julia and then back to Judge Hervey and then Dean.

JULIA LEIGHTON: I just wanted to quickly – I mean, I think the summary of all these conversations is not just looking at the associations; but you're going to have to look at the dialog about limitations. I'm sorry; the summary of this is whatever happens here, you're going to have to start looking at how do we deal with the testimony about limitations. When it's present, how is it handled? What are the answers?

And I realize I think I forgot to mention you all talked about the threshold for notifying defendants. Those are very small numbers you have up there; don't delay. Get it done; get it out to them. If you want to not scare the whole world when you do it, I'm sure you can think of creative ways to do it. But especially if there's somebody sitting in jail, get it out there, get it to them quickly – to their lawyer, them, the institutional public defender. Make sure somebody is paying attention so we don't have a repeat of past mistakes of reports that sat in drawers for too long. Thank you.

BARBARA HERVEY: Peter, I don't disagree that scientists should give complete answers; but I do believe part of the reports that the Innocence Project has put out as causes for wrongful convictions has to do with ineffective assistance counsel. And so I'm just saying that you've got to educate the lawyers as well.

And you have situations where we have judges that don't know what they're doing as well. We're lawyers, but we have situations in Texas – I can think of one case in particular where a scientist wanted to give a complete answer, and the judge shut that person down. So what you say is important, but it's also important that the lawyers understand and the judges as well. And so I'm just talking about a complete picture. We can't just beat the scientists up and say you have to come forward with everything you know and not have the lawyers understand what they're doing in court.

KIRA ANTELL: Thanks.

I think we have a question from Dean, and this is going to be the last question – not my choosing, just so we're clear. We could sit up here all day, but we do have to get on to the rest of the stuff on the agenda.

DEAN GIALAMAS: Well, I'm honored I get the last word; so thank you.

I just really wanted to continue that bit of discussion. Having been a practitioner for over 25 years, having testified in many cases which today would be considered one of the subjective areas – particularly trace evidence, crime scenes that involved blood stain patterns or shooting reconstructions of some kind – there's a lot of subjectivity that comes into that. And I can tell you, in those cases, those specific disciplines, there tends to be a higher propensity of attorneys or judges in the courtroom creating blocks for us, as forensic scientists, to be able to testify the way we normally would.

And so rather than debate the issue, I'd actually like to recommend – if you are not already going to pursue that as part of this study – is as you're looking at coding, look at the questions that lead to whether the examiner is prevented from presenting something because I think that's a very valuable, useful piece of information that can help guide. What we're really talking about here is criminal justice reform, not just forensic science reform. And so I think we really need to maybe capture that, since you're already looking at transcripts and looking at those questions. I think that, to me, would be something valuable. So as a direct feedback point, that's my recommendation.

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JONATHAN WROBLEWSKI: Well, thank you all. And, again, I urge you; look for the methodology. We'll send it to you, and please submit comments as part of this process so that everyone can see them and then so that we have the benefit of all of your expertise.

Thank you all. We'll see you in a couple of months. Have a wonderful summer.

JOHN BUTLER: Next we're going to go to Jonathan McGrath, who will give an update on the SPO in terms of the revised bylaws and some of the other things that are happening there.

Just a reminder for everybody to speak directly into the mic so that those who are doing the transcription can accurately capture that. Thank you.

JONATHAN McGRATH: Good morning, again.

We've got a really quick update from the Subcommittee on Procedures and Operations. We had about three conference calls since the last meeting and just had a few updates that we wanted to share with everybody.

Real quick, we're going to go through; and the information that we're about to cover in these slides is also included in the electronic binder at the front portion, on the first chapter or so. We've got one minor update to the bylaws that, I believe, we're going to vote on. And we're going to review an extra comment that will be put into a Views Document Note that already exists. And then we also discussed adding a note to the Recommendations Document to be consistent with the Views Document Note as well. Each of these notes are going to be noted in the work product development process as footnotes to the existing language. And then Matt Redle will be presenting on the reconciliation of the two medical/legal death investigation documents on accreditation and certification.

So the additional statement that the SPO discussed is added to Section V under Commission Work Products. And the very end, the statement that's proposed is: "When work products are adopted by the Commission, technical and conforming authority will be granted to Commission staff."

So we realized there was no ability to allow for Commission staff to go through and edit typos, provide minor edits, add additional notes to the work products and the approval dates. So the suggested language was to use this particular statement to grant technical and conforming authority. I believe this is standard language that is used in the legal community for this type of thing for bylaws purposes.

I'll open it up for questions because I think we would need to vote on this statement as an addition to the bylaws. Anybody have any objections?

Yes, Jim?

JIM GATES: Not an objection, but a question – which is, yes, many of us are used to having technical fixes of language as we write reports. But where's the feedback mechanism here so that someone assesses where a technical chain crosses the line in making a substantial change?

JONATHAN McGRATH: That's a good point. I don't think that's something we thought of specifically. Do any SPO members – yes, Arturo?

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ARTURO CASADEVALL: One mechanism would be that except for typos and things, the document goes back to the Committee. I mean, to say what Dr. Gates basically alluded to because a word here or there could certainly change the meaning of a work product.

JONATHAN McGRATH: I think staff are very aware changing or editing, removing periods, commas, semicolons, is very important in specific situations. So I think if we run into an issue where we have any question that we would go to the SPO or to the Subcommittee members who wrote the document to confirm. And if there's something that does need to be brought back to the Commission, I think, as we'll see from Matt Redle's presentation on the MDI documents, that's probably the way we would go about it.

So I don't know if we need to put anything specific into this statement, but I think we've got a general mechanism for providing that review and feedback.

Yes, Jules? Sorry.

MARILYN HEUSTIS: I think that we should put something specific in. I think it could go back to the Committee if they could do it quickly. Or a very easy way to do it would have it go back to the SPO since we meet more regularly. And I think it should be every one goes back because you shouldn't be depending on someone else to determine whether or not there could be a meaning change. And I think that could be done very quickly and easily.

ARTURO CASADEVALL: I just want to follow up. After a voting – this would be changes after a vote is done, right?

JONATHAN McGRATH: Correct, yeah, after it's been adopted.

ARTURO CASADEVALL: I don't know what to think about that.

JULES EPSTEIN: A real simple echoing of Marilyn -- it should be simply built into this that whenever that happens, so there is no debate or concern as to which are purely grammar and which might change -- and I'm agnostic as to the SPO versus the particular subcommittee -- it may be easiest to be the SPO. But there should be something.

PAM KING: I'm just trying to decide if I actually have something to say. My recollection is that SPO was charged with the responsibility for these types of review and revisions within the bylaws, and that this is really simply a formatting issue. So I think that there is already built into the bylaws ways to address the concerns that I'm hearing from Jim and Marilyn and Arturo as far as how we're doing this.

So I would like to go back and take a look at this, but I suspect that this is already language that's in there. And we may be talking about something that's already been accomplished because we're have those discussions within this group as to what is a meaningful change, what isn't -- and certainly with the recognition that this group, as a whole, could certainly object to any change that was being made. So I think Matt may have some more information along those lines, but I hesitate to say for sure because I am not looking right now. But I think this may have been addressed.

DEAN GIALAMAS: I'd like to echo what Pam said because that's exactly what I recall from the SPO. And to Arturo's point, the idea was that we would have four Commissioners on the SPO to review and make sure that

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there was nothing being put in change wise. Perhaps the word that may be causing some concern might be "technical" because it suggests that perhaps maybe there's something more overreaching in the change.

I think really what we're talking about is format and a little bit of grammar here and there, the addition of approval dates because they come as drafts. It was never meant to be changing language or changing anything of substance. And I think that's the job of the four Commissioners on the SPO that if that were to happen that we would ask that that would come back, and we're the balance to make sure that that doesn't happen. So to the extent that makes people a little more comfortable, that's the direction we were headed.

MATT REDLE: And to piggyback on the last two comments, what we're really talking about in a lot of instances is where it's a Views Document that the view of the Commission start out, "It is the view of the Commission that..."

We're also talking about that the view of the Commission, for instance in a Views Document, is stated before the background supplemental information is provided. It's that kind of formatting that we're referring to, I think, as "technical" type authority and not to changing the gist or the meaning of a sentence or a paragraph.

JULIA LEIGHTON: Yeah, under the SPO, No. 5 of its tasks is to make non-substantive revisions to reconcile adopted Commission work product documents. I think you might want to make a tweak there that it's to make them and to review any made by staff – so give them some review authority in there, and that should take care of that.

JONATHAN McGRATH: That sounds good. We can add that statement as well – yeah, once we have technical and conforming authority. [Laughter]

No, that works for me. And I think that captures the idea as well, so thank you.

Shall we vote on this? Oh, okay, do you want to bring – can you bring up the bylaws?

NELSON SANTOS: I think we'll—

JULIA LEIGHTON: Do you want to move to vote on it with the idea that you will, by the next meeting, give us some proposed review language of the SPO?

NELSON SANTOS: Yeah, we'll get these bylaws done before this Commission ends, I promise you.

JULIA LEIGHTON: It's a living document for us.

NELSON SANTOS: No, I agree; we just need to get the language right and we'll come back to you because I think it's a minor tweak.

JONATHAN McGRATH: Yes, Ted?

TED HUNT: You may be getting to this. I just had a comment about the work product development process. Are you going to get there?

JONATHAN McGRATH: Yeah, we'll get there in the next upload of slides.

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TED HUNT: Okay, well, before we get to that, just one thought. Every time we get these final drafts out, there is inevitably a typo or something that slips into these things. Is there no way that somebody within the Department of Justice can proofread these before we get them in final form? Because it's really not a good use of the SPO's time or anyone else's to go ahead and to try to do editorial revisions after the fact. There's got to be somebody who can sit down, proofread it, get it to the Subcommittee. They can make those minor changes ahead of putting these out for comment or even for final publication. So there just seems to be a simple fix to a recurring problem.

JONATHAN McGRATH: Yeah, I think we can use some of the contract support editorial services to do that. I think we would just ask that we work closely with the subcommittee co-chairs to figure out when the best point in the process is because we want to make sure we provide everyone sufficient amount of time to meet the deadlines to get all the votes in and everything else too. I know there are a lot of minor tweaks that occur, even that are substantive, before the Subcommittee votes that occur as well. So I think we're just trying to capture a good system to fit in the editorial proofreading process, but we have that available.

I guess I encourage the co-chairs of the subcommittees to reach out any time that they would like a specific, formal proofreading to occur at any point in the process.

All right, so I'll move on to the Views and Recommendation Notes that were discussed at the SPO.

We already currently have a Note that's in the Views template, but there was one comment that was suggested to be added – and this is based on, I believe, the Commission discussions from the very beginning as to how the votes were occurring, speaking generally that the votes may be specifically for the general top high-level views or recommendations but not necessarily every bullet or talking point within the document itself.

So we added the statement: "Only the portion of the document directly labeled 'Views of The Commission' represents the formal Views of the Commission. Information beyond that provided for the specific Views of the Commission should be considered supplemental."

Any issue with adding this additional statement to the Views Note? And again, this is a—

JULES EPSTEIN: May I?

JONATHAN McGRATH: Yes, please.

JULES EPSTEIN: So then what are those extra words? They're coming in a document that the Commission has approved. One of the reasons we have Views Documents, if I understand it correctly, is we're sort of the – pardon me, Franklin Delano Roosevelt – the bully pulpit for all things forensic. But if we now publish something that says, listen – and we're also already confined to making the Views part this very narrow statement – the history, the background, the thinking, which gets a lot of vetting here is now -- I don't know what.

And so I'm concerned about this because it seems to strip the significance from a lot of important information – one person's view.

DEAN GIALAMAS: Jules, I see your point of view. And I think from the discussions that I recall on the SPO, it was by no means meant to be exclusive in any way to create a de minimis of importance of the work and

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effort put into it or even the value that that has. I think we were just trying to make a distinction between perhaps something that was maybe more binding versus something that is more descriptive.

And so the Views were meant to be something that Commission believed that the Attorney General could not necessarily enforce; but it was a way for us, as a Commission, to get a perspective out that could influence or create change within the community.

And the language is important, but there is sometimes discussion in that language that would be up for debate or up for discussion. And it was meant to be that that isn't necessarily a Commission stand as opposed to just providing information. I don't know if I've spoken that clearly enough, but that's the distinction we were trying to make.

JONATHAN McGRATH: Stephen?

STEPHEN FIENBERG: I just want to reinforce Jules' statement. It seems to me that we spend an inordinate amount of time refining every word in a Views Document. And to then make a statement that it doesn't matter and that we didn't take all that time and effort seriously is inappropriate. I think the documents are what they are. And we have committed enormous amounts of energy and effort in framing them, and they exist the way they are and should be taken as a whole.

NELSON SANTOS: If I could just comment, I think if we think back, there was a lot of discussion on the background or supplemental material that was placed in there; and a lot of Commissioners expressed concern about what are we voting on. And I think we repeatedly said, listen, we're voting on this; this is background material. I don't think it diminishes anything, but I don't think we would have gotten those documents through if some of the Commissioners who expressed concern about the supplemental language – they might have voted it down.

So I don't want to now change history. I think this is consistent with what we've discussed on the floor here, that the only thing we were voting on was the actual View. And if we can change the language in this to make it clearer that that doesn't mean that the information is worthless; I don't think that's the point here. I think the point is that we always voted on that one thing. There was plenty of discussion on some of the other language, which we couldn't come to agreement on; and oftentimes we would just say, here, let's just vote on *this*.

So I think for consistency purposes, this statement gets there. If there's a way to improve it so that it doesn't appear that the information is not valuable – I don't read it that way. I don't think that was the intent of the SPO. It was simply just to be consistent with what we've said before.

JONATHAN McGRATH: I'm not sure who was next; but do you want to go ahead, Judge Rakoff?

JED RAKOFF: I can only talk about the Reporting and Testimony Subcommittee, but the supplemental language actually played the opposite role in many of our reports; that is to say, it was a way of achieving consensus on the overall language because there were nuances that could only be expressed in the supplemental language that enabled people to reach a consensus.

It's sort of like courts of appeals, where you will often stick some language into the opinion that's not holding but is necessary to get the votes of the other judges. And I think it may not have been the case in other reports; I'm trying to remember back. But I do think in at least the reports that came back to my

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subcommittee, the supplemental language was really critical to explaining in a more nuanced way just how far the Views language went. So I worry a little bit about this proposal.

JONATHAN McGRATH: Bill?

BILL THOMPSON: Hi, I'm here as proxy for Paul Giannelli in case you're wondering.

I think I agree with Jules and Steve and Judge Rakoff. I wonder about this distinction between a formal view and a supplemental view and what that means. Certainly it seems like any time there's legislation, it's a common issue that legislators have to decide whether to vote for a bill or not, even though there might be some portions of the bill that aren't preferred. And people generally vote as a whole, and it's understood that people who vote for something thinking on the whole it's good may not agree with every aspect of it. And so I don't really think it's necessary to say that.

But I do think that saying that some of the statements in the Views Documents represent formal views and some represent supplemental views might raise questions about what those terms mean and what the force should be that are going to be more confusing than helpful. So I think my sense is that this is unnecessary language, that what it says is already understood. And if it goes beyond what is already understood that it will raise more difficulties than it solves.

JONATHAN McGRATH: Matt?

MATT REDLE: I think that the background information has been treated by us as being context. It gives context to the discussion and to the choices that we made. And I think it informs it in that way. For the lawyers on the Commission, my suggestion is that this is similar to the Advisory Committee Notes to various rules – that it provides some guidance, some context, perhaps an explanation of those sorts of decisions that were made. But at the end of the day, what expresses and what the Commission becomes more unified about is the actual Statement of the Views that we adopt.

Otherwise, I would suggest that from time to time, there have been a number of things that have been proposed that if we had to agree with every statement that was contained within the document itself, we would have never gotten anywhere.

JOHN BUTLER: Julia, I think you had—

JULIA LEIGHTON: I agree with the sentiment so far, and I think we shouldn't include the language.

I also think this isn't entirely a problem of our making. Two things – one, since the beginning, we have debated all of the language in all of the documents; and we've made changes as a compromise to comments made by Commissioners. So there have been significant changes made in some of these Documents in the background section over time, so it really was a part of deliberation.

And I think I – I should just speak for me – thought we were doing it because we were really hoping these Documents would be taken seriously, not just by the general community but also by the Department of Justice. It was the Department of Justice who, after we had passed several of them, came in and said this is how we're going to treat them.

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And so I don't want to take away from how much effort was put into this work. And I guess I'd include making that statement to the Department of Justice. I understand they've now been categorized as Views Documents and that they don't require action from the Department, but that doesn't mean the Department shouldn't be looking at them carefully because they were crafted at a time when we thought the Department *was* going to be looking at them.

JULES EPSTEIN: So I'd like to make – my first suggestion is dump the language. But if we don't, okay, I'm going to propose, in my job as wordsmith, some wordsmithing here – which is, you begin by taking out the word "only" and begin the portion of the Document, ta da ta da represents the formal views of the Commission. You leave out "only."

The second sentence becomes information beyond that. It should be considered for context. It's real simple; it explains it. Again, I think we really don't need to say any of it; and it's going to complicate matters. So I'd really prefer a vote of don't have it; but if we're going to have something, it shouldn't be this wording. It should be simpler and less dismissive. So again, it would be information beyond that section, or whatever, is provided for context.

NELSON SANTOS: I agree. Let's just take it back to the SPO real quick. And based on this discussion, maybe we don't need the language. I think it's creating more problems than it's trying to solve. So we'll go back to the SPO based on what we've heard and discuss this again. I think that's the right thing to do.

JONATHAN McGRATH: All right, so I'll move on to the Proposed Note to Recommendations Document. So currently, there is not a note associated with a Recommendations Document. And the particular statements that are on the screen include the similar note. I'll read the whole thing, and then we can discuss it as well.

The Note is: "This document includes recommendations developed and adopted by the National Commission on Forensic Science and proposes specific acts that the Attorney General could take to further the goals of the Commission." I believe this is the same language that is included in the Work Product Development Guidance and the bylaws as well.

And then the second statement: "Only the portion of the document directly labeled 'Recommendations' represents the recommendations of the Commission. Information beyond that provided for the specific recommendation should not be considered part of the formal recommendation adopted by the Commission." So I think we may have some discussion there as well.

And then the final statement: "This document does not necessarily represent the view of the Department of Justice or the National Institute of Standards and Technology. The National Commission on Forensic Science is a Federal Advisory Committee established by the Department of Justice. For more information..." there is a link to the website.

Any – yes, Julia?

JULIA LEIGHTON: I think this is particularly suited to the edits that Jules just proposed. I think if you rewrite it that way -- it makes more sense to me that this language is here, but I think I would rewrite it the way Jules proposed.

JULES EPSTEIN: I agree.

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NELSON SANTOS: That's an excellent point so, yeah, let's take it back.

Are you done?

JONATHAN McGRATH: So the intention is to take the notes, once they are discussed, to the SPO, brought back to the Commission and then finalized. What we'll do is add two footnotes to the Work Product Development Guidance. You can see the two underlined descriptions for both Recommendations and Views. This is currently in the document for operational use on developing work products, so we'll add the footnotes just as an addition to that document.

I'm going to turn over the discussion to Matt, who is going to discuss the Reconciliation Proposal.

MATT REDLE: Excuse me – originally the (audio break) here were adopted by the Commission at our Fifth Meeting. The Documentation on Certification of Death Investigators was originally adopted as a directive recommendation to the Attorney General. And the document on Accreditation of Medical/Legal Death Investigation Offices was adopted as soon as a policy recommendation.

It was suggested at our last meeting that they be rewritten as Views Documents following the restructuring of our work products and given the limited authority of the Attorney General over death investigation.

So what we have here are the changes that were in the material. The only change here is to the format, changing the first statement. The change is changing it to the format that we've adopted for Views Documents. So it's the language, "It is the view of the National Commission..." It is just the technical change in that respect.

And the change between what was sent out and what you see before you now was to add the headings. And the reason for that was so that given the discussion that took place previously with respect to what the "view of the Commission" or the "recommendation of the Commission" means, it was set out so that you would see what would be considered to be the statement of the view of the Commission versus that supplemental or background information.

Let's move on to the next one.

The statement here puts in bold places the information. In its original context, it was a recommended implementation strategy or a part of the recommended implementation strategy. The thought was that we would include that language from the Recommended Implementation Strategy as a statement of the view of the Commission because it seemed most appropriately to fit that kind of structure. And then at the bottom, it talks about the necessity for funding and things of that nature.

And so what we are proposing to do is to move those up from a recommended implementation strategy into a separate statement of a view of the Commission.

There is another option that Jonathan, Lindsey and I developed in the course of putting this together that may be more suitable. This is not really – this is a little bit problematic because it seems to be more substantive in terms of – but it's trying to cloak itself, quite honestly, as being a view by saying we're encouraging. But who are we encouraging and to do what precisely is kind of left open.

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And so this was a tough part in the drafting process of turning this into a view of the Commission. In the course of developing this, there was a thought that we thought had some merit to it. But it is certainly a substantive change. And I made the decision that we would go ahead and bring it forward so that people could see what that looked like and see which way they wanted to go. It may require that we take more formal action than we typically do on these reconciliation documents.

But this seems to – number one, it's more true to the Views format. Number two, it encapsulates the concepts that were in the preceding slide; but it also expands the scope of the statement beyond the Department of Justice, which was the limitation of the directive and policy recommendation work products that we used to have.

Obviously, this would be a substantive change; but I think it actually may make more sense as a Views Statement than trying to tinker with the preceding. I don't think that our bylaws would allow this to be the change made, but we can come back with a recommendation at the next meeting to amend the document to include this.

And then the next slide changes the format only from a Policy Recommendation to a Views Document format and adds additional supplemental background for context. The language that you see added at the very bottom is actually taken from within the original report itself. We just changed the location of it because it seemed to fit better in that location.

And this last part of the background makes the changes to the supplemental background material to make those statements more consistent with the Views Document rather than a Policy Recommendation. And at the very bottom, you'll note that that's where we cut the language from to paste in the preceding slide.

Those are the changes that we made to come in to try to effect what the Commission asked us to do the last time, which was to try to word this as a Views Document as opposed to the Recommendation Documents that we had earlier adopted.

If anybody has any questions, I'd be happy to try to answer them.

JOHN BUTLER: Okay, so one of the things we could do is vote on it now in terms of moving it from Recommendation to Views. Or we could wait and discuss this further as part of the MDI discussion tomorrow afternoon during the Subcommittee.

NELSON SANTOS: John and Vince, have you seen these changes?

JOHN [FUDENBERG]: Yes, of course, and I propose that we vote on them right now.

JOHN BUTLER: Okay, so if you can switch to my computer?

So just to establish who is here in establishing the quorum because this is Commission general business then. We're not going over the details of the documents, but this would be a change from a Recommendation to a Views, everybody can vote – Ex-Officios as well.

Kathryn Turman has sent in her vote to me. All the rest of the Ex-Officios are here. We have four proxies, as you note there. Suzanne Bell unfortunately at the last minute couldn't come, and Linda Jackson is not here -- and she'll be here tomorrow.

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What that means then is we need to have at least 20 "Yes" votes because we just need a majority to be able to do this, so 20 "Yes" votes out of 38 possible. So do we have a motion then for the vote?

UNKNOWN MALE SPEAKER: Yes.

JOHN BUTLER: Yes? Second? Okay, go ahead and do the vote then.

This is the first one, which is Accreditation of the MDI Offices being moved from Recommendation to a Views.

[Pause for votes, 36 of 40]

We should be able to get up to 38 if everybody pushes their – if it all works. Okay, we can go back and check who is missing.

[Voting reached 100%]

Okay, everyone says "Yes" for that; so that one passes.

And then the second one is the Certification of MDI Investigators moving from Recommendation to a Views.

[Pause for votes, 35 of 40]

Anybody else? All right, we'll go forward with that then. Once again, everybody votes for moving that from a Recommendation to a Views. Thank you.

NELSON SANTOS: Okay, nicely done, Matt.

All right, it's time for break; but we need time for them to set up for lunch as well.

Is that correct, John?

JOHN BUTLER: Yes.

NELSON SANTOS: So what about 20-25 minutes if we can? Try to be back here before, I guess, noon would be great.

Is that going to be enough time for the panelists?

Okay, let's do that. Let's be back here at five till twelve, please.

PART 2

JOHN BUTLER: Patricia is going to provide some background on this panel before we get started.

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PATRICIA MANZOLILLO: So obviously certification is something that is very important to the commission and to forensic science and community in general. So we decided to push forward with certification documents. We currently have two views documents that have been out for public comment in their first draft, one on the recognition and accreditation of forensic science certification bodies and then a separate document on forensic science practitioners and certification.

So what we'd like to do today is have a panel discussion during our lunch from four different perspectives here. One is of John Byrd who is with the North Carolina Department of Justice, and he's going to talk about his perspectives in terms of mandatory certification in the laboratory. And then we also have Robert Garrett, who is with the International Association for Identification, and Gretchen Lajoie, who is the Accreditation manager for the American Board of Criminalistics, two of the largest and main accrediting bodies for practitioners in the field of forensic science. And then finally, we've invited Lynn Garcia, who is the general counsel for the Texas Forensic Science Commission to talk about where Texas is going in terms of certification and licensing. So that's all I will say. We will hold all questions until the end if possible. They'll each speak about their different perspectives, as we've done before. Thanks.

JOHN BYRD: Good morning. Thank you for invitation to come speak with you today so I could tell you a little bit about what happened in North Carolina. I'm just going to talk just a couple minutes about what happened with us. Let's see, slide. We'll hit a couple of these all the way through. Slide. I don't know if the mouse is not working.

So just a brief overview of what happened to North Carolina, there was a case that was overturned by the North Carolina Incidents Commission in February of 2010, three-judge panel looked at the Greg Taylor case. As a result of that, there it was significant review of the North Carolina State Crime Laboratory, which was, at that time, called the State Bureau of Investigation Crime Lab, because we were under law enforcement at the time. North Carolina Department of Justice commissioned an independent review of the SVI Forensic Laboratory, also called the Wolf Swecker Report that was released in August of 2010.

Simultaneously there was a joint select committee on the preservation of biological evidence that was put together, their report; that was released January 20th, 2011, that recommended, in part, certification. So the North Carolina General Assembly subsequently passed the Forensic Science Act of 2011 requiring, in part, certification, and then we pursued, by my predecessor the certification, 100% of our eligible scientists certified by January 2013. As in all legislation, sometimes there is need for refinement of the laws, so the initial requirement said forensic science professionals, as soon as practical but no later than, so we went back, that was signed by the governor in March of 2011. Slide.

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There were two amendments. One, they put a time limit, 18 months from the day the analysts become eligible, and by June the 1st of 2012, whichever occurred later, that was signed by the governor on June 27th, 2011. Slide. And the final amendment, they further clarified who would get certified. And just as a practical note, this was not for any other scientists in -- forensic scientists in North Carolina, other than those employed by the North Carolina State Crime Laboratory. [Load noise]. I hope everybody's okay. It was not a gunshot. And there was one final note. So all of our local and private labs did not have to undergo this process. And finally, there was no money associated with this requirement. Yeah, I laughed too.

So some of the things that occurred for us, of course, it created a legal quandary for those employees that were hired by the state in which there was no requirement for certification when they were hired. Of course, everybody hired after the law, there was no issue. Then the problem with the certification for 18 months of eligibility, some of the certifying bodies required a cooling off period between retesting. If that occurred, and in the case of North Carolina, it did, we had scientists that had to test twice in order to get the certification. North Carolina chose not to require sub-discipline certification, and as you can imagine, it was directly associated to money.

Here are the hiring criteria for North Carolina. We do require degree, depending on the scientific discipline they're going into, as well as the required course work for our DNA scientists. We also require two years of experience or equivalent experience, of which we use a Master's degree to sub for that, and then we also require certification. This is kind of a busy chart, but it shows all the knowledge, skills, and abilities that are posted on our job vacancy list, and you can see those listed there in your handouts. Slide.

So all the bodies that we chose to get certified with, those are your standard ones I believe that you'll see. And I am a proud certified scientist, forensic scientist, certified latent print examiner with the IEI, even though I don't get to practice that discipline. Well, I must have hit the back slide. Slide four. I do this in the military, too, and I usually don't have this much problem going through slides. Okay, one more slide, please, sir.

So to break down for North Carolina, 161 analysts that we have in the North Carolina State Crime Lab system. Those are broken down. This is a note at the bottom. My evidence technicians volunteered to do that on their own. In fact, all of my evidence techs are going forward to get independently certified by that body there. Some of the challenges that we faced, obviously the different time periods of experience that each of the bodies require, different fee structure, membership is required. Again, remember that North Carolina allocated zero dollars for this process. Different testing requirements, of course, many are objective. Some have skill tests; for example, the IAI, and, of course, the question of sub-disciplines. Slide, please.

Some of the challenges that we face, of course, balancing all the limited resources that North Carolina has for training, membership, we have to go through the continuing education, so there's different criteria for each body, and then one particular case for my farms examiner, the rules changed in mid-cycle, so we had to figure out how to address that.

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Just, this is a snapshot for North Carolina only, and my colleague from ABC, I just have to put a shout out. When the general assembly said go forth and do, ABC stepped up, as well as the IAI, and other bodies and said, "How can we help." There was no issue for us to get through this process other than making time for our scientists to study and prepare. So if you just look at the bottom line there, approximate total cost one time, plus recurring costs, it's about \$4,500 per analyst per five-year cycle. I don't have that much money. ABFT, again, look at the bottom line, \$4,200 per analyst per five-year cycle. So we're talking about 161 analysts. Whoops, too far.

Overall lab cat costs almost three-quarters-of-a-million dollars in recurring costs, and so one final thought, I welcome this body to come up with national certifying standards for us, because it will create consistency across disciplines. Hopefully we can address the membership requirement, which is additional money. It's predictable, it's measurable, it's efficient, and we can address the sub-disciplines. And that concludes my portion of the presentation. Thank you.

ROBERT GARRETT: Well good afternoon. My name is Bob Garrett. I'm currently the director for Professional Programs at the International Association for Identification, and I'm here to talk to you about the certification programs currently sponsored and administered through the IAI. Next slide.

The IAI was founded in 1915. It's been around a long time. Last year we celebrated our centennial. We have over 7,000 members in 77 countries, and it remains the oldest and largest of the forensic science identification associations in the world today. Next slide, please.

This may be hard to see, but our mission, obviously, is to associate persons who are actively engaged in the profession of forensic identification, investigation, and scientific examination of physical evidence in an organized body so that the profession and all of its branches may be standardized and effectively and scientifically practiced. We want to encourage the enlargement and improvement of science of forensic identification in crime detection. We encourage research in scientific crime detection.

We keep our members apprised of the latest techniques and discoveries in forensic identification techniques and crime detection through our website, our professional peer-reviewed publications and so on. We employed the collective wisdom of the profession to advance the scientific techniques of forensic identification and crime detection. We have a science and practice committee for each one of the disciplines that we cover. And those folks that are charged with keeping all of our members who are so interested in those particular disciplines advised of the current state of affairs, as far as both legal and scientific with regard to their discipline. And we provide training and education and the publication of information in all the forensic science disciplines that we represent. Next slide, please.

We currently have close to 3,000 participants worldwide in our certification programs. Up there, that's the number I got about two weeks ago off our database of 2,984. Each one of the programs contains a rigorous educational process, certification procedure, recertification requirements. Each is administered by a certification board that's comprised of experts in the discipline. All the programs operate under a written set of procedures approved by the IAI's professional programs Quality Assurance Governing Board.

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The disciplines currently covered are crime scene, and within crime scene there's actually four different levels there. One is sort of the entry level certification of crime scene investigator, then there's crime scene analyst, and then senior crime scene analyst, and we also have one for crime scene reconstruction. Then we have forensic photography, forensic video analysis, bloodstain pattern analysis, forensic artist, latent print, ten print, which deals more with the administrative features of the maintaining fingerprint databases and that sort of thing, and then we also have footwear analysts. Next slide, please.

The Crime Scene Certification Program has the largest participation of all the IAI certification programs. It's the only one of the programs that has multiple levels of certification, and I just went over those. You can see crime scene investigator has our largest number there, at 842; then the senior crime scene analyst at 397, or the crime scene analyst at 397; the senior at 348; and the crime scene reconstructionist at 11. That program was established in 1990. Next one.

The certified latent print examiner, this is the oldest of the IAI certification program. It has been in existence for almost 40 years now. It's geared towards examiners who process evidence at crime scenes for friction ridge impressions and compare those impressions to known exemplars or other recovered impressions. We currently have 1,010 certified examiners worldwide in the latent print discipline. Next slide, please.

We also have a certified footwear examiner. It is for those who specialize in the collection of footwear specimens from crime scenes or evidence and comparing them to known exemplars. We currently have a 105 people certified worldwide, and that program was established in 1997. Next slide, please.

Our certified forensic photographers, the applicants for certification must demonstrate a proficiency in crime scene photography, evidence photography, chemical-based, as well as digital photography, lighting techniques, special filters, scaling, digital editing and image enhancement and other aspects related to forensic photography. We currently have 59 certified in that discipline, and that was established in the year 2000. Next slide, please.

Our Ten Print Certification Program is for individuals who deal with the creation, management, and comparison of fingerprint records used to maintain criminal history records and populate databases used by automated fingerprint identification systems and other biometric identification systems. This was established in 2002, and we currently have 120 people certified in that discipline. Next slide, please.

The Forensic Art Certification Program, it offers multiple certifications or aspects of that certification. They're not levels. They just deal with different areas within the forensic artist discipline. So their endorsements, we deal with the specific aspect of forensic art in which the applicant wishes to certify. So there's one core of the certification program that everybody is required to adhere to, and then depending on the specialty that they choose, that will determine what the rest of their testing entails. And that involves composite imaging, which is what's usually associated with forensic art, but also things like facial reconstruction and age enhancement. We currently have 32 certified forensic artists, and that was established in 1995. Next slide, please.

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We also have certified bloodstain pattern examiners, and this deals with the analysis and interpretation of bloodstain evidence found at the crime scene and on evidence. Some of the analysis is based on visual pattern recognition and some involves mathematical calculations based on measurements taken of individual bloodstains. We currently have 39 people certified as bloodstain pattern examiners, and that program was established in 1996. Next slide, please.

Our newest one is the forensic video certification. It's designed for those who are proficient at using the various tools and technologies associated with the examination of video captures. It was established in 2011, and we currently have 21 people certified in that discipline. Next slide, please.

I want to talk a little bit about accreditation. From 2010 through March of this year, seven of the programs were accredited by the Forensic Specialties Accreditation Board; however, due to inconsistencies in the interpretation and application of FSAB standards, which we were in a unique position to realize, because we had so many boards that were accredited by a single body, and we found that there was a large inconsistency in the way that they interpret the standards from one year to the next, and even from one month to the next. And we thought that this was both unfair to us in the IAI, and did not provide a good basis on which to declare accreditation.

It is true that FSAB does not have -- while they have everybody there is a volunteer and dedicated and I'm sure have, you know, everyone's best interest as heart, they do not have a formal training program for their assessors, and that's part of the problem with that program. We also opened up a European division of the IAI, and we are being encouraged by that group to seek ISO 17024 accreditation, and that's where we find ourselves right now. So we're currently in the process of doing a gap analysis for all of the boards. We're hoping that either our initial application will be going in by late this year or early next year, and then proceed with the process of accreditation pursuant to that standards. Next slide, please.

Our current fees, as far as what it costs to be certified, if you're an IAI member, the initial certification, recertification, and any retesting that may be required is \$200. If you're not a member it's \$300. For all of those, we are probably going to be raising those fees because there's one thing about accreditation is that it's a very expensive process. One of the advantages we had with FSAB was that they deal -- most of the people on the FSAB -- well, all of the people on the FSAB are volunteers. And because of that, there's minimal cost running that accreditation program. But in trying to get accredited pursuant to 17024 for and through the ANSI resources, it's going to cost us -- if things go well, it's going to cost us about \$40,000 for the first initial accreditation to the programs, and so that's something that we're putting all that money together now and putting all the resources necessary to make this thing go as smoothly as possible. We think the fact that we were accredited previously by FSAB, and a lot of the FSAB standards are actually based on the 17024 standard, that we're well on our way to achieving accreditation under 17024 standard. Next slide, please.

We're on the internet. Obviously everybody is these days. If you really want to see some more information, you can just got to the iai.org and there's a special section there about certification. We also have a program manual there, which you can download. It's available to the public. There's certification board details. The one thing we publish is all the people that are certified are published in a roster, so if you have a question about

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whether or not somebody is certified, it's very easy enough to find out. And all of our contact information is there also.

I would want to address one thing that I heard Mr. Neufeld say earlier, and these days I also do a lot of defense work, and I can tell you how disappointed and embarrassed I am sometimes by what I read in trial transcripts, by what people who are supposed to be experts say about their discipline and about their conclusions. But I will say this. I don't agree with Mr. Neufeld on all his positions, but each one of these certification programs has a scope of practice published, which will tell you exactly what it is that we're certifying. So if it's a crime scene analyst, what exactly does that mean?

That sounds like, you know, a lot of happy words to some people. But you can actually find on the website the scope of practice for them and tell you exactly what it is that we're saying that this person is qualified to do. And it goes that way for all the other certification programs that are up there also. So, you know, we want to be very up front about that. We don't like ambiguity. We don't like ambiguity in evidence. We don't like ambiguity in the courtroom. And so we want to encourage all of our people to adhere to a very strict code of ethics, a very strict standard of practices, and also to recognize what their obligations are pursuant to the scope of practice for each one of these certification programs. Okay. Thank you very much.

GRETCHEN LAJOIE: Good afternoon. My name is Gretchen Lajoie. I'm the accreditation manager for the American Board of Criminalistics. I've been doing that work for about a year-and-a-half. Prior to that time, I was a trace evidence examiner for the Maine State Police Crime Laboratory. I spent 17 years there, 6 of those I was the quality manager responsible for our Accreditation Program at our laboratory. I also am on the board of directors of the American Board of Criminalistics, representing ASTM E30.

So the mission of the American Board of Criminalistics is to raise the level of competence in forensic science through peer-based certification and promotion of professional development. The ABC is dedicated to the high standards and programs for scientists involved in the administration of justice. The American Board of Criminalistics, the governing body is the board of directors. The board of directors is comprised of a representatives from each of the member organizations, up to three at-large members, and one public member.

The other board course of the organization is the Examination Committee, which is comprised of one representative from each of the member organizations. Our program philosophy is that examinations should measure knowledge and reasoning, demonstrate general forensic knowledge, in addition to specialty knowledge, require continuing professional competence and involvement. We do have some level or proficiency testing for some of our certificants, and also continual improvement through accreditation. We have been FSAB accredited since 2004. We were the first forensic certifying body to be accredited with FSAB.

A brief history of the American Board of Criminalistics. ABC was incorporated in 1999. We were built on the previous work of the Criminalistics Certification Study Committee, which occurred in the 1970s, and then also the California Association of Criminalistics. The original certification scheme required passing a general knowledge examination for a diploma status, which was then followed by specialty examinations to attain fellow status. In 1993, our first general knowledge examinations were offered in Boston, and in 1994, we offered our first specialty examinations. In 2000, we incorporated technical specialist examination, which was

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a single examination process. The examination consisted of some general knowledge questions, as well as specialty questions. In 2007, our current testing format was incorporated, which went to a single-test system.

Our current examinations that we offer, we offer molecular biology, drug analysis, fire debris, paint and polymer, hair and fiber, and comprehensive criminalistics. The comprehensive criminalistics examination is designed for a generalist. It has a wide breadth of knowledge on that examination. We offer two levels of certification and also an affiliate status. Affiliates are people who are certification eligible. They can be students finishing up their degree in a natural science or forensics field or somebody in training at a laboratory. It's for someone with less than two years of work experience.

To be certified with the American Board of Criminalistics, certificants are required to have a degree in natural science or forensic field, two years of full-time work experience, be actively working in forensics, and then for a fellow status, we have the added requirement of annual proficiency testing.

Our certification examination process is to submit an application with a \$50 application fee. The applicants are vetted by our credentialed committee. A request for an examination seat is submitted, along with the \$250 sitting fee, and then prepare for the examination utilizing work experience or study guides that we provide on the website.

So one of the questions that came up was how do certain components affect examination scoring? This is a three-dimensional graph along the X axis. We have examination scores. This one is specific to how does education affect exam score. We do see a slight increase in mean examination scores based on level of education.

How does experience affect the score? Again, we see the lowest mean scores with the individuals less than one year of experience, and then comparable mean scores with individuals with higher levels of experience. And then hours of study, we do see a drop off in mean exam scores with individuals who have not fully studied for the examination. Once somebody gets to 50 to 100 hours of study time for the examination, we do see those mean scores kind of level off.

So what are our examination pass rates? This is a difficult question. It was asked of me, but based on a snapshot of time, the number of examinations that are offered, that pass rate can be difficult to nail down. So I did round those pass rates to the nearest approximate 5%. You can see that molecular biology has about a 65% pass rate. Comprehensive criminalistics has a lower pass rate, as expected. It's more of a broad-based examination. One of the problems we run into are our trace evidence examinations. Fire debris, this statistic is based on 30 examinees, and this is since 2008. Hair and fiber is based on ten examinees, also since 2008, and paint and polymer is 13 examinees. So these low-fruit examinations, it's difficult to nail down an accurate pass rates.

How does one maintain certification once they have passed the examination? We have a five-year certification cycle. For recertification, certificants are required to submit an annual \$50 maintenance fee, annually sign our rule of professional conduct, and then obtain 50 recertification points over five years. There are specific requirements. Ten of those must be in professional development, and 15 must within the specialty area that

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the individual is certified in. And then fellows have the added requirement of providing proof of annual proficiency testing, all of the proficiency tests that they take within their certified disciplines.

Cost comparisons of our organization versus other certifying bodies, I just created a table based on IAI ABFT, American Board of Forensic Toxicology, and I also included International Association of Forensic Nursing. The certification costs for those different organizations vary from \$200 to \$400, depending on the organization. The recertification fees are quite different. For ABFT is \$25 per recertification cycle, which is every five years, up to approximately \$400 per recertification cycle for IAFN, which is every-three-year recertification cycle.

How are our examinations developed? We have our examination committee, which is the workhorse of the organization. We have one examination coordinator responsible for each of our certification examinations. Between the committee and the examination coordinator, they develop the knowledge, skills, abilities, and job descriptions relevant those examinations. They're also responsible for reviewing and refreshing the examination. Each examination coordinator has approximately five subject matter experts that they utilize. These are outside of the committee. These individuals are responsible for assisting in question development, ensuring the questions are accurate and the technical information is accurate. Our examinations have 200 questions. 40% is general knowledge, 60% is specialty knowledge, and then we have an added 20 pilot questions for each examination.

Previously, to validate our examinations, we would have a sample size of at least 20 test takers, plus some negative controls, individuals who were not trained in a discipline being tested. We would look at how all of the questions were performed on the pilot test, look for the natural breaks, and determine a cut score. So what are we working towards?

We are working towards ISO 17024 accreditation. There are two accrediting bodies in the United States that offer this accreditation. The first being ANSI. I guess not the first, but the American National Standards Institution offers 17024 accreditation for certifying bodies. Additionally, there's the National Commission on Certifying Agencies. This organization has previously offered their own accreditation standards, but they're now offering 17024 to certifying programs already accredited to their standards or programs looking for dual accreditation.

Things in 17024 that are of significance, impartiality is a significant component of the standards. We are required to have firewalls between the examination creators, the examination scorers, and trainers. We need to have procedures in place to prevent conflict of interest in the candidate approval process, proctoring examinations, recertification review. We need to conduct a thread analysis, looking to related organizations and how their may be a threat to impartiality. An example would be our member organization. And we need to have procedures in place to protect the candidate during examination grading. Our examinations are electronically graded. They're multiple choice examinations.

Additional requirements for us are the certification scheme requirements. The first would be to conduct the job task analysis for each certification examination. To conduct the job task analysis, we're looking at minimally 15 of these subject matter experts to examine the job descriptions, look at the knowledge skills and abilities, to ensure that we have a proper KSA group and frequency and importance. The expert panel would then develop a survey to send out to approximately 200 practitioners to ensure that, and to further refine

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those knowledge, skills, and abilities, and the frequency and importance. And then that expert panel will develop the blueprint for our examination.

The examination committee would then be responsible for developing examination based on that blueprint from the job task analysis. We do require sensitivity testing of our questions prior to being included into an examination. So the sensitivity testing looks to make sure that we're being culturally sensitive but also are our questions structured properly? Are we inadvertently leading an examiner to a particular answer or a distracter based on the structure of the questions? And then once the examination is in place and out, then we need to have item analyses conducted on the examinations. So this is work that's done once the examination is out. We look at candidate responses to make sure the examinations are properly performing.

Statistically speaking, we're looking for two -- a multiple of two of the number of questions on the examination. So we're looking for 400 datasets. That's 400 examinees. Minimally, we need to have 100 test takers, invested test takers, not negative controls. These people need to be trying to actually pass the examination in order to be statistically valid.

So what is the item analysis? I have definitions up there, but simply speaking, it's ensuring that the examination is working as we are expecting it to work, that people who should be passing the examination are, and people who shouldn't be passing the examination aren't.

So what are examples of what an item analysis will include? Response choice frequencies are all of our distractors working equally. Is there a possibility of false positives or false negatives in the scoring? Is the test reliable, even if we remove a particular item or a particular question? Item discrimination, does that particular -- does each question differentiate between higher and lower scores? Are the questions appropriately difficult so we have the appropriate ratio of easy questions versus hard questions? And then the demographic analysis, do the demographics affect the passage rate? So upon completion of the item analysis, the examination will be revised as necessary.

Other things that we need to consider, the examination should not be stagnant. This needs to be occurring with some frequency. So the job task analysis and the item analysis, minimally, needs to be happening every five years this needs to be a fluid process. Grandfathering is not allowed. So we must define a process by which individuals are recertified to the accredited certification program, and some certifications will never be accredited. The original general knowledge examination diplomates will never have an accredited certification unless they retake an examination. And then each certification scheme is actually a different scope of accreditation, so we offer six -- currently offer six examinations but two levels of certification for each examination, which is a total of 12 certification schemes that we're looking to have accredited.

What are our concerns? We are a volunteer organization. We do have three contractors who are part time. But the bulk of the work is conducted by volunteers. It is an expensive process, the accreditation process, hiring the statisticians to do the psychometric work. How do we manage these low through-put examinations? We will most likely never have enough examinees for the fire debris or the paint polymer hair and fiber examinations to conduct the proper statistics. Validating our exams with greater than 100 test taker, this takes a lot of time to do. How do we involve test takers and have them take our test?

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Proficiency testing, is that sufficient to separate the different levels of certification, which is how we're currently structured. We get requests frequently for these specialized evidence areas with limited participation. How do we manage those types of requests and serve those clients? The waiting periods between examinations of certification becomes mandatory. We do have a waiting period between examinations, how will that affect our waiting period? And then the recertification process and points, validating our recertification process and why we assign points to the different recertification activities. And that is our contact information as well. Our website, my e-mail and our register e-mail.

LYNN GARCIA: While he's loading that, my name is Lynn Garcia. I'm here from the Texas Forensic Science Commission, and it may shock all of you to hear that Texas is doing it a little different than everyone else. The legislature passed a couple years ago a program to require licensing of forensic scientists in Texas, and I have a Prezi, the very first one I've ever done that's about to be loaded, hopefully, and I will walk you through that process.

This is all Marc Lebeau's fault, because he did the first Prezi I ever saw, and I thought it was the coolest thing, so I decided to do that, and I think it's just a little more complicated than the traditional PowerPoint. We did rehearse this. All right. Okay. All right. So here we go.

So the requirements in Texas by the legislature is that by 2019 no person can act or offer to act as a forensic analyst in Texas unless that person holds a license. The definition of forensic analyst is a person who, on behalf of an accredited crime lab, either technically reviews, performs forensic analysis, or draws conclusions from or interprets forensic analysis for a court or a crime laboratory. So it's a pretty broad definition.

Some other key definitions in the law, forensic analysis, you can read it there. It's a pretty broad definition. Crime laboratory includes public or private labs or other entities that conduct forensic analysis, and an accredited fields, I don't have to explain, is basically any of the disciplines that have to be accredited under Texas law.

So which disciplines are subject to accreditation? We have there for you all sort of the traditional suspects. I would note that one major discipline that has not been subject to accreditation under Texas law, until now, is latent print examination. So that's actually a fairly big exception.

The effective date of this requirement is January 1st of 2019. We're moving really fast to meet that requirement. The commission has to establish qualifications for the license, set fees for the issuance and renewal of the license, and then issue them to applicants who meet the criteria. In order to help the commission to do that, we've established a License Advisory Committee. And that committee consists of a prosecutor, a defense attorney, and seven scientists. They advise the commission and make recommendations on all matters related to licensing, and they have staggered two-year terms. I'm moving pretty quickly through all this, because I assume you all want to get to the questions, so I'm just going to kind of roll there.

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What you are the qualifications? Successful completion of educational requirements, specific course work and experience, including instruction on courtroom testimony and ethics, completion of an exam, completion of proficiency testing to the extent required for accreditation, and then to pay the fee. All of these things are being determined right now by the Advisory Board and by the Commission.

So this is a very tiny chart. I apologize for that. But this is the beginning of what we're doing in terms of laying out all these requirements. Here are our discipline and sub-discipline charts. You can see there, just firearms and tool marks alone are broken down into various different areas. Same thing for trace evidence, toxicology, controlled substances, they're all broken down because in some disciplines, for example toxicology, you may have an analytical toxicologist, someone who does the testing, and then an interpretive toxicologist, someone who does testing and interpretation. Those are different skill sets and so our advisory committee believes that the licensing requirements should be different. They also typically require different levels of experience.

Disciplinary action, the commission can revoke a license. The commission can just not renew the person's license or reprimand the license holder, and this is on a determination by the commission that a license holder has committed professional misconduct or violated a rule or order of the commission. Those disciplinary proceedings are subject to hearings and due process through the State Office of Administrative Hearings, which is administered by the attorney general's office.

A question came up about defense experts. Does the licensing requirement apply to defense experts? And the way that this is working out is we're just now having a discussion in Texas that I think probably should have happened when the original accreditation requirement was adopted in 2003. The accreditation law applies to an examination or test requested by the state, but also by a criminal suspect or a defendant. But what's happened in practices; that most Texas courts allow defense experts to testify, even though they don't come from an accredited laboratories. The reason for that is the state typically does not object, and fighting the admission of a defense expert is not -- from the prosecutors I've talked to, is usually not something that they want to engage in. They want to let everybody testify and then allow the court to make decisions and let the jury hear the evidence.

So the licensing requirement and recognition, we don't want to place burdens on defense experts who may not be able to get licensed, it actually doesn't require defense experts to be licensed. The crime laboratories wanted to try the licensing program out first on themselves, sort of submit themselves to that process, and then talk about defense experts at a later time. But because accreditation is required, we have to sort of reconcile the law. So the legislature is working on that now. We have a real dilemma with this issue because there are Constitutional questions about defense experts' access to good experts.

There are county laboratories that will do work for both the state and for criminal defendants, but I talked to some defense lawyers who say that's not good enough, because, you know, one day we're cross-examining the witness, the next day we're sponsoring the witness and it makes it difficult. So this is an issue we have to keep working on. It's not just Texas but I think around the country. Uh-oh, I don't know what happened. Sorry. Okay. Can you go to the next one. Okay.

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So what are some issues we still need to address? The format of the examinations that we're going to be requiring, the criteria we're developing. I should point out that the commission has not said that it won't recognize the certification examinations that my colleagues on this panel have talked about, but they want to understand that those examinations cover certain subject areas and make sure that those examinations are updated in a timely way. So we're going to be working with the existing certification programs to look at those exams, and if the exams are not workable, the commission will be working with the labs to develop competency exams that are administered in Texas to fulfill that requirement.

We're also working on how those exams would be evaluated, the fee schedule. Obviously if we're talking about perhaps administering some of our own exams, what about all the issues that Gretchen just talked about? You know, are the questions fair? Are the issues with psychometrics being addressed properly? Up until now, the commission has been really focused on the substance of the exams first, but these issues are insignificant, you know, whether there should be grandfathering or waivers for some examiners, provisional licenses for new hires.

The way the law works right now is, as soon as you get hired you cannot hold yourself out as a forensic analyst in Texas, whether you're testifying or not if you don't have a license. So for those folks who just get hired out of school and are trying to fulfill these requirements, do we need to have a provisional license like you do for lawyers who come just straight out of law school? Also, temporary, or what I put there, the lawyers will understand this, pro hac vice type licenses, for people who testify in frequently. They may come in from the FBI or something and testify once a year in state court, should they really have to get a license, and then the continuing education requirements.

I will tell you the scientists in the group have said the one thing, they are going to make sure that they have more continuing education than the lawyers, because they want to make sure that they are holding themselves to as high or higher standards. Next. My mouse seems to have -- can you go to that next slide. Next one. Yes. Okay.

So one of the things I was asked to address is why Texas did not just go with certification, as opposed to licensing, because we are always talking in terms of certification. And there were a few things that came up. One is tremendous variation in the certification offerings out there, both in terms of how long you have to be practicing before you can even sign up to be certified, the rigor of the examinations, the fees involved. There's a lot of variations. Some of the certification exams are perceived as outdated. I will tell you that five years and DNA in molecular biology is a really long time, and I have learned that painfully firsthand from some experiences that we've had in Texas, coming to grips with the fact that the DNA community has had some issues interpreting mixtures over the years and how to deal with that situation and make sure that we have ways to properly assess people's understanding of really difficult concepts in mathematics and biology.

The disciplinary component allows for when the commission conducts -- our primary job is to investigate allegations of negligence and misconduct in Texas. So by having a licensing requirement, if there is a finding of misconduct, the commission also has the ability to address that finding and to revoke someone's license if they should not be practicing if they should not be offered as a witness in criminal courts. That happens infrequently, but when it does happen, there should be a way to address it. The certification programs

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certainly do have disciplinary mechanisms, but we have no control over that, and typically there's no way to know what's going on in that process. So I think in Texas the idea was, much like lawyers, if you're going to be disciplined, that should be something that's done statewide.

Also, there are issues that are very suited to handling as a state, such as the requirements of Brady and the Michael Morton Act, which is a very extensive discovery and notification obligation that we have in Texas, and that forensic scientists are starting and need to understand their role in that.

Also, statistics, every single conversation we have now revolves around the need to truly understand statistical models. And I don't think I really appreciated that when I first got this job, or over the last few years. But more recently it's become acutely clear to me that scientists, forensic scientists need to have that skill set in order to do their jobs properly. Also, testimony and reporting, all of those things we can try to assess through a comprehensive licensing program.

Also, we think that lab-to-lab consistency will be easier to achieve with a licensing program, and incremental changes in our program, we can make over time and try to bring all the labs along. Also, we want to harmonize with other professions. You know, you have to have a license to do a lot of things in our state. Why shouldn't you have to have a license if you're going to be talking about issues that impact life and liberty? So that was a big part of the decision calculus as well.

So I have one more thing to show you. It's actually a little bit of Texas trivia before we move on to questions. Which of your vice chairs is a competitive calf roper and spent five years of his -- five of his childhood years in Alpine, Texas? You don't have to vote. Just keep it in your head. Guess which one. Hold on. If I can get -- oh, no, it's not here. Oh, no. So this version, for some reason, does not have a video, this lovely video of Dr. Butler at a conference in Grapevine, Texas, showing how -- I mean very, very cool footage of him roping an imaginary calf, which I was going to show you and that was going to be the end of my talk. But, anyway, you can imagine it in your heads. It's a view -- there he is. There he is. Okay, let's see if I can get him to do his thing. Ready? There he is. Look at that. Pretty spectacular, huh?

JOHN BYRD: I'm not certified to do that.

LYNN GARCIA: Okay, that's all I have from Texas. Great.

PATRICIA MANZOLILLO: Thank you very much. Do we have any questions for the panel? Yeah, Greg.

GREGORY MOTTA: I have a question for John. Could you tell us briefly what was in the Wolf report that expedited the process in Carolina? And secondly, did you have any pushback from any unions or state rules that would force people to do things that they weren't required to do when they took the state jobs?

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JOHN BYRD: So I'll start with the second part of the question. There's no pushback on the state level. There's no union in North Carolina, so that's pretty cut and dry. We deal with Office of State Human Resources and they look at what our requirements were and how to implement those.

Back to the first question, the Wolf Swecker Report was 637 pages long. There was no question of the quality in the laboratory, that State Crime Lab in North Carolina has been continuously accredited since 1988 by ASCLD/Lab, and now dual accredited by ANAB and ASCLD/Lab. So, in that respect, it was the preponderance of the Joint Select Committee on the preservation of biological evidence, the overturning of the Greg Taylor case, and the Wolf Swecker Report in totality that, then, the legislature went and said, how can we address this. And it was a multi-prong piece of legislation, of which accreditation bias standards certification, Forensic Science Advisory Board for the State of North Carolina, as well as an ombudsman were four of the major components that came out of that, and it happened all within an 11-month period of time, after the preceding events occurred.

JAMES GATES: Thank you, and I'd like to thank all the members of the panels for the briefings. It's very informative. General Byrd, I have to tell you, I was going to ask the question Dr. Beiber was going to ask, because it's amazing that you pushed towards these national certification standards but not get pushback at the local level. I was going to ask you how you managed that trick, because some of us who work in education would like to do that too. It's a whole different field. But thank you very much.

Two questions; one, actually for Director Garrett, and one for our CEO, Miss Lajoie. Director Garrett, you mentioned ambiguities and avoiding ambiguity. And, you know, for some of us who are scientists, that's like putting red meat in front of a bull, because science is really all about knowing how unsure you are about assertions that you make. And so your comment about not liking ambiguities raises red flags with some of us. So I'd like to give you a chance to clarify or expand on that comment.

ROBERT GARRETT: Well, you know, as far as people working in law enforcement, in spite of what you may see on the news every day, I spent over 30 years in law enforcement myself. In the last -- since 2003, I've been on sort of the other side of the aisle, even though I do work for both these days. There's really no delight taken when somebody gets, you know, convicted of something that they were not guilty of. When I go into court -- and I testify and I know my associates feel the same way -- we really don't want to leave any doubt in the jury's mind, and I don't want to have it on my conscious that I, in any way, participated in the wrongful conviction of an individual. I don't know that I could live with myself if I did that. I'm the sort of person where if I found out that based upon my testimony, where I was found to be wrong, somebody went to jail for, you know, the rest of their life or even if they went as far as I'm concerned for 30 days, I'd probably resign my position, and I don't know how I would live myself afterwards, because that's me. That's the sort of person

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that I am. I try to instill that in other people, and people that I talk with, people that I work with, and people that work in these certification programs also.

You know, we're coming up pretty soon, celebrating, you know, Independence Day, and I fully believe those inalienable rights of life, liberty, and the pursuit of happiness are things that nobody should ever jeopardize, unless you have good cause.

JAMES GATES: Thank you.

ROBERT GARRETT: And that's where I see that, you know, it's important for us. If we're truly going to be part of a criminal justice system, it's truly important that we participate in the most important part of that, which is the justice part. And my work and my effort on toward reaching those goals of justice for everybody, I think certification plays an important role in all of that.

So as far as there being any ambiguity, when what -- you know, we have statisticians that you're going to bringing in when you're going to be talking about the way we testify in court and so on. So to tell you the truth, I was much better off -- I don't know if "better off" is the right word, but I was much more satisfied when somebody went in the court and they said absolutely this is it to the exclusion to all others, don't -- you know, and I'm absolutely sure this this is what happened. Because I know if that person is found wrong, that person is out of a job. They're gone. Goodbye. Because all your credibility is now out the window.

But if you go into court and start offering statistics. I don't want to be convicted based upon statistics. That it was more likely that I committed the crime than not. Because, you know, if we live a democracy where 51% wins, I don't want my fate nor my future to be held on 51% in that courtroom. I want it to be as close to as a hundred percent as possible. So I know we have to -- to be more scientific, we have to do just the way that we testify about certain things. But I want, in the mind of that examiner at least, or that analyst, to be that there as close to a hundred percent as they're ever going to get, otherwise don't offer that testimony at all.

JAMES GATES: Well let me assure you, I don't watch TV at all, so I wouldn't get that impression of any police officer or law enforcement officer. But there is a fundamental tension here in science and what this commission is about, which I have voiced on many occasions here. Because on science, in fact, it's really about quantifying uncertainty. And I know that in the prosecution of justice you have to get a standard where the finder of fact has a sufficient confidence in their beliefs they they're willing to take a position that, in fact, has

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implications for life, liberty and freedom, you know, the whole thing. So it's not that I was being critical of you, I just wanted to hear what your sort of statement was and what you propagated in the community around you about this issue certainly, because this group in particular is going to come back to this over and over again in our work, so it was very important, I think, to give you an opportunity to expand.

And if I may, and I hate to occupy so much of the discussion, I wanted to ask CEO Lajoie about the testing and certification, in particular, it's a volunteer organization, but are psychometrics involved, because that's the coin of the realm in terms of standards about how you construct tests?

GRETCHEN LAJOIE: Yes, we've been working with Ohio State University Group to do the psychometrics for our examination.

PATRICIA MANZOLILLO: Okay. So Julia took her tent down, and, okay. So I know Marilyn's tent was up, so let's try Marilyn next.

MARILYN HUESTIS: Thank you for the presentations. It really was informative. I have an easy one and a hard one. So the first thing, I don't remember who said it but someone said that they didn't include latent print examinations in their process. Can states say why?

LYNN GARCIA: So we didn't -- it was not a decision made by the commission. All I was saying is that when the legislature of Texas originally passed the requirement in 2003, that all forensics analysis, in order to be admitted in Texas courts, had to be accredited, they decided at the time not to include latent prints. I think because at that time, it was perceived that if they had included latent prints the bill would have had a hard time passing. So what has been set up for latent prints in the licensing realm is not a mandatory requirement for licensing, but we will develop a program that people can participate in, with the hoping that eventually it will become mandatory.

In Texas there are hundreds, if not thousands, of latent print outfits. We have 254 counties. It's just an issue that is historical in nature and not anything the committee decided. I just thought I'd mention it because, you know, we definitely do, we have a lot of pride in Texas about how great we're doing, but there are some things that we still need to work on, and that's one of them.

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MARILYN HUESTIS: Yeah, that's interesting. Okay, the harder thing is that -- my understanding is that some of the requirements between the different certification organizations are quite different, and some may be easier or harder, whatever. How do you see us going forward with trying to standardize better across the different accrediting bodies so they achieve the same level of competence or standards that we like to see?

ROBERT GARRETT: It's going to be hard to have a one size fits all when it comes to certification because we're certifying in different things. Whether you're certifying people who are doing work in laboratories or people who are doing work out in the field, some of the certifications are specific to the task at hand, like latent print examination and so on. So I don't know that you can have that, you know, perfect one-size-fits-all framing of things.

MARILYN HUESTIS: So I can see that across disciplines, but there are quite a few disciplines that are certified -- different accreditations and certifications by more than one organization, so they, you know, have different difficulties. So that's one of the big worries. I think that if practitioners see that this one is easier to achieve that one, that that may be a difficulty. So is there a way we can harmonize within a specific discipline?

ROBERT GARRETT: Well, I think accreditation is one of those rungs on the ladder that you can look toward, whether or not this particular certification program is, in fact, accredited, which means that at least you know that it's meeting a certain level of standards. And in the case of ABC or IAI, that's pursuing the 17024 accreditation, you'll know that at least we're talk the same language when it comes to setting those standards.

MARILYN HUESTIS: Okay. So I know it's really difficult, but I think that that's -- you know, that level, it's hard for this commission to get down in the weeds of these specifics, but I do know that there are differences, and that's one of the big controversial issues that people are talking about.

GRETCHEN LAJOIE: I actually think it's like from our perspective, as we go through our job task analysis of our examinations, years of experience is probably a relevant question to ask. What is an appropriate amount of experience for an examiner to have? So it may be something that we address as we're doing that process for our examinations. And I do believe that accreditation is a reasonable response, because the accreditation process will have psychometricians looking at the work that has been done to ensure that it is appropriate. But where the concern, I think, is going to be is, again, on those low through-put examinations that will not meet accreditation requirements, because we can't get the psychometrics for those examinations; therefore, they will not be accredited. So those, I think, are going to -- may be problematic going down the road.

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PATRICIA MANZOLILLO: Okay. Phil, you took your tent down. Bill, you took your tent down. Okay, Arturo, you're next.

ARTURO CASADEVALL: Yeah, I just want to comment on the -- I saw the great comments from Dr. Gates and I think some of the tension that I feel here -- I've been here four or five times already -- is the tension between how, in science, to us, all knowledge is provisional? In fact, we consider that the only part of human endeavor where the knowledge maintains itself and (inaudible) mathematics. Everything is an error, everything is probabilistic, and yet when in the legal system and, in fact, when these issues are made, the decisions are made almost without an acknowledgment that this is an underlying error, and yet we know that many decisions are not right and that.

And I think that what we -- I mean, what I'd like to see is more of an acknowledgement, that, in fact, we're working in a space, in a space where that even in the best circumstances there is a tremendous amount of error. I mean you can do the most controlled experiment for God's sake and you can often not reproduce it. So it's a comment. It's not a question. It's just passing it on. So they were triggered by Dr. Gates comments.

PATRICIA MANZOLILLO: Troy, I don't know if you were next or -- okay.

TROY LAWRENCE: Thank you for coming. This is my first meeting, so I'm introducing myself to the rest of the commission. I am from a digital forensics field, and I'm from Texas as well. And unfortunately there was nobody on the panel to discuss digital. I know that, Mr. Byrd, you have EnCase certification required in your lab. But that's just certification to a tool, it's not a general certification.

Do your examiners -- I would assume that they process phones as well. Do they have to rely upon that EnCase tool certification to do that job, or would a more general digital evidence certification possibly be warranted? I would like for each of you to, if you can, kind of describe how not all sciences are done in a lab. Some of these are actually investigations that are done out in the field, crime scenes, sometimes digital. And explain to the rest of the commission the benefit of the certification, and that it tests the examiner's ability to do the job and not necessarily whether the lab has protocols in place. And just explain how you do the testing to make sure that that person is up to speed and knows how to perform the functions that they're required and not necessarily what the lab's quality manual is in for its organization.

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JOHN BYRD: So if I might just add, we started with EnCase, because when the requirement came down from our North Carolina General Assembly, it was get it done now. What we have done, we use Lean Six Sigma methodology in our laboratories, part of our continuing process improvement. We'll actually transitioning over to certified computer examiner through the International Society of Phrenic Computer Examiners. I had to write that down. Yes, as part of our process, we went back and looked to see is this really the one we want to continue with? And we made determination, no, we need to be of more broader scope in our certification.

To address your following questioning, how it strengthens my examiners, there's a lot of, I guess, intangibles in what we see and how it strengthens my examinations. But at the end of the day, when my examiners are on the stand testifying, the knowledge that they impart in their testimony is really the true -- I hate to say "testimony," but it is the true test of what they've learned through not only their training, experience, but also through the certification process. It is the totality of everything that we do that strengthens the science in our laboratory, the certification, the accreditation, the training, and the experience going in together.

PATRICIA MANZOLILLO: Okay, if no one else, Matt, I think you were next.

MATTHEW REDLE: This is, I guess, to the four of you. At our last meeting the commission offered up a proposed code of ethics, and unfortunately we've not seen an insignificant number of laboratory scandals, scandals with different examiners, that sort of thing. One of the difficulties that we face is being able to identify that wrongdoing, and then once the wrongdoer has been identified, track them, because we also have a history of some of these examiners moving from state to state. So I guess the question I have for you is do you have thoughts or ideas about whether or not certification or licensing might be a better means of accomplishing those tasks?

LYNN GARCIA: Well I have thoughts, as you might imagine. A big reason why the Texas approach is the way it is, is to address that exact issue. We're a big state. We anticipate licensing at least 1,400 examiners just in Texas, plus those who come to Texas, and who live outside. And the vision for this is that if someone gets their license revoked or their license is suspended, that the public will be able to see that, just like they would be able to see it with an attorney or any other professional. And it's important, because we don't want folks who have committed misconduct to move around inside of Texas or outside. So that was a big part of why license was the way that we went in our state.

JOHN BYRD: So, as a lab director from North Carolina, I would tell you that having that process in place, to be able to take a look at scientists that are coming into our laboratory system as a new hire, we want to go back and look to see. I have 85% millennials in my laboratory, a tremendous amount of turnover in the last five

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years. But as we start to see more experienced examiners move towards North Carolina, having the ability to go look at certification to see what they've done, go back and look at their history, that's important to the reputation of the lab, and important to the reputation in the justice of North Carolina.

PATRICIA MANZOLILLO: Okay. So I've been told that we have about five minutes left, so we'll take Jules, Phil, and then Gerry.

JULES EPSTEIN: Thank you all. My question goes to our guest from ABC -- is that right -- about the slide you showed with the failure rate on the different exams. And I guess my question is, what's that mean? What does it mean about how good or bad the exams are, and what does it mean about the fields that you're testing? Thank you.

GRETCHEN LAJOIE: Okay, so the slide was a pass rate, so just to make sure --

JULES EPSTEIN: I wasn't sure.

GRETCHEN LAJOIE: That's okay.

JULES EPSTEIN: [Inaudible].

GRETCHEN LAJOIE: It was -- I will say that the pass rate I included in the presentation, because it's a question that was asked of me to present. I think, you know, especially speaking, we do have a question database manager who does a fair number of statistics for the organization. You know, his feeling is that the pass rate is not a great tool necessarily, because there are things that can change that pass rate. The examinations can shift over time. We change questions in and out. You could have an influx of examinees, some who may be prepared, and some who may not be prepared to take the examination. There are so many variables at play, so I tried to provide kind of a general pass rate for those examinations, like, because that's kind of what was asked of me to present. Did I answer that question?

JULES EPSTEIN: If I can rephrase what I think your answer was, is not sure what it means because there are too many intangibles.

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GRETCHEN LAJOIE: Correct.

JULES EPSTEIN: Can I just ask as a follow up, over how long a period of time do those numbers reflect? I realize that wasn't good English, but I think you know what I mean.

GRETCHEN LAJOIE: Yes. So that was since the change of the examination structure, which was in 2007.

PHIL PULASKI: I have two questions. The first question is for the certification bodies, those certification tests that are multiple choice don't involve a practical examination or a problem. The validity of that exam as showing kind of what I know as the test taker, that's been validated by psychometrician? I come from an engineering background. I don't think I had sort of multiple choice test when I was in an engineer. Everything was a problem, because you could end up getting the answer wrong as a result of some complex arithmetic formula and you screwed it up, but you had to write methodology, and so, you know, it's the old partial credit. So just how competent are you in a multiple choice situation, that purely multiple choice, that this person has accomplished whatever that level is to require certification? That's question one.

Question two, in Texas, do you think that this more stringent standard that you're setting may dissuade certain people from entering the field? So if I want to be -- I don't know -- a DNA analyst and I'm looking and say, Jesus, lawyers don't have to be relicensed. Five years is a relicensing period?

LYNN GARCIA: So what's contemplated --

PHIL PULASKI: So just -- I'm sorry, you have to be relicensed; right, as a forensic analyst?

LYNN GARCIA: No. Once you get your license, you have it. You have to fulfill CLE or what is the equivalent of CLE. You don't get rely sensed, no.

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PHIL PULASKI: Okay. Just in terms of original questions, so you don't feel that -- or has been any studying done that says, "You know, I think I'll be a latent print examiner. It's, you know, a lot of fun. It's a forensic science and I don't need to take a license." So just first answer.

ROBERT GARRETT: As far as the multiple choice questions and the development of the tests are concerned, in some areas where the multiple choice questions relate to, say, background or historical information that someone needs to know in order to be prepared to address particular issues that may arise in cross-examination or, you know, as part of a challenge in court or what have you, you know, that's rather basic as far as that's concerned. And a lot of that information comes from the experience of the people who putting together the tests and their actual experience in the courtroom.

As far as the multiple choice type of test, where you're trying to find out if somebody is capable in a particular area, it all comes down to what we were talking about earlier about scope, and they know that what they need to do is define the scope of what it is your certification means, and then you have to test for those particular goals within the scope that you're hoping that this testing process is going to, you know, substantiate. We're in the process now, a number of our tests are under review, and we're actually getting the cooperation of our European partners to help with the validation of the tests also, and we're hoping to have all of that done by the time this accreditation package is complete.

GRETCHEN LAJOIE: So, yeah, so the examinations were validated prior to implementation, and then we do have piloted questions that have to be through a certain number of examinations before they are actually placed on the examination and go into our question pool. We do have a question database manager who is responsible for ensuring that those questions are appropriate. And then we examine the questions periodically to make sure that there aren't poor performing questions. If there are poorly performing questions, they're removed. This will be -- as far as going doing an actual item analysis with a psychometrician, be trained in a psychometrics, I believe that this is the first time, or at least the first time in a couple of years, since I've been around, that that is being done so we're going through that process now.

PHIL PULASKI: So there is a correlation mathematically, statistically between my performance on the exam and my performance in the laboratory.

GRETCHEN LAJOIE: I don't know that I could answer that question. I mean, I can answer, you know, the correlation is, are the questions performing properly. They aren't specific. Can you -- are you properly performing in the laboratory? They're different questions.

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PHIL PULASKI: You know, I mean, I'm a good paint analyst, and it's reflected by a multiple choice test. So is there any correlation in that or --

GRETCHEN LAJOIE: From the examination itself, it's more of a, do you have the training and the experience, the historical information. It's not a practical -- certainly not a practical examination, but that's where, again, the fellow status comes in with our examinations. We do have proficiency testing as a component of that certification. Proficiency test providers, they're very good at what they do, and most of them are accredited now as well. So that's -- we leave that to those experts.

LYNN GARCIA: So in response to your question, I think, first of all, one of the reasons we're going the way we is because a lot the analysts want to get to that question that you raise, which is if I'm going to take an exam and go through this process, I want that exam to be an evaluation of whether I can do my job and do it well. So that's one of the reasons why we're taking a little bit of a different approach than the traditional certification bodies.

On the question of whether I think people are going to be discouraged from practicing forensic science in Texas, I have not seen that at all. In fact, I think people are quite excited about the prospect of having a license and testifying with the license, because, frankly, they're sick of being compared. The analogy is always, you know, you even have -- you know, you go to the barber and they've got a license, but, you know, forensic scientists don't even have licenses or anything governing them.

That is not -- I think the perception that our scientists want the community at large to have. This emanated out of the community. They want it. They want a way to hold people accountable when they're not doing what they need to be doing or when they're outright committing some type of misconduct. Was it unanimous? No. But I think, you know, frankly if there are people that don't want to go through getting a license, then probably we don't want them. And I think that's something that Texas is willing to say. I mean, you should be able to meet these requirements. They're not impossible requirements. We ask it of our lawyers. We ask it of our doctors. We ask it of a lot of professions. So we should ask it of our scientists in this context where life and liberty are at stake. And I think that's the direction we're going in.

GRETCHEN LAJOIE: I'd like to add to her comment. Just because somebody has a barber's license doesn't mean they can give a good haircut either. It just means that they know what they need to know to operate in a hair

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facility. So we do leave a lot of the onus on the laboratories to have their own quality system in place. So we are one cog in the wheel of this process.

PATRICIA MANZOLILLO: Okay, our final question from Gerry.

GERALD LAPORTE: Actually, that final comment segues exactly into what I was going to say, which was -- and my question is actually addressed to Lynn. And so is the focus of the licensure on proficiency, competency, knowledge, and ethics? Is it those individually, all of the above, some of those things? Because proficiency and competency are measured in completely different ways than someone taking a written test. It certainly provides you with the background.

And then one final question, and I'll leave it at that is, in terms of revoking someone's license, I assume that the commission has put together some sort of protocol. And I'm just wondering what the keys to revocation would be. It is more of are we talking about ethical things? Is it bad interpretation of evidence? It is just doing some really bad things in the laboratory? And I'll let you go from there.

LYNN GARCIA: Sure. So on the second question, because it's fresh in my mind, it had to be professional misconduct. It's not a mistake. So we're talking about intentionally violating a standard of practice that the community holds itself to. So that's on revocation.

And before someone -- because it's an occupational license, before someone's license may be revoked, they have due process and a hearing through the attorney general's office, and a process that's set up for administrative hearing. It's not something the commission just takes a vote at a meeting and that's it.

On your other question, what we're trying to get at, so we have various prongs, and educational requirements, coursework requirements, ethical courtroom testimony, statistics, notification, what the scientist's duty to correct; right, do people understand what it is and how to implement it? We also have the examination requirement, and we have proficiency testing, in the traditional sense. So it's actually multifaceted.

Now the question I think you're asking is, are we looking for a minimum, you're competent to practice, or are we looking for some elevated level of proficiency, mastery, for example. The statute allows the commission to set different sort of grays of licensure. Sort of if you think about it in the lawyer context, which is the only

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place my head lives, because I am one, you know, you can board certified. You can have a higher level of competency than what you need just to be able to do your work. So we have the threshold level plus the possibility of establishing additional levels. I think we got to get to the threshold first, and then we'll talk about the others. Hopefully that answers.

PATRICIA MANZOLILLO: Okay. Thank you very much to our panel for the presentations and the questions.

JOHN BUTLER: Before we go to our subcommittees, there's an opportunity for public comment. Anybody have any? Jonathan has a microphone if there's somebody that would like to make a public comment. We have up to three minutes to be able to do so. So seeing none, Jonathan, you have to close the meeting as the DFO, until we meet tomorrow at 9:00 o'clock.

JONATHAN: I adjourn this meeting, and we'll see everybody 9:00 a.m. tomorrow morning. Thank you very much. Let me know if you have any questions.

NCFS DAY #2, TUESDAY, JUNE 21, 2016

PART 3

JONATHAN McGRATH: Good morning everyone. Welcome to day two of the tenth meeting of the National Commission on Forensic Science. I just had a couple updates that I wanted to remind the Commissioners about, that it was instructions that were provided in some of the previous email correspondence on commission business. There's administrative instructions on how to access the ANSI portal where there are standards available for commissioners' use in developing work products. I believe we added some additional standards to the portal that included some of the referenced ASTM and other standards on digital forensics. So if you need any assistance in accessing that portal, please let myself or the rest of the Commission staff know.

Also, during the last meeting in March, the question was brought up to request access to the OSAC standards portal. And I believe we had instructions for commissioner use to access the OSAC standards as well. So if you have any questions on that, please let the staff know. Again, welcome. Good morning. And I'll turn over the mic to Nelson. Thanks.

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NELSON SANTOS: Good morning everyone. A couple of points, first of all. I hope everyone had a nice evening. It's been brought to my attention that the format doesn't allow for sufficient "collegiation," as it was mentioned to me.

JULES EPSTEIN: Excuse me. There's no such word.

NELSON SANTOS: Oh, it was brought up by a New Yorker named Phil. In fact, I -- he will remain anonymous. I've never heard the word said so many times in such a short period of time. But anyhow, I think the reason why we did that was because we wanted to hear the DAG's comments and then have the commissioners meet in their subcommittees afterwards. Something we'll take a look at because I do believe it's important to have some after-hour interaction or, as Mr. Pulaski says, "collegiation."

Point number two, we've got a lot to do today, folks. I ask you to be patient with John and I. We're going to do our best to moderate and get to hear as many people who have questions as possible. So if your tent goes up and you've spoken before, and somebody else's tent goes up after you, we might pick that person if you've already had an opportunity to speak. So, please, understand the time limitations and the fact that we want to hear as many perspectives as possible.

Lastly, I want to turn over the floor to Phil again. He has a clarification. He asked a question yesterday to one of the presenters, and he spoke to a couple people afterwards, and apparently the answer that he got wasn't accurate. So Phil wants to get the record straight.

PHIL PULASKI: So I had asked a question yesterday of Bob Garrett from the IAI regarding my concern that the certification test was just multiple choice. So it was clarified after the meeting when I spoke to Bob and to Kenny Martin that the IAI certification is not just a written test. So, first there's a written test. If you pass the test, then there is a practical test. And if you pass the practical test, then there is a moot court or you submit a transcript. So it's actually much more complex than just passing a written test. Additionally, the five-year re-cert, in addition to having your continuing education, you also have to retake a practical. It's not as difficult as the first practical, but you do take another practical exam. So I wanted to make sure that my question wasn't sandbagging Bob and giving people the wrong impression, misleading them in terms of what the process is for certification by IAI. Thank you.

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NELSON SANTOS: Okay, before we start with any business, does anybody have any items they want to discuss before we move forward? John?

JOHN BUTLER: Just basically put up the agenda briefly in terms of the number of documents that are going up for a vote, potentially for a vote, or to be introduced. You can see there's a lot that's going to happen this morning with Reporting & Testimony. And then we'll go to the Human Factors, working lunch with Digital & Multimedia Evidence Panel, then we'll have four documents introduced by Accreditation & Proficiency Testing, two potentially for a vote with Scientific Inquiry & Research, and then Medicolegal Death Investigation. So, a lot of work will be going on today. So we just wanted to point that out. And then we'll have the wrap up and public comment period at the end.

So in terms of the vote, I don't know where -- I don't see Jim Gates yet, but I wanted to just quickly go through the quorum as we -- before we'll do the voting and stuff, just to point out who's here. So Linda is here today. We don't have Suzanne Bell. I don't see Jim Gates here yet. So, but we have four that are proxies for various individuals. And so what that means is for a two-thirds -- so the clickers for ex-officio are here, not handed out because they won't be voting on the documents we have before us today. But that means for a two-thirds required, that means we need to have 21 yeses out of 31 possible. So these are the people we'll have for votes. I just want to make that clear on the record before we get into the documents. So we'll now turn it over to Reporting & Testimony to Judge Rakoff and Matt Redle.

JED RAKOFF: So, good morning. The Reporting & Testimony Subcommittee has been working very hard and we have no fewer than five reports to present to you today. Three are up for a final vote and two are being presented for the first time. The first one is the report on -- a recommendation report on pretrial discovery. Paul Giannelli was the primary draftsman of this report. And unfortunately, Paul is out sick. So I will try my best to summarize it for you.

It should look fairly familiar, both because it was presented to you last time but also because the general principles are taken, more or less, directly from the views report on pre-trial discovery that was passed by this commission some months ago. When it came to recommendations, the subcommittee felt that we should focus on recommendations that would be specific to the federal system, since this is something we're asking the attorney general to implement with her prosecutors. And our first recommendation was to, in effect, adopt the pretrial disclosure rules that are presently part of the federal rules for civil cases for forensic and other experts in civil cases and ask the attorney general to have her prosecutors apply that to criminal cases as well.

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The parallel language in the criminal rules is much more general, and as a number of the comments that were received from the public point out, frequently what has been presented on the criminal side are one or two paragraphs giving very little of the basis for the conclusions, and indeed only a bare bones statement of the conclusions. This has not been true in every case, but we thought to make this uniform it made sense to apply the provisions which are much more specific that are set out in the parallel civil rule. Another advantage of this recommendation is the civil rule has worked very well for many years now and the terms are all familiar in the case law in the civil cases. So the interpretation problems are much reduced from what they might otherwise be if we were starting on a clean slate.

The main change we made from this civil rule was to say that the disclosure should be reasonably in advance of trial, whereas the civil rule requires a 90 days or greater period of disclosure. Our feeling was that, in many criminal cases, that was unrealistic. There were some other minor changes. The only one I think worth noting is the civil rule requires that the expert disclose a list of all cases in which she or he have testified in that last four years. We recommend that provision, but recommend that it be prospective because a lot of forensic labs are not -- have not, in the past, been recording that information.

The second recommendation was simply that the Attorney General should direct her prosecutors to allow the defendant full access to the expert's case record. And the third recommendation was that, to the extent that these recommendations go beyond what the law presently requires in the criminal context, they should be reciprocal and the prosecutor should be authorized, at their discretion, to say to the defense, "If you want this that goes beyond what we're required to give you, you have to agree that if you have an expert, you will give us the same thing." There is a similar reciprocity provision that's part of the present rule applying to what is required. So this would only be extending that same philosophy to stuff that goes beyond what is presently required.

I wanted to note one minor point. For some reason that Lindsay and I have never been able to figure out, two sentences were dropped from the commentary. If you look at the second page of our report and the commentary in the middle of the page, at the bottom of the first paragraph after the words "evidence," there were two sentences that Gerry LaPorte suggested and that the subcommittee unanimously adopted, and they read, "providing forensic science test results, opinions, and conclusions reasonably in advance of trial is also critical to facilitating a comprehensive and scientific review of the data. Such disclosures will also allow opposing experts to sufficiently review the scientific findings in order to provide appropriate guidance to counsel and help form their own opinions." And so that is part of the report that we're presenting. And the point of those two sentences is to show that the advanced disclosure is not only helpful in the adversary process but it's also helpful in the scientific process in making sure that what is presented has the maximum scientific basis. So that's my overview. And I guess we're open to discussion.

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GREGORY MOTTA: Thank you. I just have actually a question so I can understand the scope of the rule. So most of our other documents reference the defined terms of forensic science practitioner, forensic science service providers. This, of course, uses the term "expert witness." So relative to the constituency which I represent, the definitions of forensic science service provider have the limitation that they be for criminal, civil, or regulatory purposes.

Because this is disjointed from those definitions and uses the broader term of expert, what is it that you understand to be the scope of the application of this recommendation? Is it criminal? Is it civil? Is it regulatory? Is it all purposes? Is it for reports? Because it's both testimony reports, is it action reports? So because it doesn't have the objectives of the limitations that are built into the definition of forensic science service provider, I'm trying to understand what is the scope of the rule? And second to that, let me just ask, relative to our new commissioner, is it envisioned that it would cover digital evidence forensic expert witnesses as well?

JED RAKOFF: So we used the same term that's in the federal rules. By the way, that term, "experts," is in both the civil and the criminal. So it's a well-defined term. And what that term means is someone who is being offered, under the federal rules of evidence, as an expert in a case. And so it doesn't matter what the nature of the expertise is, but it's someone who is being proffered to testify in a civil case or a criminal case. And as you might imagine, controversies come up from time to time as to whether someone is or is not an expert and is or is not going to be asked to testify. Those have all been decided many, many times by the case law using these terms. So that's why we thought we'd better stick to the terms that are presently in the federal rules.

GREGORY MOTTA: So is the scope of the rule intended to be the scope of the application of the rules of evidence, which I think in rule one says testimonial hearings, in other words there's a scope in the early -- I don't have the rules of evidence handy, I'll look it up, but there's a provision in the beginning of the rules of evidence that say to what types of hearings the rules of evidence rules apply. So is it intended that this rule of evidence, which is kind of a discovery adjunct to experts, would be limited to the scope of hearings to which the rules of evidence would apply?

JED RAKOFF: Yes, and actually I think that's -- what you're referring to is at the end of the federal rules, not the beginning. Yeah, 1101. But yes, that same provision obviously applies.

NELSON SANTOS: Ted.

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TED HUNT: I guess I'll direct this to Matt, since he's on the SPO and a co-chair of the subcommittee. Looking over this final draft in conjunction with the work product development process, specifically number seven, there is a requirement that the subcommittee co-chairs and the vice chairs determine when there's enough of a substantive change between drafts that it should go out for public comment. And just looking at this final draft, it's hard to find a place where there's not a new addition, an underline, or a deletion. In fact, I think one of the recommendations about the inclusion of the case record, which incidentally I agree with, is brand new, it seems to me, this time.

So it's kind of a two-parter. One, what is the standard? Because we have a substantially revamped, although, one could argue, substantively similar document. That begs the question, at least from me, where is the line drawn where we have to send something back out because there have been enough changes or at least one substantive addition to a recommendation that nobody, up to this point, as far as I know, has had the ability to comment on or the opportunity to comment on, specifically the case record point. So I guess that's -- the primary question is where do we draw that line or what is that standard, because it's very vague and nebulous? Is just says "in agreement" or "in consultation with the vice chairs, the co-chairs shall make that call."

JED RAKOFF: Ted, I'm going to take the liberty of answering it first, because I worked very closely with Paul Giannelli on it. There is nothing changed. There is no substantive change. What we did, and it was primarily, to be frank, in response to your comments at the previous meeting, was rework the language. For example, the reference to what's recommendation two was half of recommendation two previously, and then we split that into recommendation two and recommendation three to make clear that the reciprocity covered everything and not just the case record aspect of it. So the -- it is true that there was a lot of wording massaging. And we thought -- again, forgive me, but I thought we thought it was responsive to the very good points, you and Ray's, previously, but I don't think there's any substantive change here whatsoever.

TED HUNT: Okay, is the inclusion of the recommendation that the case record be turned over something new, because I don't recall seeing that before?

JED RAKOFF: No, no, that --

TED HUNT: Was that in the previous draft?

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JED RAKOFF: That was half of the previous -- number two previously. Number two previously was turn over the case record and make it reciprocal. We decided on comments that various people really had made that the reciprocity -- Deirdre also raised this point -- should be across the board so that to the extent that recommendation goes beyond existing law, that should be reciprocal as well. But I don't think you'll find -- I invite you to look, but I don't think you'll find any substantive changes.

TED HUNT: Okay. Well, again, I appreciate the willingness to revise. I think there is room in the work product revision process to put a little more language in there about what trips that wire, at what point do we have to send something back. Because I know this subcommittee and I appreciate the fact the subcommittee before has sent one document in the recent past back out for comment after it's come up. So there was some determination there. I believe it was on the reasonable degree of scientific certainty document where you sent it back out, and I do appreciate that.

But going forward, I would just ask for -- request that the SPO think about putting some teeth in there so that we have a little more guidance about what point the revisions become substantive or so substantive that it needs to go back out. And this might help with consensus because, as we talked about many times, sometimes the arguments are whether or not the recommendations can be very high level, but the rationale that underlies those recommendations. And sometimes that can mean the difference between somebody voting for and against.

MATT REDLE: And Ted, the other point about that is that there is a tension between that rule that if it is a substantive change, then it goes back. There is some tension there because we also want to try to be responsive to the public comment that we receive as well. Public comments shouldn't just be a sham exercise that we go through, and we try to take that seriously. And if we can stay within the bounds and accommodate that public comment, then it seems like that's the appropriate step for us to do.

NELSON SANTOS: Dean.

DEAN GIALAMAS: I just have a quick question regarding recommendation number one of -- sub-bullet number one, the statement of all opinions. And forgive me if I'm asking a question you might have answered because I missed the last meeting, but I just want to have an idea of the process or the manner in which this would be documented. In order to provide the opinion of the witness plus the basis of reasons for them, will the written report, as we may be considering at the commission with more detail, suffice for that, or are we talking about a differently constructed document or differently constructed process? I'm just trying to figure out how that is going to be transmitted.

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JED RAKOFF: So I don't think that question can be answered in the abstract. I think it depends on the individual case. The way this has typically worked in civil cases is that a report is prepared by the lawyer and the expert in conjunction. And the lawyer's role is to make sure that the i's are dotted and the t's are crossed. So it's not just what comes immediately from the expert. There's a certain interplay that's done. But there's nothing required about that, and different cases have different results. So it -- there are many cases where something that's coming straight out of the lab is sufficient. If it's a simple case, a typical situation might be where the lab says, "We tested the substance and it was found to be cocaine," and the lab report typically has been found to be sufficient there. On the other hand, you know, in a much more complicated situation, then there's been more input from these attorneys.

DEAN GIALAMAS: Okay, so just so I'm clear then, you're -- in the recommendation, we're specifying the desire to have an information exchange but we're not necessarily requiring a certain mechanism or format of that exchange. Is that clear?

JED RAKOFF: Yeah, and again, a lot of this has already been -- the short answer is yes. The longer answer is, as you would imagine, a lot of this has already come up because the civil rule has existed for, I don't know, 15, 20 years. So it's worked out on a case by case basis. But I think a fair statement is there is no required format. It can be any format that satisfies these requirements.

JULIA LEIGHTON: Yeah, Dean, I think you ask an important question and I just want to follow on that some, because it, I think, isn't duplicative. The more fulsome the lab report, the less likely you're going to move into this, and the more the onus is going to be on the lawyer to be engaged, both with your lab report and what it is they expect they'll need in the courtroom. It really is on the proponent of the evidence because if the proponent doesn't satisfy the rule, then the direct will be limited. And it won't be on you, you're the witness, you just answer the questions that are asked. The proponent will have failed to put forward sufficient information in the report to be able to elicit.

A really concrete example for you is imagine if a latent fingerprint report was to conform with the document you've referenced that we're going to be discussing later. I imagine that would be sufficient, unless the prosecutor decides that since there were no results, I also want to inquire about how often it is that somebody doesn't actually obtain any results when they test a gun. So if I want to go into areas like that, there's no reason for them to be in the report because that's not what was called for in the report, then I, as the person that wants to elicit that testimony, I'm going to have to work with you to develop a report that explains what your opinion is about that and what your basis for that opinion is. And if I don't, then I'm going to be able to get all your testimony about everything you've put in your report but I'm not going to be able to ask you your opinion about how often it is that you don't get results. And that's on me.

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NELSON SANTOS: Fred.

FREDERICK BIEBER: Judge and Matt, I have a question. Would you intend recommendation one to apply to Daubert hearings as well as trials?

JED RAKOFF: The first, and this is the most important point because I've made it a crusade, it's properly -- Mr. Daubert pronounced his name "Dob-ert." Now that we've cleared that batter, the -- so a Daubert hearing would be a hearing about whether the guy could testify at all, or to portions of what he could testify to. And his report would be a factor in doing but it wouldn't be definitive one way or the other. It'd just be something that the judge would look at by applying a different standard there. This is to -- this is a discovery tool. This is to allow the other side to gain the information they need, and some of that will be relevant to a Daubert hearing but it's not the same standard.

FREDERICK BIEBER: Would you consider a wording change that would allow for some of the uncertainty that goes into the actual process? In many courts that I've testified in, I have no idea what hypotheticals will be asked of me by a defense counsel or the prosecutor, or the court for that matter. And many times the exhibits I use would be ad hoc, going to the whiteboard or the chalkboard and making a diagram or deriving a calculation at the request of the court on an ad hoc basis. So I would have no way to prepare the statement you're asking me to prepare without having a premonition from above about what I'm going to be asked and what opinions I'm going to be invited to express.

JED RAKOFF: Well, as was pointed out in the last colloquy, that's why there is this interplay often between the lawyer and the expert, because the lawyer knows what questions he's going to ask. So that often is --

FREDERICK BIEBER: But unless I was deposed in advance by both parties --

JED RAKOFF: Which you won't be in a criminal case.

FREDERICK BIEBER: Which I won't get.

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JED RAKOFF: Right.

FREDERICK BIEBER: Then I would have no idea what questions I'll be asked, and therefore I wouldn't know what opinions I would express before I express them.

JED RAKOFF: No, no, no, if you're talking about cross-examination, that's not required. This -- the opinions -- and we deal with that in the commentary part of this. This deals with the opinions that you will be asked on your direct examination. If on cross-examination the defense lawyer says, "Well what about X, what's your opinion about X," usually there will be an objection beyond the scope of the testimony, but assuming that objection is overruled, you are not in any way bound by your report in answering that because the defense has waived its objection by asking the question. So that's never been a problem. That comes up, frankly, all the time.

NELSON SANTOS: Phil.

PHIL PULASKI: So, in the subcommittee hearings, I've expressed my concern over this, and it was -- I just want to ask the question that I always ask, just for the benefit of the whole committee. The reason why this is needed above the report in the format that we're proposing, albeit we don't know that the format that we're proposing is going to be accepted. So the imperative -- I don't know if that's the right word, but the rationale as to why this is necessary above and beyond the report, because there are time constraints in a laboratory in terms of producing this report. Now you kind of got to sit and wait until trial prep before you can get it so you can understand the scope of the testimony, depending upon when the trial prep occurs. Now you got to get back. You got to do the statement of all opinions the witnesses will express. I was just looking to get at that rationale.

JED RAKOFF: So the rationale is really, in many ways, reflected in one of the comments we received, which was from a bunch of very well-known lawyers here in Washington. Let me see if I can find it. Yes, this was from James Bensfield [ph], William Taylor III, Timothy O'Toole [ph], Patty Schmidt [ph], Mary Lou Soler [ph], Anne Morris [ph], Sandy Weinberg [ph], all of whom have been both prosecutors and defense counsel. And what they said is expert disclosures in criminal cases are often a single paragraph and contain only the basic outline of the important opinion that the expert will give, and very little of the basis for it. So it was responsive to that practice that we thought the Attorney General should be requiring her prosecutors to give this much fuller report. One of the things we were very cognizant of is that the time constraints in the state systems are often much more extreme than in the federal system. And so in the very last part of our commentary, we note -- it

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was literally the last sentence -- application to state practice might require different modifications. And the committee was very sensitive to that issue. But I think on the federal system, this will not be a problem.

NELSON SANTOS: Thanks, Judge. Gerry.

GERALD LAPORTE: Judge, I just -- oh, sorry -- Judge, I just wanted to clarify, too, based on what Fred asked. So I assume that this isn't necessarily applicable for rebuttal testimony as well. So, for example, an expert testifies, they're crossed, they're dismissed, but then the opposing counsel brings up sort of a new theory during the trial, and then now you get called back as a rebuttal witness.

JED RAKOFF: Absolutely, you can be called back as a rebuttal witness, and this would not apply to that.

NELSON SANTOS: Okay, I just want to make sure I understand what Ted had said earlier. You think there was a substantial change made. And I looked at the record from before, and recommendation two did have "allow the defendants full access to the expert's case file," they changed that to "case record" and then they broke that out. So I guess my question to you, Ted, is where are other areas where you think there was substantial changes made?

TED HUNT: That's the one that I had in mind, and I didn't compare the two one-to-one. I just noticed the track changes seemed to be quite substantial. And I guess my larger point was outside of the case record point is if you change the rationale or the justification, even if we're not voting on that, as we talked about yesterday, that can sway people one way or another because they flat may disagree. And I have, at times, with some of the commentary that supports the recommendation, sort of like a concurrence, I agree with the result and the recommendation but I completely disagree with the rationale that leads to it. And I think that's not what we're voting on, but that is very important for folks to consider and take into account. So I can't point to you line item where there have been changes, but I would recommend that the SPO go back and consider a trip wire or a threshold there where something is enough of a change to send it back, whether it's revamping the entire document that basically says the same thing but the rationale is completely different, or you've got additional recommendations, or something to give some teeth to that point in number seven. That's all I'm saying.

NELSON SANTOS: I don't disagree with you. I think in the past we've actually taken votes where it has been kind of on the line. I don't know that we can articulate in words exactly when it reaches that threshold. I think we kind of know it when it's there. And I agree with you. And one of the points that I do want to make, and I

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think Ted kind of reiterates what we said yesterday when we were having a discussion about the language we were adding, and I think we've had these discussions before about the commentary and the background and the appendix, whatever we want to call it, not being what we vote on. But yet there was concern raised yesterday that if we're -- or that not being the view. And I think we need to be consistent in how we look at these documents because there are a lot of discussion that we've had in the past about the commentary, background, appendix, which we've said, "Well, okay, I don't agree with the rationale, however I do agree with the view of the recommendation."

So the SPO will go back and look at it again, but I was a little surprised yesterday when we actually were concerned about that language because I thought we kind of all agreed that let's vote on this, the background is the background. So, in hearing your point, I don't see anything substantial in that particular thing. I think we go ahead with a vote here. We'll take back what you've said to the SPO. And I ask everyone to remember those conversations we've had in the past because I think we've had votes where we've actually said, "Hey, don't worry about all that extra language and let's move forward." So, with that, I'll turn it over to John, if I hear no other comments. Go ahead, John.

JOHN BUTLER: So do we have a motion to vote on this document?

MALE SPEAKER: So moved.

JOHN BUTLER: And second?

MALE SPEAKER: Second.

JOHN BUTLER: Okay. Pull it up. So Jim Gates is here. John Fudenberg is here. And Suzanne Bell has emailed in hers. So we actually will have that vote. We should only get to 32 here. So we've got it. Okay. So we have 78% yes and -- that show up, yeah -- and 19% no, 3% abstain. So that means it passes. Okay, next.

JED RAKOFF: So your work has just begun. Let me turn it over to Matt to present the next of our reports that's coming up for a vote.

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MATT REDLE: The next report is the work product on judicial vouching. And we did receive six public comments. One was opposed and one offered some changes, and four supported the proposal. All of the suggestions were accepted. The one comment that opposed was based on the idea that the proposals should be examined by the Federal Advisory Committee of the Judicial Conference and not the commission. The advisory committee, however, only deals with federal, not state, rules. And as a views document, we're speaking to a larger community than simply the federal community, and for that reason we didn't feel that that comment was particularly apropos to the document.

You'll recall that the issue of judicial vouching is one in which the witness is about to be tendered as an expert in the field for purposes of a finding by the court so that the expert can be asked opinions. And the concern is that when I offer that expert and ask the judge to make that finding, if I do it in front of the jury, the jury may be confused by that into believing that this is some kind of certification or good housekeeping seal of approval that the court is now conferring upon the witness. And that's what we're attempting to take care of. This is nothing new in the law.

In the 2000 Advisory Committee notes, to rule 702 of the Federal Rules of Evidence, Judge Ritchie's law review article with reference to this particular problem is noted with considerable approval by the advisory committee. There have been a number of other similar statements that have been made. It doesn't change anything. It doesn't change the idea of qualification of the witness. All it does is it just says that if the judge is asked to make some kind of ruling on the qualifications of the witness to testify as an expert, that that take place in some manner outside the hearing of the jury. And we would offer that particular views document at this time.

NELSON SANTOS: Questions. Comments. Ted.

TED HUNT: Just real quickly, Paul actually reached out to me on this one and the notice and demand changes. And I communicated some proposed revisions to him and he agreed with them and said he would recommend them to the subcommittee. Have those been taken into account, because they're not reflected in what we have here?

MATT REDLE: They actually were incorporated into it. Paul indicated that he accepted each and every one of those, and that was the --

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JED RAKOFF: But they don't appear in what's before you here.

TED HUNT: Just as long as everybody who's voting knows what those changes are so they can agree or disagree with them, I suppose.

JED RAKOFF: So the only one who remembers them is Paul, but maybe you remember them.

TED HUNT: It was a case citation, and there were a few other citation issues and grammatical issues. Maybe it's something even that the -- or Paul could communicate to the SPO and you could reconcile it after we vote. I don't think it was substantive in nature.

JED RAKOFF: No, it wasn't substantive.

MATT REDLE: We would be happy to do that. And as I indicated, that was the intent.

NELSON SANTOS: Anyone else? Do we have the final document that we could show the commissioners? No, no, no, the one that apparently was edited?

JED RAKOFF: So these changes -- and by the way, if you ever want to hire a super good proof reader, hire Ted Hunt. He is fantastic. These were all non-substantive -- really non-substantive changes, but Paul, unfortunately, is the only one who's got the thing. But the -- I will represent that they are totally non-substantive.

NELSON SANTOS: Okay, well we'll have this vote and take a look at it. Anyone else before we vote? Dean.

DEAN GIALAMAS: I just want to quickly point out the necessity of what you just commented on, Nelson, about the need for the SPO to be able to make some edits. And I'm going to point out a concern I have about formatting and language on this. I don't have any issue with the document itself, other than formatting and language. But if you look at the views of the commission, really the view is the first sentence. What follows in

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the second sentence is "in the experience of some commissioners." So now we're setting precedent that the view of the commission is based on just a few commissioners, and I just don't like that structural format.

So I want to really echo what Nelson said. I want to echo my opposition to the fact that we're voting on a document that now seems to imply we have potentially even minority views that are now a view of the commission. And it is a -- it's an operational issue. It is not an issue with the basis of why this view is needed. I fully support it, but I just want to point out that what we did yesterday was really a big step backwards as a commission, not allowing the SPO to make some of these minor edits, and this to me is an artifact of that.

NELSON SANTOS: Okay. John. John.

JOHN BUTLER: You want to vote?

NELSON SANTOS: Yeah. Oh, no, Jules has a question. I'm sorry.

JULES EPSTEIN: Just briefly, I agree with Dean that views of the commission should be views of the commission, but I respectfully think you're misreading what's said here. When it says "in the experience of some commissioners," that's just reporting an anecdotal occurrence. Some of us have actually seen this. It's not the view of the commission. It's just stating we've actually experienced it. Artfully, maybe that should be in another part, but I don't think substantively here, Dean, that anyone is saying the view of the commission is actually the view of some of the commissioners. So I get it and I agree with you on the cleansing process, and maybe that should go to the SPO, but it's not substantively a factor in this document, respectfully.

JOHN BUTLER: Do we have a motion for vote then? Oh, Fred, you have another?

FREDERICK BIEBER: Are you planning to fix footnote five on page 79?

MATT REDLE: Yes.

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JOHN BUTLER: Okay, do we have a motion to vote on this document?

MALE SPEAKER: So moved.

JOHN BUTLER: And second?

MALE SPEAKER: Second.

JOHN BUTLER: Okay, so therefore, it's with request to changes that Ted's given to Paul, and footnote number five, of course, being fixed. Yes, no, or abstain? There should be four more people to vote. Anybody out of the room? Okay, 31, 32. All right. We'll see who's not voting and we'll go forward. All right, we have 90% yes, 10% no, 0% abstain. So it passes.

MATT REDLE: The next document was on notice and demand provisions, and there were three public comments received on this. ASCLD recommended adoption. One comment made five specific suggestions, all of which were accepted in one form or another. You'll recall that the notice and demand provision was something that the U.S. Supreme Court identified as a means for laboratories to deal with the confrontation clause requirements so that, for instance, the prosecution under a notice and demand rule or a notice and demand statute could indicate or request that the defendant, under one scheme, could request that the defendant indicate whether or not they wished a particular witness to actually appear as opposed to introduce the written statement or some other document, documentary report. And the defense could then indicate whether or not they wished to have that witness appear for purposes of confrontation.

It doesn't -- the defense is not required to do so. It would afford the defense the opportunity to still claim defects in the report, even though the report was admitted without a witness to support it. And they could still attack the content of the report. What it does is it eliminates the situation that we frequently see, particularly in areas of -- for instance, I think toxicology, which was the issue in Melendez-Diaz, is probably the most frequently -- it's probably the one area that spends the most time in a courtroom because of the rise and number of different types of cases that involve that evidence. And so frequently you have analysts and toxicologists who are sitting outside the courtroom for a prolonged period of time, and not really because their opinion or report is being contested in any meaningful way. And it affords a way to assist labs in their time out of the laboratory. We would offer the work product.

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NELSON SANTOS: Comments? Hearing none. Motion to --

FEMALE SPEAKER: So moved.

MALE SPEAKER: Second.

JOHN BUTLER: Still missing one. I don't know if somebody's battery is getting low or something. I'll have to go back and check which one it might be. Okay. We'll go forward with that. 94% yes, 3% no, 3% abstain. So that views document passes.

MATT REDLE: And at this time I would turn the floor over to Julia Leighton to discuss the next two work products. This is the introduction of some draft work products that have been open for public comment.

JULIA LEIGHTON: Thank you. I should start by saying there are two documents, and my thought is that I'll start actually with one that appears second in your book, the recommendation to the Attorney General on documentation case record and report contents. And I'm starting here because this should look very familiar. This very closely mirrors, but not exactly, a views document that we passed I want to say two meetings ago and converted into a recommendation to the Attorney General. This passed out of our subcommittee with 22 in favor and no opposed to bring to the floor here. As I said, it just simply takes the views document and, I think with some helpful language, sort of sharpens even that views document and turns it into a recommendation to the attorney general.

Where the language was sharpened I think is worth pointing out because it also appears in the other document, which details the specifics that should appear in a report. And we tried to be sharper with our language about uncertainty, variability, and error. And I'm going to do the very best I can here to articulate that, but I was not the source of it. We have several scientists and statisticians on our subcommittee that were very helpful in this area. And so we talk about estimated uncertainty, and by that we're talking about instrument uncertainty. We talk about estimate of variability, and by that we're talking about variation in the relevant population. And when we refer to error, we're talking about measurement uncertainty and not mistakes. We're using it in the scientific sense of the word. And so that's where that sharpening of language came from.

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I think in our earlier document, I don't -- I apologize, I don't have it in front of me -- that we may have talked about measurement and not been so clear about what we're talking about in terms of both uncertainty and variability. And that's the language we've cleared up here. Otherwise, I think we took out an "and/or" where it really is an "and," and otherwise, it's a pretty similar document. So I think, without further, I should open the floor on that one and get people's comments before moving to the other document.

NELSON SANTOS: Ted.

TED HUNT: I'm just curious about what you just spoke of. As far as I know, the term out in the community is simply "measurement uncertainty." Using these different terms, is this trying to encompass that concept or is it something different? For example, when you say "possible sources of error," what does that mean in relation to measurement uncertainty?

JULIA LEIGHTON: I should quickly defer, but I'll give it a try because it probably tests whether or not it's clear to a layperson, though I think it is clearer to the scientists and the statisticians. But with respect to error, they are talking about measurement uncertainty. With respect to sources -- with respect to uncertainty, what we're talking about is instruments; right? So when you talk about measurement error, as I understand it, and I'm going to turn it over pretty quickly, we're talking about things like whether you can accurately identify something as a minutia as as opposed to a rule [ph]. So there's measurement that's not just in inches and feet, or in centimeters, but other sorts of measurement error that's understood -- widely understood in the scientific community.

But it is not talking about, as we dropped in a footnote in the other document, we're not talking about mislabeling evidence, we're not talking about mishandling evidence, we're not talking about sort of let's speculate on everything that can go on. We're talking about errors in measurement that are understood in the scientific community but that will vary from discipline to discipline and may not be entirely known by some disciplines. There may still be work that needs to be done to fully understand that.

In terms of instrument uncertainty, we're talking about the tools being used and what we know about the tools and the methods being used, and what their range of performance is. With respect to estimates of variability, we're talking about what is the variability in the relevant population. The example that was given to me, if I sampled 12 pieces of a large pane glass window, what do I know about the variability when I take that kind of a sample and pull from it some results? And I think I should, before we go any further, see if any of the much smarter people on this want to --

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TED HUNT: Maybe I can just shorten this. My point is it says in the appendix "all quantitative results should include the estimated uncertainty." I understand that to mean uncertainty of measurement or measurement uncertainty.

JULIA LEIGHTON: Okay, are we talking about the recommendation document? I think you're on to the next document. This is where we use it in the recommendation to the Attorney General.

TED HUNT: Some of these are being used repetitively across documents. So I just -- but my point was there's estimated uncertainty. And I understand what you mean now by estimate of variability when you're talking about populations, but then it goes to statements of possible sources of error, and then down in footnote seven, "error refers to uncertainty in measurement." So it seems to be a bit duplicative or redundant.

JULIA LEIGHTON: Duplicative or redundant of what, because it's different than the estimated -- and maybe we need to clear up that footnote. It is not the same thing as estimated uncertainty. That's talking about instrument. Estimate of variability, that's talking about population. And error, in the way we're using it now, is going to measurement uncertainty.

TED HUNT: Okay, in that case, it might help to sharpen the language by putting a descriptor on that to explain exactly what you're talking about, because I don't think it's intuitively apparent from the words that are used.

STEPHEN FIENBERG: So as one of those who's contributed to this language, I think to any scientific expert coming forward, there is a clear understanding of what sources of error means. This is common scientific language. If I turned to Arturo or Tom and asked them about their work and how they would present it, these are all components that contribute to the overall assessment of the evidence and statements about variability about that assessment. And this is not lay language. This is language for experts who are analyzing things quantitatively. And there's documentation over and over again in different communities about how to do this. So the statistical community has illustrative examples of documenting sources of variation. The geneticists do it in a different way and have done this for DNA now for decades. This is not a legal language. This is language for the scientists, the scientific expert.

TED HUNT: Well I read "estimate of variability," variability of what? And I'm not arguing substantively the point, I'm just saying it could be more clear by saying "population" if you mean population. Just adding an additional descriptor I think would help immensely.

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JULIA LEIGHTON: I'll take that back and we'll look at it, but I think that may be a little bit like saying "chai tea," it's like saying "tea tea" if you speak to a scientist, but we'll check with them.

TED HUNT: I disagree.

NELSON SANTOS: Phil, I think you were next.

PHIL PULASKI: So even though this is a scientific document for scientists, people are going to read it who aren't at that level of scientific knowledge, and I think anything that would clarify it, I'm not sure what the downside is of having further clarification of that language. So I don't disagree kind of with either party, I'm just trying to figure out what's the downside of more fully explaining those terms. Even though for scientists it may not be necessary, but this is the intersection -- I know I've heard this numerous times, because it's accurate -- this is the intersection of science and the law.

JULIA LEIGHTON: And I said Phil, I definitely will take that back. And, you know, I'm a lawyer, so I love footnotes, so I'm sure I can find a way. This is the only document that I've done that doesn't have a footnote, so I'm sure I can -- I love the opportunity to find a way to work this into a footnote and work it out with a scientist so it's still accurate but more understandable.

NELSON SANTOS: Arturo.

ARTURO CASADEVALL: So I want to reinforce what Steve said. These terms are very well-known and defined and accepted in the scientific community. So I wouldn't mess with the terms. What I would potentially do is you can put a box or something like that and construct a scenario in which you can illustrate how they work. Somebody -- you sample an area that has an error, then you take the material and you do it into the instrument, and the instrument has a different type of error. And the important thing is that the error is propagating the system in ways that are often not linear. And so your final certainty will have the product of all those errors in it. And maybe a box in which you illustrate just something like that will solve the problem. Any layperson can see it. You can put something as, you know, sampling the ground for blood and then taking it back, and the errors plug up.

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TED HUNT: I understand substantively, but the term in forensic science, for better or worse, is measurement uncertainty. That's what the --

STEPHEN FIENBERG: Then forensic science needs to learn what science is all about.

TED HUNT: Well.

JED RAKOFF: I think this is just a variation on a debate that has existed for decades, if not centuries, in that different fields talk a different language and there needs to be translation. And I agree with Ted, I see no harm -- and with Phil -- I see no harm in our explaining what these terms mean in a way that will allow people who are not learned in the field to comprehend what they're about.

NELSON SANTOS: Jim.

JAMES GATES: The problem is the scientist is the most far removed from reality on this group. I want to weigh in in support of Ted, Phil, and Judge Rakoff's comments on this. I think we scientists, even though we have our specific language when we're talking about these things, I think if we're at this interface, I think we need to make the accommodation to make it clearer. So I certainly agree that more explanation is better. And whether it's with illustrations, as Arturo suggests. I'm part of a group where we often put boxes in reports to break out that kind of thing. So I just urge us to get out of our ivory tower a little bit. I know it's comfortable in there, but let's get out and make sure that we can express our ideas clearly to people who are not up in the tower with us.

JULIA LEIGHTON: Good. I have two people already who have volunteered to help me work on a box. Great.

NELSON SANTOS: Julia, I have a comment as well. On number five, just since this is a recommendation that refers to "The case record should be organized and developed in a manner consistent with the discovery recommendations," can we be more specific as to which discovery recommendation we're referring to? Is it the pre-trial discovery view? Is it the one we just passed? I just think in terms of thinking how DOJ would implement it, it would be clearer to be precise.

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JULIA LEIGHTON: Okay. I think we're thinking both what we've done and what we do in the future. I think the goal was to say that we're not addressing discovery in this, but we think that whatever the commission does, both in the past and going forward, should be wrapped into this. And I'll try and think of a better way to say that. But it was not to cover a specific document but generally the work of the commission on discovery.

NELSON SANTOS: Okay. Jeff.

JEFF SALYARDS: The one other area I'd like to clarify around the use of the word "error," I think it's -- as you pointed out, Julia, there's already this confusion of do we mean mistake. And we're clearly not talking about that. On the scientific side, we're using it today, as Ted would point out, interchangeably with some measurement and some uncertainty around it. But there is one other important scientific use of that word, and that is that it's an error rate study where you have receiver/operator characteristics or detection error tradeoff, type one and type two errors, false-positives and false-negatives. And those are important as well. They're often, obviously, directly affected by our ability to measure something, but it's a different phenomenon. So I think, as forensic scientists, we need to capture this global measurement uncertainty, as Ted referred to it. But often we're not reporting our measurement, we're reporting our conclusion based on all those measurements, I'm declaring this to be cocaine. And I'm either right or wrong at that point. It's a very binary thing. So we need to find a way to capture type one and type two errors and make sure we're talking about those clearly as well.

JULIA LEIGHTON: So my third volunteer.

NELSON SANTOS: You got a lot of volunteers. If I can recommend that you go on to the next doc. You have ten more minutes in your section, so.

JULIA LEIGHTON: So the next document starts with a really heartfelt thank you to Linda Jackson, Mike Cariola, Phil Pulaski, Peter early on, Pam King later on, and am I forgetting someone? Shame on me. We spent a lot of time working. And we started with the SOFT's report just because they had done a survey and gave us a start towards what we were heading for, which was to give more guidance on our view about what should be in a report. The group of us spent many, many hours going through every -- each of these sources and all of the different recommendations about whether something should be in a report, could be in a report, whether discretion was given or not given, and put together sort of our best effort to go through each item and say what were we going to recommend be required in a report, what were we going to say didn't need to be in a report and could be in the case file.

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The reason we gave you so many appendices was to try to be as transparent as possible about what we were doing, and, as a result, it also pulled in a lot of typos, because I can't tell you how many times we went through trying to figure out what we were striking through, what we were adding. And I'm sure that my secretarial skills failed us in that regard. And so we've received some helpful comments on that about where we may have missed a strike-through, where we may have not identified properly what the source was, and we'll clean that up. But we also gave you the clean document for those that said, "I don't care where it comes from, I just want to figure out what you're trying to say." And even as I went through it last night, I saw a couple places where we were still a little duplicative in what we were saying because we had pulled in sources from different places and where I think, yet again, we will tighten down the language. I don't think we'll change anything substantively, but I think we recognize that there are a couple places we said almost the same thing twice, and that we should combine them into a single statement of the thing we're looking for.

That said, there's a lot of detail here. The concerns we had were to really talk about how -- to think through how many -- first, there are tons and tons of cases that get resolved with no report at all. In my jurisdiction, for example, the most common plea offer is one that happens in the first four days of a case. And if you move forward and actually ask for discovery or do anything, the plea offer expires. So a lot of jurisdictions I know work that way. A ton of cases disappear before any report's done. And then there are a lot of cases that will move out of the system based solely on a report. We won't even get to the issue of discovery and we won't get to the issue of the testifying expert's report, but instead people will be basing it just off of the report.

So we're thinking about the kind of information that we think someone should have about a result when making significant decision about how to resolve a case. And that's the balance that we struck as a group and then brought to our subcommittee -- and I guess I was supposed to mention the subcommittee passed it out, again, unanimously for this body's consideration and for public comment. I'm trying to think if there's anything else I should add to our process. And I think I'll leave it there and open the floor for comment. And I also invite the subcommittee's members to chime in. I think one of the reasons we wanted to move it out is we really wanted to hear back from the public about this. We are very interested and expect a lot of comments and to hear back about those comments, and to go back to work to rework our way through it.

The one thing I did want to say, though, is what I said earlier to Dean, to the extent that there's a concern about it being duplicative, I think that's not the case. And I'm curious, Ted, if I've convinced you of that because, to the extent that this report is done, and it is all that the proponent of the evidence wants to present to the fact finder, then there isn't a second report that has to be done under rule 26. But it also is a very thorough report that the presenter of the evidence can look at and say, "Actually, there is more that I'm going to ask about, and I know exactly what it is because I know what's missing, and I'm going to be able to work with my expert about what additional information I need." So anyhow, if I could have the liberty of first

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asking if anybody from the working group wants to chime in on what I've said. I want to give them an opportunity, then, otherwise, take comments.

NELSON SANTOS: Phil, did you have a comment or no? I thought you had a comment. Okay. Ted.

TED HUNT: Just curious about your vision of specificity, particularly when it comes to the view that there should be inclusion of all underlying data or description of the underlying data and observation. So, for example, in a drug chemistry report, is the analyst going to be required to put in all of the data from the GCMS or that printout in a report, because some of these disciplines are going to have voluminous underlying data, and I can't quite see how that's actually going to work in practice, to put all underlying data in the report.

JULIA LEIGHTON: With respect to drugs, I'm going to defer to Linda, if I could.

LINDA JACKSON: As it has feedback. Okay. So we've had discussions about this in our subgroup, and truthfully this is one of the reasons that we were bringing this out for public comment, because in looking at all of the different disciplines, it seems like there's a lot of variability of what the supporting data would be. And so we wanted to put this out for public comment to get those comments. I don't think it's reasonable to have, you know, the actual data from the GCMS in the report. In my mind, it's important to know that GCMS data is available and that it was used to make the conclusion. But to actually have the data itself was not the intention.

TED HUNT: And that's my point. And I think -- and I agree with the fact that the case record should be fully discoverable. Given that presumption, which is written into the views document, where do you draw the line? I mean, it's not just drug chemistry. DNA, for example. I mean, there's got to be some limits of practicality in that view to make it sensible. Right now you certainly can't do that. I don't think anybody realizes or recognizes or would say that, "Well, sure you could put all that in there." If you say that, you've never tried to do it before.

JULIA LEIGHTON: Well, Ted, I think what you'll see is we say, "Including the underlying data or a description of the underlying data." So I can imagine a case where someone could say -- in a fingerprint case could say that "My underlying data was that I observed eight points of similarity." So there are examples of data and observations that can be fairly simply summarized. Or you can describe the data so that someone knows what type of data it is, whether it's coming from a particular instrument or a particular test, they understand what

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sort of data they would be asking for, which actually informs the ability to talk with an expert who will then -- a consulting expert who could then say to me, "Oh, actually, you need to go get the X piece of data that they've described in there. You need to get the actual data." So I think we said it as either or.

But part of what we're looking for is not someone to simply say -- to give no -- as often happens in the comparison disciplines, to give no sense of whether there's any record of observations or data points, and simply say, "I looked at two things. They come from the same source. Period," that that isn't sufficient, that there needs to be some description or actual identification of the observations that were made that resulted and generated the data.

TED HUNT: And I agree with you. There is a tension, though, and latent prints is a good example because you have issues of quantity that you mentioned, you have issues of quality, you have issues of clarity, you have issues of distortion, you have all of those mental processes in the back and forth. I would think you'd have to just put a copy of the latent in question in the report to say, "Well, you know, here it is," to actually describe all of the mental processes that you went into and considered in making that inclusion. Certainly, in some form, in some way, in some sense, needs to be documented to the extent possible. And it's not a question of whether it should be disclosed, that's not my point. It should be, to the extent it exists. It's just where's the appropriate place for it? Is that in the case report? And I don't think this might necessarily help defense attorneys to put it all in the report because you could lose the data because of the noise. And again, I think they need to have access to the case a number of times, but it's just a matter of where do you put it rather than should you get it.

PHIL PULASKI: Ted, we agree with you. We went through this debate. As a matter of fact, it might be helpful, we started off with one position that we then moved off of because not everybody agreed that the case report should look like a paper being submitted for publication. And then part of the argument was exactly what you're saying, that it has to be readable. And we used a lot of different examples. So what we were trying to do was find kind of the Goldilocks zone, understanding that we didn't hit it. So we didn't expect this to just sail through and we wanted, you know, comments. We wanted, in the NYPD we call them murder boards, where people come in and just rip it apart because it helps make it better.

So I have one and I'm on the subcommittee, I still don't know the difference between conclusions, opinions, and interpretations. I'm not sure what the hell that means. So, you know, I'm hoping that the rest of the community goes, "Yeah, we don't know either," so that this is brought together in a better fashion. So I don't think we, as a committee -- we just didn't want to keep sitting on this. We needed to get it out and we needed people to do exactly what you're doing.

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NELSON SANTOS: Okay, we've got time for a couple more questions. Tim.

TIMOTHY SCANLAN: So I have just one comment -- well, two. One is the list of items received should be included in the report. I think that can get confusing in that -- I'll give an example of, say, an IBIS hit where you have multiple guns used in multiple crimes, and items tested or not tested. A lot of times we'll author an initial report that will have all ten guns used, but if you then put all the items from all the cases in every report in every IBIS hit, you're going to lose things in the weeds. So what we'll do it we'll take the one gun that was hit in the IBIS hits and connect them together. We'll have an initial report that has all the evidence listed, but to have that for every report on these big cases that continue to grow tends to be confusing at best for both sides. And we've had to walk people through that.

The other question is items received, do you mean by the examiner, by that particular person? Do you mean by the laboratory? How refined is that? And then the last is the names and addresses of the customer. We mentioned this this morning, that you may have multiple addresses within an agency. Would the agency name alone suffice? Are you going to get the detective bureau versus the different precincts who submit the evidence? One thing to consider. And then lastly is you have names of the verifier should be listed. Is that just the verifier or is that including a tech reviewer? Should all those names be listed? Just some things to think about. All of this stuff is going to be in the case record, and you're clearly saying in the report that there's more information in the case record that is available to you. I just don't want you all to receive a dissertation for every report when a lot of times a summary of the findings is enough to get the information out of it.

LINDA JACKSON: Can I address a couple of those real quick. To start from the back forward, we did mean verifier and not -- we did not mean to include tech reviewer because we thought that the verifier was of a different level in the scientific process than the tech reviewer. When we were discussing the items being listed on the case or on a report, it was not the intention that they would be listed on every report. That certainly may not be clear the way it's written, but that in some report they should be all listed somewhere so that it was clear, you know, what had been submitted initially and then, you know, at some point there was the indication of something was analyzed or not. So it's not that it has to be redundant [inaudible].

TIMOTHY SCANLAN: What we do is we refer to that report, "For additional information, see report blah."

LINDA JACKSON: Yeah, that was the intention was not to make --

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TIMOTHY SCANLAN: Because the way this is worded says we have to -- it seems like we have to list everything every time.

NELSON SANTOS: Dean and then Arturo, and I think we got to move on to Human Factors. Okay, Arturo.

ARTURO CASADEVALL: No, my view is that I think primary data needs to be discoverable. I mean, I could tell you in the medical arena where I function sometimes and I'm a physician and a practice, if you take -- if I take the blood of anybody here and I send it for 20 or 30 tests, there is a good chance that one person, that one of the numbers will come up off from the normal. And this is in the machines that are being used for 40, 50 years, that are certified by the FDA, and which they're standardized every day, and we do the technicians are certified. Now, you don't hear about this because oftentimes what you do is you just repeat the test. And then when you do it again, just by the statistics and the errors in the system, it comes in negative.

But I also want to add that in the scientific literature, there is increasing -- when there are disputes -- for example, I'm a journal editor. When there are disputes between data, you can request the primary data that was done to adjudicate the question. What do I mean? You can request the western blots, the southern blots, you can request anything. And if they don't produce, you offer a retracted paper. So the standards are that the primary data, at some level -- I agree with Ted, you can't have everybody walk into a lab and asking to see the runoff from the DNA machine. But on the other hand, there has to be an awareness and an acknowledgment that all the systems have built in errors, and at some level that -- one should be able to go to the source, especially when dealing with questions of life and liberty.

NELSON SANTOS: Okay. Good discussion. Thank you, gentlemen. Let's move on to Human Factors and then we'll take a break after that. Jules, Bridget.

JULES EPSTEIN: Good morning. We're going to go first to the New York Times, which, on June 17th, had a very important article about the value of napping. And it recommends 20-minute naps. So we hope to be done in 20 minutes and go from there. Okay, putting that aside. So our report is pretty simple. We're mostly in a work-in-progress stage. We had a presentation one or two meetings ago by Bill Thompson about the data from the lab questionnaire survey that was done. Those data are still being studied intently and one day we'll get follow-up from Bill. For the next commission meeting, we will have a views document on the issue of checklists. We have had a number of meetings about that. We refined it a little bit yesterday at our afternoon meeting. We'll be circulating a final draft within our subcommittee and then we will get it out for the public comment period so it can be vetted by the commission at the next meeting.

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The third subject that we have been spending an awful lot of time on is the issue of medicolegal death determinations and issues of possible biasing information. We are very appreciative of the fact that two individuals from the medicolegal community, Randy Hanslick and Andy Baker, both highly skilled forensic pathologists, joined our subcommittee for those discussions. I think we had 100+ email exchanges of great length and detail to flesh this out, and spent about an hour on our conference yesterday with Randy piped in from a remote location. So that I can now say I think we're at the place where we will be able to start writing a views document and have it for circulation at the next meeting. It's been a daunting prospect but a lot of good exchange among the different constituencies. I should also add, and I'm sorry, that new commissioner Rebecca Ferrell has opted to join our subcommittee, and glad to have her.

So the only piece of business really for discussion today is a views document that was published for public comment. It is found in your materials at page 114. And it's called "Views of the Commission: Optimizing Human Performance in Crime Laboratories through Testing and Feedback." I will tell you that since it was published, I think I can say this -- Bill, stop me if I say it wrong -- we already did a lot of work on refining the ideas, the underpinnings of it. So what we'd like to do now is turn this over to Bill so he can both discuss the document as it exists and the ideas for change that we've already talked about, plus our one public comment. Bill, thank you.

WILLIAM THOMPSON: All right, thanks, Jules. As Jules said, this is a work in progress. We've gotten some very helpful comments, both from within the subcommittee and from public comments that have led us to see ways that this document can be improved. Let's put it that way. The major goal of this document is to find ways to facilitate a kind of research that can be done in forensic labs for purposes of quality assurance, validation, training, and so on. It's kind of a new form of research that's becoming possible in labs that have adopted context management procedures. And as you recall from previous discussions from the Human Factors Committee, we've recommended and, in fact, the views document was adopted suggesting that labs, when feasible, adopt procedures to shield bench-level analysts from exposure to task irrelevant contextual information. So analysts are, in effect, blinded to information that they don't know.

And these procedures are introduced for the purpose of reducing bias. But in labs that have introduced these procedures, there's sort of an unexpected secondary benefit that we've become aware of through some of the labs that are doing this, and that is that it makes it much easier for labs that have adopted those procedures to engage in new forms of research and quality assurance in which bench-level analysts are blinded to research samples or training samples that are passed through the process in a way that's indistinguishable from other samples. One lab that started doing this that we're aware of is the Houston Forensic Science Center, which has adopted blinding procedures in a number of their disciplines, and has begun introducing test samples for quality assurance purposes, basically introducing them in the police property room, passing them through the

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process. This has been an important quality assurance measure for them because it's identified a number of problems that can arise in the process. And it's quite similar. I think the director of the Houston lab comes out of the medical testing domain, which Arturo mentioned. And one of the key aspects of medical testing, and particularly under the CLIA amendments that improved medical testing so much in the late '80s, is the use of these quality assurance samples that are passed through the process in a way that's indistinguishable from other samples.

So, anyway, this is a new form of research that can be used for quality assurance. It can be used to engage in training exercises. It can be used to test the limitations of particular methods. So if there's some method that the lab wants to try using in a new way, it can test how far the method can go before quality declines. A number of possible research projects can arise from use of these techniques. And the question is are there things that the government can do to facilitate what we view as very helpful research programs. The document suggests several things that can be done, that we're urging be considered. One is governmental funding of pilot programs by labs that choose to engage in this kind of research. We're not suggesting that every lab must or should do this, but some labs want to do this. And providing funding to those labs to do pilot projects, the kind of projects that are already under way, at labs like Houston are already doing them. We've heard reports of some pilot projects from some Australian labs, particularly the Melbourne lab. The Netherlands Forensic Institute is doing this kind of research. So some labs are already starting to do that, but financial support for these kinds of programs, which could be helpful, would be good.

The second thing is that one of the limitations of running these research programs is that it's difficult for labs on their own to generate enough research samples or training samples or validation samples, and so on, to send through the process. It's time-consuming and expensive to do that. And it seems like a task that might usefully be centralized by the government. A government agency could do it or could contract with service providers who could create test samples that could be used, or, you know -- I guess we're calling them research samples now -- research samples that could be used by a variety of labs. For latent print analysis, for example, a lot of the comparisons done by bench-level analysts are done on digital files. So creating digital files of samples that could be used by a variety of labs would be good.

Our suggestion is that these samples be created with the help of statisticians and researchers in order to facilitate specific research programs. If one were interested, for example, in how much distortion one could introduce into a latent print before the quality of latent print identification would degrade, one could prepare sets of research samples in which you vary the level of degradation systematically and then introduce those samples into the process and see how far the system could be passed. So this could be a form of validation.

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There's been some discussions with the Houston lab about testing the limits of some of its procedures. They were talking about calling these "samples extreme challenge samples," so putting through extremely challenging samples to see -- to help the analysts improve their skills on really hard cases and to give them feedback on how they were doing, you know, how far could they go and still be accurate with the feedback. So we think all of these efforts are very positive and desirable. We think some sort of governmental support of them would be helpful.

So a third thing that would be useful is that there's some lack of clarity or uncertainty about whether these quality assurance programs can be used in connection with national databases, for example, the latent print databases, the NDIS/CODIS systems. Some of the language of the memorandums of understanding that set up those databases, some of the language in there might be interpreted as being inconsistent with comparing quality assurance samples with the database to see, for example.

One interesting study one could do, for example, is take latent prints made by somebody who we know is in the latent print database and test the sensitivity of the system. How distorted can they be before analysts are no longer able to identify that person? That kind of study. You know, I've had conversations with people at some of these labs who would like to do this kind of research but are uncertain about the legality and propriety of it under the existing rules for the operation of those databases. So we're suggesting that that be clarified so that research done for quality assurance purposes of the type we're discussing here be allowed, or that any language in the memorandum of understanding or legislation be cleared up so that it's clear this can be done.

So, anyway, as I said, it's not -- this is not proficiency testing and this is not something we're suggesting as a requirement for all labs. We think it's a form of research that's becoming possible, that would be very important and helpful for the field, that could be used to explore a number of different issues. And we can go further into how one might do research under this kind of regime. But we think it would be very helpful. And the views document basically is just stating certain steps that we think should be taken to facilitate that kind of program.

JULES EPSTEIN: Folks have -- oh, I'm sorry, Nelson. I took your job.

NELSON SANTOS: No, go ahead.

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JULES EPSTEIN: Does anyone have a question or comment? Steve, Gerry, Tom, Pam.

STEPHEN FIENBERG: This is a very, very important set of views. And I think that it -- when moving -- if steps are taken to follow through, we will learn much about measurement in forensic science that has been opaque to-date. And I just wanted to note that there are many technical issues that then follow from what is being suggested here. It's -- you know, we have the label "proficiency testing," but, in some sense, I would say it's beyond proficiency testing that is so critical here. And it isn't obvious how to design the appropriate studies so that they're fundamental statistical issues on the design, both within a lab and across labs.

So you could think of the cross-lab study design as something akin to the multi-centered clinical trial. But what's going on here is very different but, yet again, is based on a restricted set of units for which we have access. And so there's all sorts of interesting questions here and very important ways to move forward. And I'm very supportive of this particular proposal. We actually have a proposed statistical activity as part of CSAFE beginning in year two, this coming year that will begin to explore this, interacting with Bill and with others, and hopefully the Houston lab.

GERALD LAPORTE: I just wanted to mention Bill that NIJ does have a solicitation in this particular area. I mean, we don't specifically call out this, but it's titled "Research and Evaluation for the Testing and Interpretation of Physical Evidence in Publically Funded Forensic Laboratories." So in the solicitation, though, we do urge the public laboratory to work with a statistician and to potentially bring in fellows as well, too. So we've been doing this -- we just closed it this second year. I made five million dollars available last year and only spent three-and-a-half million dollars. I made five million dollars available this year and won't spend the five million dollars this year. So I'm going to take this opportunity to sort of urge everyone that the opportunity is there, the funding is there.

STEPHEN FIENBERG: What date are the proposals due?

GERALD LAPORTE: And then also urge laboratories probably not to undertake this task by yourself. Definitely consult with statisticians, consult with academicians, and, like I said, urging people to bring in a fellow in this as well, too.

MALE SPEAKER: Okay. Thank you.

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THOMAS ALBRIGHT: I just want to offer a strong endorsement of this idea. I think if one of the goals -- our goals is to improve human performance in a forensic context, then one of the most important pieces of information you could obtain are the distributions of different types of errors as a function of human and environmental conditions. And so the beauty of this is you have a naturally-occurring experiment. You have people performing these tasks under different types of environmental conditions, under different human conditions, and you have data on error rates that can be used to try to determine what are the factors that lead to better or worse performance. There are statistical issues with the design of the experiment that Steve has alluded to, but I think that those can be resolved. But I think that there is -- there's a huge amount of power associated with this program.

PHIL PULASKI: So for the forensic laboratory directors, I just want to make it clear that this is not proficiency testing. It is not designed to replace proficiency testing. I believe, Bill, correct me if I'm wrong, we're going to scrub the word "test" out of there and replace it with something else like "trial," to be analogized to a clinical trial. In terms of cross-examination, if your laboratory participates, the document is going to address that. So as to do the best that is humanly possible to ensure that nobody misinterprets this as just some other form of proficiency test, and it's going to have to be taken on by the laboratories as a mandate with no additional funding, no additional resources. Did I state that correctly?

WILLIAM THOMPSON: Yes.

PAM KING: So I think this looks great and there's a lot of really good information and great ideas in here. My suggestion would be that, with respect to subsection three, which is commission recommendations, that is where you really set out sort of the meat or the heart of what it is that this group is being asked to endorse, that those be moved up so that it starts with here's the recommendations that we're making. And make sure that it's clear that we're talking about a view, because I think it starts to get a little unclear, is this a view or is this a recommendation? So by moving those up, making it -- choosing what you want to do, but making that sort of, for those of us that want to get to the skinny quick, that we know what it is that you want. And then the background stuff can come in later.

And then I think I would suggest thinking about maybe even shortening up some of the language in each of these numbers because it seems to me that there's -- it may be able to be shortened and be able -- so, for example, the first one, funding pilot programs. The sentence that gets to the heart of this for me is the very last one, "funding agencies should both support trial efforts and provide incentives to encourage laboratories to undertake these efforts." Sure, that seems like a pretty good summary of a lot of what you're talking about. And I think the more that you can do that -- leave the rest of it. I'm not saying take it out, but I'm just saying let's make sure that we know what it is that we're asking the community to do.

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WILLIAM THOMPSON: I think that's a great suggestion.

FEDERICK BIEBER: Jules, I have a couple comments and then -- or a couple questions and a comment. First, I'd like to point out what's probably an oversight in line five, page 117, in section five, where the sentence reads "CLIA requires medical labs to participate in routine blind proficiency medical testing." That's not correct. They do require us to participate in proficiency testing, but it's not blind. Most of it is the College of American Pathologists. We know the dates and times the samples will arrive. We know they are -- they call them CAP surveys. So we know. And in our lab, we treat them as normal samples, one technician, one person signs off the report, we don't share the data throughout the lab, we each sign that we participated in that test so if we fail the challenge or survey, the feedback is attached to our name, we discuss it in a lab meeting and take due notice thereof and govern ourselves accordingly.

WILLIAM THOMPSON: Fred, do your bench-level analysts know that these are test samples?

FREDERICK BIEBER: Yes, they do. And they're accessioned along with everything else, and they treat them the same, because the patient history is provided with the CAP survey. This has been going on for 35 years.

WILLIAM THOMPSON: Yeah, no, because the regulations require that the samples be treated the same as other casework. And some people have interpreted that to mean not distinguished from other casework.

FREDERICK BIEBER: But the CLIA does not require it be blind. So I think we have to be careful with that use of the "blind."

WILLIAM THOMPSON: Okay.

FEMALE SPEAKER: SAMHSA requires blind. So if you just put that in.

WILLIAM THOMPSON: Okay.

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FREDERICK BIEBER: I would just strike that word.

WILLIAM THOMPSON: All right, we can strike that.

FREDERICK BIEBER: The other comment -- I have two other quick comments. One is do you really mean the word "test" throughout this document, or validation?

WILLIAM THOMPSON: I think validation is what we mean, or research. Yeah, we've had extensive discussion of that. And yeah, the word "test" raises a red flag for many people. We're talking about research studies here.

FREDERICK BIEBER: Okay. Thank you. And the last comment will take me about a minute-and-a-half. It deals with blinding of bench-level examiners vis-à-vis task irrelevant contextual information. I can think of two dozen examples right now, but I'll give two of them where having some context is crucial, not only for medical care of a patient who is a victim of a sexual assault and achieved a pregnancy on account of that sexual assault, and also a death penalty case in the State of Texas that I was involved in.

In the first instance, I got called by a former student of mine who's now an FBI agent it turns out, she worked at Cellmark at the time. And during the chat about her application to the academy, she mentioned a case she had in the lab in Maryland where there was homozygosity at every locus. And they excluded the mother and the named man who had allegedly raped the 14-year-old girl. And I said, "Well that can't be true. I'll bet you this is a partial or a complete hydatidiform mole. What hospital did this test come from?" Brigham and Women's Hospital, where I happened to work as a pathologist.

We pulled the slides. It turns out this showed the scalloped villi, hydropic villi, about 1% or 2% of such patients develop invasive choriocarcinoma, which is a deadly metastatic cancer, and these patients need to be surveyed over a course of about two years with human chorionic gonadotropin testing. Without that context information, they would have excluded the father, the named man, who was indeed excluded because they shared no alleles in common. But whoever raped her produced a homozygous pattern because of endoreduplication of the haploid sperms. So in these rare pregnancies, there's homozygosity, two male contributions to the diploid genome, and no maternal contribution. So in that particular case, knowing context, A, provided the correct lab result and also got the medical care to that young girl that she needed for medical follow-up.

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The second case -- and I'll be brief -- is one in Texas where I was called to help an office who were prosecuting a man, seeking a death penalty for raping and murdering a woman the weekend before her marriage. And there was a partial degradation of evidence. And there was a nine locus -- so-called nine locus match, and they wanted me to clarify the statistical estimate that had been made by the lab. And I said, "Well the lab did the right work, but how many brothers and male relatives does this alleged murderer have?" And they said, "What does that have to do with anything? He's the guy we're charging." I said, "Because we inherit alleles in common from our close relatives." We've seen a ten locus match in sibs, and we've even seen an 11 locus match in people where there was incest. They checked and there were nine brothers of this defendant. And in accord with common sense and their due diligence, they tracked down every one of those brothers and either got a voluntary sample or a clandestine sample and excluded each one of them before trial. So, but for the grace of those above, theoretically, they could charge and win a -- prevail in a serious case with partial evidence.

So without that context, without asking that rhetorical question, how many relatives are there, male relatives, uncles, cousins, and so on, we could be led astray. So I'm -- I have three flags up on my banner with regard to task irrelevant contextual information because -- I can give you ten more examples, if you have time at lunch, where knowing some context provides crucial directional changes in the thought process of a so-called expert or requires additional testing or retesting of different samples. So I just raise that as an issue for you to consider as you go back to this document. Thank you.

WILLIAM THOMPSON: Let me just respond briefly. Of course, the commission has already approved a views document on task relevance. And I think the commission's views document would accommodate and take into account the examples that you're giving very well. I mean, the idea of context management isn't that everyone in the lab is ignorant. It's just that the people -- the bench-level analysts who are making the allele calls at a particular point in time will make those calls before they're exposed to the full contextual information. Once those allele calls are made and the report is issued, of course somebody knowledgeable about the context of the case could identify the issues. And so I -- so context management isn't a call for ignorance by forensic science, it's just a call to control who knows what when in a manner designed to reduce bias. And I think the document that the commission's already approved gives some really helpful guidelines for how to negotiate and resolve those issues, including the very difficult ones you've highlighted, so.

JAMES GATES: Thank you. Thank you, Jules. First of all, I want to commend the work of the group on this issue of performance evaluation. Several meetings ago, maybe a year ago, I actually -- we were talking about proficiency testing, and, in fact, I said, "No, no, no, we want performance." And that's, in fact, the key to getting -- unlocking a treasure trove of data. As you all know, this community is under stress about this whole issue of what the word "science" and "forensic science" means. And for a lot of us who are on the outside, a lot of the questions revolve around error and the lack of how to measure error. And this whole issue of performance evaluation is also a way to get at that because we're not trying to -- you know, as I said at the

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time, we're not trying to point fingers at particular analysts. We want to understand how the system is performing. And so I think this is critical. I hope the commission moves this up as a high priority because I think this is a lever for cultural change, which I think is extraordinarily important here. So I just want to commend the group for bringing this back so forcefully. I would like to see it moved slightly higher in terms of I hope the commission get behind this. But I think this is a real keystone here to moving the commission's work forward.

MALE SPEAKER: Thank you.

TONI ROBERTS: Definitely a proponent of this type of research, but I just want to urge that care must be taken to properly design a study like this. And in the document it seemed a little convoluted, and maybe it was the use of the term "proficiency testing." But when we talk about this type of performance testing, I'm not sure if this research would be aimed at testing quality assurance measures in that lab or would it be focused on testing contextual bias, or would it be focused on more what I think of performance testing, like the false-positive, false-negative error rates. So I don't know if it's trying to do all of these things, but maybe --

WILLIAM THOMPSON: Yeah, I think any of those things would be possible. It would depend on how the particular research project was designed; right?

TONI ROBERTS: Right, so I just urge --

WILLIAM THOMPSON: So one could imagine doing this simply for quality assurance purposes or one could imagine doing it to test particular hypotheses that you might have about how the system would work.

TONI ROBERTS: Absolutely.

WILLIAM THOMPSON: So there's a lot of flexibility. And, you know, I think -- and several people have made the point, it's not easy to design these studies. That's why it would be helpful if there was input from organizations like NIST where, you know, metrologists and statisticians, on how to do this. There's a possibility of creating multi-site studies to expand the size of the sample and so on.

TONI ROBERTS: Yeah, because even within, say, performance testing, with the false-negative, false-positive, even within that, it's not that simple; right? So are you testing how good examiners are at making

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identifications? I mean, and you'll construct -- the statisticians will know better than me -- you would have to construct the data sets appropriately to test those things. Definitely want to urge statistician and experimental design input. And finally, we throw out the term "data sets" like they're readily available. And just urging the community that, especially in latent prints, these type of data sets are not readily available. I think it's in the document. They'd have to be created. And finally -- finally finally, attention to institutional review board and the fact that with latent prints, since I know that discipline, it is PII, and people forget that. So that's it.

GREGORY MOTTA: Thank you. So I feel like the scope editor, and so I'll ask a question about scope. So the document begins by referencing forensic science service providers, but then it very quickly lapses into the term "laboratories," which is not a term we've ever defined in our standard definitions and terms. And "laboratory" is one of those terms that a lot of people use. You'll have individual experts who will say, "Back at my lab," or even task forces in digital evidence referred to their laboratory. And so the document uses the term "laboratory" 50 times, about a third of the time it refers only to crime laboratories, even though forensic science service provider is civil, criminal, or regulatory application.

So I guess the question would be both in terms of burden and scope and expectation, what are the groups you actually would expect this to be applied to? Would it be accredited laboratories or would it -- or maybe it's -- I don't want to use the word "punishment," but, you know, if you use the word "laboratory," then you're covered. But I have trouble understanding how one would decide, given the fact that we currently have a survey out to try to identify across the country, who are the forensic science service providers, how many of them are operating laboratory environments, how many are not. So the scope of the application of the document kind of jumps around throughout the document, using disparate terms would be my comment.

WILLIAM THOMPSON: Yeah, no, I think that's a part of the document that definitely needs improvement. As I said at the beginning, the goal here is not to require or mandate that labs engage in this kind of research. It's just to facilitate the possibility of doing this kind of research by those labs that choose to undertake it for all of the very good reasons that they might. So, but I take your point.

JULES EPSTEIN: So on our subcommittee -- first, again, a big thanks to Bill, who spearheaded this, and the many people who have assisted. We will be taking this back, taking the comments from today, the comments from yesterday, the public comment, hoping to make it a leaner, meaner document. And again, going to what Phil said, to completely take it out of the context of anything that could be Brady discoverable. This is not about individual error. This is not about anything. This is about designing research that will help improve the practice. So that's our report.

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NELSON SANTOS: Thank you, Jules. Okay, let's take a break until 11:30. We'll have our lunch out. And then we'll have our presenters on Digital Evidence and Multimedia.

PART 4

LINDA JACKSON: So for lunch today we have been asked to present a panel discussion on visual evidence, since visual evidence had been added to our charter but not a lot of information had been disseminated about digital evidence and that there seems to be quite a few complicated factors to visual evidence as a whole. We wanted to provide kind of a broad spectrum of information about digital evidence. Our first speaker, James Emerson, is from the International Association of the Chiefs of Police, and so hopefully he will give us a scope of digital evidence, not only in the federal system but also state and local. James Dibble, he is the President of IACIS, which is the certifying body in this – or a certifying body in the digital evidence arena, and so hopefully he will speak, at least partially, to certification and efficiency tests in that area. Bill Eber is from the DoD Cyber Crime Center, and they are a very large federal agency that does digital evidence and are accredited. And then lastly Carl Hoecker from the Inspector General Office. He is going to talk about digital evidence in the IG community as well as some quality assurance that they have put into place in lieu of accreditation.

So thank you to our speakers. And so is we could hold our questions until all of the folks have presented, that will allow us to eat our lunch and then maybe some people will speak to something afterwards that would answer that question anyway and we can all have a discussion at the end.

So, Mr. Emerson.

JAMES EMERSON: Thank you. On behalf of our President Chief Terry Cunningham and our Executive Director Vince Talucci, we want to thank the Commission for the opportunity, and the time and consideration to be able to present today on such an important topic.

We thought it would be useful if you understood how the IACP garners experience and comes to consensus with regard to this issue. The Computer Crime and Digital Evidence Committee, a standing committee, one of more than 30 within the IACP, not only cooperates with other committees within the IACP but also collaborates within the construct of that committee. So as that committee exists, we have a U.S., federal, state and local presence, private sector presence. We've got international partners and members that collaborate with us. And the charter of that committee is broader than digital evidence. It also involves cyber crime, cyber-enabled or facilitated crime investigation, as well as cyber security for law enforcement agency infrastructure and data.

In 2001, there was a digital forensic research workshop which gave way to a research paper by NIJ Office of Science and Technology that essentially put law enforcement on notice with regard to digital evidence and the future, and in the conclusion section suggested that if there weren't some sweeping efforts made to address digital evidence, that we would be chasing it for decades. We may well be there now. But it was kind of the starting point, as I recall in my own personal experience, for this discussion within IACP.

In 2009, we had a president who had had some challenges as a chief of police in Virginia. He's now a sheriff in Virginia. And he's now chasing backlogs related to digital evidence. And as they competed with speedy trial clock and certain criminal offenses in cases, and he had a very passionate interest in doing something within the Association. At that point there was a committee created, a standing committee, and in the interim there's been some research done by the IACP. I'll direct your attention to 2013, the IACP, with the National Sheriffs

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Association, in concert with the National White Collar Crime Center, essentially polled 500 state and local, tribal, territorial law enforcement agencies with regard to their current state and handling of digital evidence. And so some of what I'm going to tell you today benefits from that particular piece of research that was done. It was not, obviously, substantive in its volume and coverage. It was demographically consistent with the BJS census, though. So we felt like it was worthy of paying attention to in that sense.

We tend to partner with other organizations as the issue of digital evidence progresses. There's currently a standing task force at the Integrated Justice Information System Institute, and that has co-opted partners from all over the justice stakeholders space to come together and try to address and deal with issues – the National Center for State Courts, as an example, would participate in a forum like that to try to address some of the issues that are there, daunting issues if not wicked problems presented by digital evidence.

Most recently prior to this particular Commission meeting, our friends at the National White Collar Crime Center helped IACP do some polling of examiners, practitioners, so I'll rely on some of that information that's very recent today as well.

UNKNOWN SPEAKER: Try that again.

JAMES EMERSON: There are a couple of characteristics which give a context for digital evidence, which is essentially right in the forefront of what state and local is dealing with. The increasing volume of digital evidence is no surprise to anyone. The problem here is that we have very little, if any, metrics to defend a comment like that. With regard to crime reporting, even of cyber crime or with regard to reporting crime where cyber enablement or cyber facilitation occurs, we've got very limited statistics, and so tends to be we lean pretty heavily on anecdotal references.

There is just a twenty-first century policing explosion of digital content. Everything from sensors, shot spotters in New York City or other major metropolitan areas. Video cameras. The incorporation of private sector CCTV video footage. Audio digitations. Everywhere we turn, every aspect of professional policing tends to run face to face into digital content. At some point it's a business record, and at some point it's potentially evidence. And it's at least worthy of noting it in terms of context.

The challenges expand further and probably more severely with regard to the need for state and local law enforcement to be able to access and collect evidence in a forensically-sound manner from differing environments. Large distributed network environments where everything is connected and there are varying forms of operating systems, proprietary OS's, sensors, appliances, things that are non-standard types of technologies and data sets relevant to those technologies are now affecting what state and local law enforcement needs to do day in and day out to satisfy their requirements in the policing role.

The rapidity of technological change is probably one of the most exacerbating problems. The speed at which we find the physical technology changing and moving forward, updates to firmware, software, things that would affect the forensic process, is daunting.

There's also the issue of cyber crime itself, and frankly whether we're talking about a particular intrusion, or whether we're talking about lawful intercept, or whether we're really looking at digital data in a non-traditional mode, not at rest. Data in motion. Data in use, in volatile memory. Those particular contextual environments add complexity to the requirement and to what's going on in the field.

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There are an emerging number of barriers to access, both legal, if you look at proposed legislation in the United States right now, you'll see immediately at the forefront of that restrictions, constraints to access to digital evidence. There are also equally as many technical barriers to access in terms of implementation of encryption or other forms of restriction to that particular data.

I think at this point it's probably useful, having said that, taking you through a thought process about the sophistication of digital evidence, to look at the 2008, the latest published Bureau of Justice statistics census for state, local, tribal and territorial law enforcement agencies. So at the same time we have this increasing complexity, volume and sophistication, speed attending to physical evidence as it confronts policing, 73% of the agencies in 2008 in the United States had less than 25 officers. I mean you can – you just run those numbers conceptually, intuitively through your head as to what that means in terms of likelihood of bench technology and trained examiners in an agency with less than 25 officers or civilian personnel.

The model for which we have our members in a recurring fashion talk to us about digital evidence is more about handling than it is about forensic science. And we use this layer cake visual to try to simplify that discussion in the sense that any traffic stop in the United States today, tomorrow, or the next day, is likely to involve digital evidence. There's a cell phone in the car. The car itself probably, depending on the reason for the stop, the accident, injury, death, the nature of forensic intrusion with regard to the data that's in play, the technology that's in play, starts right there in the road, in the street. For officers that bring suspects into custody, they're carrying flash memory, they're carrying computing machines in the form of wireless handheld devices. It's out front in the field more than any other form of evidence that we encounter.

We've also got specialists that are fairly unique whereas in the traditional forensic sciences you have crime scene specialists, there's an awful lot of triage going on in the field. The ability to interrogate data quickly without compromising the forensic integrity of the data so that a life can be saved, so that an investigative process of a life safety issue can move further much more quickly.

And then there's the traditional lab environment. Keep in mind that census data, again, as we talk about size of labs.

Now in 2013, the research that was done by IACP and the National Sheriffs Association, we asked a question that I thought was notable for this particular Commission. We asked the agencies, the 500 agencies, if you need to go outside of your agency for forensic support, where do you go? We gave them five options. Federal task force or labs. State, regional, local partners, mutual aid scenarios. Or commercial vendors. The reason I put this slide up there is because the answers tallied 154.3% which indicated to us in the course of that research there was desperation to deal with the amount of physical – the physical quantities of digital evidence that they were encountering.

Now we saw the policy recommendation from this Commission with regard to universal accreditation, and we paid very close attention to the definition of a forensic science service provider. And what I'd simply like to point out is in that definition, with regard to digital evidence handling, in many, many cases in a state and local, tribal, territorial agency, there are a lot of people performing what is defined in the first portion of that definition. Number one, recognizing, collecting analyzing. There are very few people performing number two. And so we wanted to convey that distinction with regard to the actual process of handling digital evidence.

Universal accreditation, the policy recommendations suggested, really, as we read it, a federal perspective on forensic science service providers. The challenge we have with that is the level of integration between state and local and federal day in and day out probably exceeds the awareness of most people that aren't really

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standing in those caucuses. And what I mean by that is when we had our mid-year meeting in Dallas just several weeks back, the Captain from the state policy agency who was there who sits on our Committee, and the Deputy Assistant Director from the FBI who was there were exchanging pleasantries about how the state police were going to support the FBI because the FBI card examiners were leaving the state within the next several days. That level of integration is very easy and normal within the task force environment. We have internet crimes against children task force integration. We see electronic crimes task force integration. Regional computer forensics lab. Task force integration. There's drug interdiction task force integration fusion centers. Everywhere we turn, state, local, federal is integrating, and there's digital evidence in that environment, and there's a likelihood that when you start talking to federal issues, there's an impact immediately both ways because of the integration between state, local, federal and tribal and territorial.

So, again, I think it's probably important to slow down at this point and really speak to the issue, quality management. What traditionally is our view, our awareness, of quality management in the digital evidence arena for state, local agencies? Typically it's been three-pronged, just like a stool, three-legged stool. Tool validation. Ensuring that the tool performs in a manner as designed and advertised effectively. Certification and proficiency testing for the examiner, the person using that tool. Implementing those devices, whether it's in the field or in the lab. And then quality management. Typically that takes the form of peer review, but I'll talk more to the responses we got back in polling.

There's also supervisory quality review programs. There's policies that garner how activities operate within these agencies. But peer review tends to be the largest thrust for quality, confirmation of process and reporting.

We asked 470 examiners, through our friends at National White Collar Crime Center, six basic questions within the last couple weeks. The first one was we asked how tool – we thought this would be informative for the Commission and insightful. How does tool validation occur? Local validation tends – and really taking two forms, local validation and national or federal activities that validate tools. The emphasis seemed to be on local tool validation, the ability to provide seated evidence sets for testing these tools and to work through validation in a recurrent process.

We asked about revalidation of the tools, why, when, what was the frequency. Typically the explanations we got back was anything that caused change, whether it was change in the hardware, change in the software of the tool itself. Whether it was contextual change for the lab. Or how the examination was being done.

Tool limitations. We asked these examiners how they were being addressed. The simple answers here are they report, they catalog. There's well-known false negatives in digital forensic tools, especially as it relates to wireless hand-held devices, mobile phones. But typically in these agencies, multiple tools sit on the bench that are available and known and validated. And they use more than one tool in each and every examination to accommodate that. So they report limitations. They catalog them, and they use a variety of overlapping tools to compensate for that.

Professional certification was a question we put out, and we asked about the various ways officers, deputies were actually being certified as examiners. I've listed a couple up here. I think what's important to understand is there's no single professional certification track. There are a couple of major ones here, and my colleague from IACIS is going to talk in great depth about that, so I won't go any further.

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Quality control programs. Most of the agencies took on the concept of peer review, the concept of supervisory review as it related to quality control in a similar fashion. However, policy is not uniform. There aren't standard programs with regard to quality management across these agencies.

Recurring proficiency testing really derives its frequency based on the track that you were certified. So an agency may gold plate that. An agency may insist upon more frequent annual, semi-annual recertification. However, the vast majority of examiners are certified a certain way. That particular training, proficiency-testing track tends to dictate how the recertification will occur, the frequency with which it will occur.

IACP's position and urgings to the Commission were written in a letter to the Deputy Attorney General. It's probably been seen before by this body. We're concerned about the speed and the mechanism by which universal accreditation is considered and implemented. We think that adequate resourcing is a very important issue right now simply because we've got a lot of professional policy agencies with an array of significant issues, making very difficult budget decisions, and it's not uncommon to see reduction of budgets with regard to digital evidence processes and labs.

We think that for non-DoJ forensic science service providers, that process should remain voluntary, and I'll get to that a little bit further in some subsequent recommendations as to why.

Universal accreditation should not affect the eligibility for a state and local agency to compete for federal grant money. I think that the integration that we rely on as professional policing agencies day in and day out at the task force level, federal, state, local, tribal, territorial, all working together in all these different venues is immediately at risk when that occurs. Regardless of the timeline, regardless of the goal, the end game.

Federal prosecutors, obviously due to the integration that we see day in and day out, should not be constrained to refuse evidence that's coming from a non-accredited state, local, tribal or territorial activity. We believe that that should be controlled at the prosecutorial level as we move towards some satisfactory level of accreditation. But to just simply cut off evidence headed into federal courtrooms because a lab is not universally accredited is a bit drastic with regard to the level of integration we depend upon.

We also finally wanted to comment on the fact that the definition of a forensic science service provider possibly needs to be a bit more granular. Take into account the types of digital evidence handling that have to occur across anyone who is sworn and on the job or any civilian who is duly authorized in a jurisdiction to work for that agency. Whereas the definition is intended to have an effect that I've listened to discourse about today, but also at the lab level, there are a great number of functions that occur outside of that functionality that we think should be taken into account. And frankly it might be time to create additional ISO standards for – or standards of some sort – that address those kinds of functions specifically.

I listened to some briefings in Savannah, Georgia last week. One of our sister committees was having a meeting down there, and they talked at great length about creating new ISO standards to deal with crime scene investigators and that process. And digital represents, clearly, another opportunity where that seems to be necessary.

We need an infusion of national resources to deal with the consolidated issues. The ability to expedite tool validation, for example. To assist agencies in getting those kinds of processes out of backlog and moving forward.

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We need a common digital forensic certification for proficiency testing for curriculum. It's clear that the diversity is not useful in moving towards accreditation. And to that end, it seems as if we've got a number of state partners that have, at the Attorney General level, created models in their states, or in regions within their states, where they're creating model policy at the state level. That creates great opportunity for cooperation and efficiency within those groupings, within those clusterings of examiners. Where there might be small agencies with one examiner, a small bench. If you're operating within the construct of 50, 100 or more at a state level, all of a sudden you have a much greater reach with regard to what can be accomplished.

And then finally we believe that development of model policy is clearly overdue in terms of all the various aspects of digital evidence handling and not just the forensics associated with digital evidence.

I mentioned earlier that in 2015 the Bureau of Justice Assistance, it was on a previous slide, created the Law Enforcement Cyber Center. This is where we push information about the National Commission on Forensic Science now out to state and local agencies as we learn and move forward in these particular pursuits. I would direct your attention to that portal, and thank you for your time and attention.

UNKNOWN SPEAKER: There you go. (Inaudible.) Hold on. I'm not sure what (inaudible).

JAMES DIBBLE: Is that me? Am I supposed to be doing that? Oh, perfect.

Good afternoon, Commissioners, fellow digital forensic practitioners. On behalf of the more than 8,000 members of the International Association of Computer Investigative Specialists, I'd like to thank you for the opportunity to address the National Commission on Forensic Science.

My name is Jim Dibble, and I currently serve as President and member of the Board of Directors for IACIS.

Okay. It's not advancing. There we go.

UNKNOWN SPEAKER: There we go.

JAMES DIBBLE: Thank you.

IACIS is a nonprofit corporation composed entirely of digital forensic volunteers, professionals from around the world. Established in 1989, the organization is dedicated to fostering perpetuating educational excellence in the field of forensic computer science.

Now our membership is composed of professionals from the federal, state, local and international law enforcement community, as well as business, commerce, and academic communities. Collectively we all share a passion for training and certification excellence and the forensic principles of computer examination.

As part of its core mission, IACIS is dedicated to providing professional support to its membership and the digital forensic community through the provision of state-of-the-art training, accredited certification and membership services.

IACIS is the only accredited organization of its type and exists to provide affordable professional training and certification services in the disciplines of computer forensic examination. Earlier this year the IACIS membership provided input in response to the policy recommendation by NCFS with respect to mandatory accreditation of all forensic science service providers. And although IACIS recognizes and fully supports the

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need and purpose of accreditation, it does not support mandatory accreditation requirements for all digital forensic science service providers due to the significant concerns on the impact to medium and small-sized digital forensic programs.

UNKNOWN SPEAKER: There we go.

JAMES DIBBLE: I mentioned earlier that IACIS is an all volunteer nonprofit organization. And although I'm here primarily to represent IACIS, as you can see, I'm a forensic practitioner with the state of Washington and most definitely will be directly impacted by mandatory accreditation requirements.

It appears that all aspects of digital evidence have been caught up in a push to accredit the more traditional forensic sciences. It also appears this move toward mandatory accreditation may well be a manifestation of the 2009 National Academy of Sciences committee report on identifying the needs of the forensic science community. In his review of the findings, the Honorable Harry Edwards makes a compelling case for investing the necessary resources to overhaul the current structure that supports the forensic science community in this country. He goes on to say that the most significant aspect of the 2009 NAS report is "its call for real science to support the forensic disciplines." Now throughout his review, Judge Edwards continually applies the NAS findings to the traditional pattern identification sciences, such as fingerprints, ballistics, fiber and handwriting analysis.

Well one of the first questions I think we need to ask ourselves is whether digital forensic examiners are actually performing a scientific process or merely an investigative activity. If we agree that some of the actions are investigative rather than scientific, the question then becomes at what point does the activity actually become a forensic process.

Are current digital forensic units doing an improper job of handling and reporting data? If so, would any of these issues have been prevented if the examiners were in an accredited lab? This begs the question as to what remedies already exist, such as digital forensic units with robust internal organizational policies and procedures. Our legal system. And existing certification programs.

Computer forensics typically deals with computers that have been seized from a crime scene and transported to the forensic unit for processing and examination. Forensic video often involves obtaining surveillance video and using filters or converting aspect ratios to identify suspects, victims and witnesses. Image analysis routinely consists of photo comparisons to identify suspects and victims. Forensic audio often involves the elementary filtering of audio files to enhance the sound quality and clarity.

But we don't stop there. Even cell phones now have to be somewhat shoe-horned into the field of computer forensics. Do cell phone examiners have to be proficiently tested on computer forensic material since that is the closest fit according to the (inaudible) sub-disciplines? The term digital evidence encompasses such a large and dynamically-changing landscape, how many other examples of digital evidence don't necessarily fit into these categories?

Consider for a moment that ten years ago smartphones didn't even exist. The first Apple iPhone wasn't released until 2007. Now consider the profound technological impact of Smartphone technology on the digital forensics discipline. What advancements can be expected over the next ten years? Considering the accelerated rate of technological advancements, have we even adequately defined what constitutes digital evidence that would fall under the scientific purview of the digital forensic science service provider?

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Sorry, this is being – I love technology.

The positive aspects of mandatory accreditation include: Forcing examiners to develop and adhere to written policies regarding handling and processing digital evidence. It also mandates continuing professional education, all while providing the appearance of quality, credible work.

Despite the positive aspects there are corresponding negative impacts. Consider, for example, technical reviews for one examiner forensic units would be difficult if not absolutely impossible. (Inaudible) requires a technical and administrative review. Technical review must be conducted by someone equally qualified. One person shops don't have a second set of trained eyes to review the evidence.

Another issue is that contraband reports cannot be emailed or Drop Boxed to another examiner for review.

Mandatory accreditation does not necessarily address training or examiner qualifications. That is pretty much left up to the discretion of the lab.

And those who believe accreditation will increase public confidence I fear are only getting a false sense of protection. Accreditation alone does little if anything, I feel, to enhance or ensure the examiner's skills.

Here we go.

Unlike federal departments, the state and local departments necessarily have different perspectives. We just talked – Jim talked a few minutes ago about the number of departments out there. Well considering there are more than 12,000 local police departments and more than 3,000 local sheriff's departments, their unique perspective warrants consideration. IACIS has over 1,900 current certified examiners. More than 500 of those are from police and sheriff's departments with a single forensic examiner. Based on this I would submit to you that the majority of digital forensic exams are being conducted in one-to-two-person digital forensic units around the country.

UNKNOWN SPEAKER: All right. I wonder if it's just a matter of – there we go.

JAMES DIBBLE: Another pertinent issue is that accrediting bodies don't mandate how evidence is to be processed in the lab. They do, however, verify that policies implemented are followed. I suspect that different forensic units will produce differing results depending on the examiner's training and expertise. If digital forensic units can't be trusted to perform their functions now, can they be trusted to develop their own policies?

Another issue that plagues industry concerns digital forensic personnel selection. Sheriff and police departments typically select examiners from the current roster of employees. Most departments don't require college degrees for their officers, much less degrees in science.

Currently there are significant policy and procedure variations between digital forensic units. It is a fact that the cost of implementing and maintaining accreditation can be somewhat overbearing. Even at this present time many sheriff and police departments are held hostage by the current evidence turnaround time.

I may need to just hold my head right.

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One thing seems certain. If all institutions with digital forensic examiners are required to be accredited, there will be fewer departments processing digital evidence. Backlogs in state accredited labs will grow exponentially, will result in dramatic increases in turnaround time which could have devastating legal impacts.

A couple of examples of the types of activities that would necessarily be affected. Consider, for example, a Cellebrite produces a machine used for examining the contents of a mobile device, cell phones. If you consider the amount of evidence that exists on cell phones today, it comes from first response police officers, such as those dealing with drugs, or perhaps abductions or missing persons, things of that nature. Right now outside of the Regional Computer Forensic Labs that the FBI has, they have little kiosks set up where police officers can come in with their cell phones, and after watching a 15 to 20 minute tutorial, they can actually connect their phone to the Cellebrite device, do a logical extraction of the data on there, and then produce a logical report. I fear that requiring all digital evidence to be processed by accredited labs would be a dangerous impediment to the timely investigation of crime involving digital evidence because certainly, under proposals, those types of activities would have to be conducted by an accredited lab and their staff.

When it comes to accreditation, one size does not fit all. And although IACIS firmly believes accreditation is an important option, we also feel very strongly it's not appropriate for all organizations and should not be a mandatory component of practicing digital forensics.

Finally, we realize that mandatory accreditation is only being suggested for federal agencies. But the loss of federal funding for those state and local law enforcement agencies partnering in crimes against children and electronic crimes task forces would have a devastating impact on those local programs.

UNKNOWN SPEAKER: Almost there.

JAMES DIBBLE: In consideration of strengthening the weight of digital evidence and the qualifications of the forensic practitioner, training and certification efforts can be accomplished much sooner than accreditation can have a more profound impact on the examiners and their work product. To be effective, the minimum certification standards must be vendor neutral, based on a core set of forensic competencies and a robust set of ethics, and consist of ongoing period recertification to measure the current knowledge, skills and abilities of the practitioners. The preferred goal is to focus on the skills and abilities of the practitioner as opposed to where the actual work is being conducted.

If accreditation is to be mandated, we respectfully ask that consideration be given to adopting standards more in line with the types of digital forensic examinations being conducted. Consider, for example, ISO 17020. According to ANEP, recently just merged with (inaudible), "historically many crime scene units were part of the traditional state or metropolitan crime laboratory which many appropriately have been accredited ISO 17025. Because many police agencies are taking on risks previously handled by big crime laboratories, such as crime scene investigations, latent print analysis, ten prints, foot and tire print examinations, firearms examinations, handwriting analysis, digital media, and anthropology, accreditation ISO 17027 020 may be more appropriate. Pat (Inaudible), (Inaudible)'s Accreditation Manager for Inspection and Forensic Science, encourages agencies to pursue the benefits of accreditation but cautions that they should carefully consider which standard best fits their needs.

You know, many different standards have been suggested, as you see here. Inasmuch as there is wide conjecture as to which standards best apply to the digital forensic discipline, the IACIS recommendation would be that the Commission task the digital forensic subject matter experts to develop digital evidence accreditation standards that truly reflect the digital forensic discipline.

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Finally, if accreditation is to be mandated, we recommend the following. That implementation be limited to those larger forensic organizations with the sufficient resources to absorb the somewhat onerous overhead. Additionally, the smaller labs be excluded from the accreditation requirement and instead be required to implement training requirements based upon an exacting set of forensic core competencies, certification requirements for all examiners that are vendor neutral based on forensic best practices and core competencies, contingent upon periodic recertification and continuing professional education. And finally, that certifying bodies be accredited and remain independent from the examiner's organization.

On behalf of the entire body of the IACIS membership, I wanted to thank you for the opportunity to comment on this most important topic. Thank you.

WILLIAM EBER: Okay. Good afternoon. Again thank you for the opportunity to be able to present to the Commission.

My name is Bill Eber. I'm with the DoD Cyber Crime Center. And basically we're going to take this issue on from a slightly different perspective and that would be of a large accredited digital forensic laboratory.

So – hey, it worked.

Okay. So real quick – I'm going to real quick go over the DoD Cyber Crime Center, what we did to get accredited. What's all involved in staying accredited. Go a little bit into digital evidence as a forensic discipline. I'm going to try not to repeat the things that have been said by my colleagues. And then a couple of suggested proposals for consideration should accreditation be mandated.

Real quick, the DoD Cyber Crime Center is one of six National Cyber Centers. We are the smallest of the National Cyber Centers. Around 420 folks. So we have other missions aside from digital forensics. We have a training mission. We have a RDT&E mission. We have a – we support critical infrastructure. So all of these different missions play into it. So the lab is roughly about, depending upon the time of day, around 100 people.

So this is kind of how we break things down. And conservatively we will probably wind up with about 1,150 cases that we will have gone through this fiscal year. And probably about 650 terabytes of data. We used to see over a petabyte of data, and the reason why that has gone down is because of the increased use of cell phones and mobile devices and other small form factors with smaller storage capacity.

So here is kind of how we make up the laboratory. The point of bringing this up to you is the two asterisks elements there, with the evidence intake and the quality assurance element, those are elements that we baked in specifically to make accreditation easier for our particular lab. You can see we have 24 folks working in Major Crimes, and, you know, across the board, we have a lot of folks in there, and so what we did is we added six – to be able to do quality assurance, to be able to make sure that they could write the quality manuals, the operations manuals, the training manuals, the laboratory process manuals. So all those elements. So just to give you an idea. So if you look at it that way, it's roughly between six and nine percent of what we have up there is dedicated toward making sure that we stay accredited and in the good graces.

So the accreditation started. We are under the Computer Forensics Testing category. Like I said, we are one of the larger Computer Forensic labs under one roof. I'll throw that in there because of our CFLs and everything under the FBI. We were initially accredited in 2005. That was under the old legacy piece. And now – 17025 – we just got renewed in May.

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So some of the takeaways here. There's 383 potential findings we found out. So 383 elements for which you need to be held accountable. So they had six inspectors come in. They were there for about a week. They went through an awful lot with us.

So in prior years the issues had to be systemic in order for you to have a finding or to fail on a certain (inaudible). So in other words you would have to have more than one instance of violating whatever was in the way. That changed in April, of course, right before we got accredited again, to you could one-off instances and get dinged on it. So there's 383 potential findings that can happen there. And then you have yearly reviews by one inspector. They're usually in for one or two days, depending upon what they want.

So continuing factors. These are things that we continue to do. Quality Management System. We have (inaudible) procedures that take into consideration the ISO, the supplemental, and then the local requirements which, of course, are our requirements that we have to bake in for our processes and procedure. We maintain quality manuals. But they have to be agile enough to be able to allow for the evolving technical challenges that you've heard about already.

So I just want to hit on that just a little bit more. These are constantly changing techniques. And we have some elements in our lab that are constantly pushing boundaries. We have something that we call the Advanced Data Acquisition Team, and what they're looking for is new ways to be able to get data off of cell phones. So as you can imagine, as the cell phones change, as the operating systems change, we have to come up with different techniques. There are two billion – with a B – applications out there for both IOS and for android. So there are a lot of different techniques and changes. So when these quality manuals are written, they need to be written sufficiently vague to be able to afford you the ability to be able to tackle these changes quickly.

Of course you go back, and you verify and you validate, you make sure that all of these things can be repeatable and that it all works.

The other element is you have to be able to articulate training requirements. These, of course, have to be achievable without shutting down your lab. As you can imagine, we have to send a lot of people to training.

We also have to keep people on leading-edge capabilities. We've already got a few people in working on vehicle forensics, for instance. So and with all that you still have to keep up your peer reviews, your admin reviews, and your quality reviews.

Information management system. Nothing new there. I'm sure all the traditional labs go through all this as well.

Quality assurance manager. We have multiple networks. We have to make sure that we have consistent processes across there.

One of the fun things with digital is that we have to have consistent software and hardware builds. We try to bake in firm ware. That's very, very difficult to be able to get the vendors to give you the same version of firmware with the same version of hardware. So we haven't had a whole luck with that. But you have to have consistent builds. You have to make sure that you have the validation tools which my colleague have spoken about.

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And then you have to have a deviation process. What happens when you do color outside the lines? You know, why did you color outside the lines? As long as you can capture that and you show that you're trying to bring that coloring inside the line, that works pretty well.

Just to get into this a little bit more on the digital evidence side. Relatively nascent relative to the traditional disciplines. Constantly evolving as we've hit you over the head with with a club here now, the three of us.

One of the things about digital evidence is that it can be replicated and mathematically validated. And I'm not smart enough to know whether or not that is unique to digital evidence. But I'm going to say I think it kind of sets us apart from at least most of the other forensic disciplines. So there's no limit to the number of copies. We don't change the original evidence so you can go back and make sure that you've got it right.

So some of the most important steps to increase accuracy. I'll go into the peer review piece. The comparative evaluation that was talked about before where you had multiple tools being able to go after and make sure that you are not missing anything. You want to make sure not only are you getting all the evidence that will put the individual away, but you're also looking to make sure that you get any exculpatory data.

Technical deviation tracking.

Regular solicitation of customer feedback. Motherhood and apple pie.

So, if a decision is made to mandate accreditation. Like for the Commission to consider the potential of striking a bit of a balance here to achieve the intent of accreditation, to ensure the quality of forensic processes, without holding smaller labs to the same criteria for overhead and management that us larger labs – or we larger labs – we – we larger labs can more easily accomplish.

So the ISO 17025 standard, sufficiently high level. It doesn't necessarily dictate specific steps, but then what happens is that the accrediting bodies come in, and they come in with their supplementals that they're trying to map to 17025 to make sure. So what that does is that that helps with the labs trying to figure out how they're going to map back to all the – like Section Four and Section Five in particular of 17025.

And again I'll go back to the bit where we have 383 potential findings on a lab. Like, as it's been said before, if we could consider the differences in lab functionality, I think that that's been brought up real well between Jim and Jim. There we go.

And I don't think I'm saying anything much different here. Okay. There we go.

So, one option that might be considered is the idea of a tailored accreditation. So right now the ability to be able to influence the supplementals specific to digital evidence, we have an option here. The time might be right. There is some indication that ISO 17025 might be rewritten, or might be reworked, maybe by about this time next year. If that is true, then all of the other supplementals need to be rewritten. We have an opportunity here to influence the writing of those supplementals.

OSAC has a healthy cross section of practitioners and as such can ensure a balanced approach to these requirements, ensuring that they're not too detailed so as to exclude viable techniques that might be used in the smaller labs. So this will drive the accrediting bodies to adopt these supplemental requirements.

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Again, it opens the door for the smaller labs to adhere to a subset of the requirements that us larger labs are held to.

Again, core forensic competencies will not be nego – or should not be negotiable.

And also again here I want to point out we need a broader interpretation of management and the other resource-intensive requirements that are in 17025.

Let's see. The other element here is that we can look at a five-year program to be able to get the smaller labs accredited. So come up with some milestones in accountability because if we say you're going to be accredited in five years, at four years 11 months people may not have made any progress. We need to have some kind of structure to it if we're going to do that.

A lot of the quality management processes will occur by default. And then you can evolve toward the management and the oversight components.

Nothing else really. I swear, I'm getting through this.

Okay, so the summary. In summary accreditation has its pros and cons, as you've seen, even for us larger labs. Digital evidence discipline continues to evolve and is becoming more mature. So if mandated, developmental factors should be taken into consideration to promote the intent of accreditation without damaging the roots of the discipline. We need to figure out a way to strike a balance. That makes it less painful for the smaller labs to achieve accreditation without compromising the forensic integrity of the evidence.

And with that I thank you for your time.

CARL HOECKER: Good afternoon. I'm Carl Hoecker, the Inspector General for the Securities and Exchange Commission. Thank you for inviting me here today to speak to you about digital evidence analysis in the IG community.

The IG community has long supported the fundamental principles of standards of quality assurance, and indeed its members are following with great interest the proposals of the Commission for accreditation for digital evidence analysis.

We're grateful for the Commission's efforts to improve forensic sciences. My goal here today is to show you and to give you an overview of our approach to assuring reliability of digital evidence and findings in our investigation. But my lawyers tell me I have to do a disclaimer first, so I will do the disclaimer. My views today are my own, and not those of any Commissioner of the Securities and Exchange Commission or individual Commissioners or colleagues on the SEC staff.

Whoa. All right. Didn't realize that was going to be so small. But I'll describe to you the IG's role. The IGs have the unique role in government. There are 73 independent offices whose task it is to root out fraud, waste, abuse and mismanagement in their agencies. The federal Inspector General community form the Council of Inspectors General on Integrity and Efficiency, which we call CIGIE. By statute, Public Law 110409, CIGIE issues guidelines and standards for the IG community.

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As the head of the Investigations Committee for CIGIE, we issued the quality standards for investigations in 1997 and have updated them a number of times since then. These are standards that provide guidance for the process of conducting a full range of government investigations to include computer crime investigations.

Each OIG must develop and document its quality control policies and procedures in accordance with its agency and individual OIG requirements yet assure compliance with professional standards.

The OIG community also establish a quality assurance review, which we sometimes call a peer review, which is, I think, a little bit different in the scientific community of peer review. But we call it a quality assurance review in which the investigative function is independently reviewed by a similarly-situated OIG. The purpose of the QAR is to ensure that CIGIE standards for investigation and our law enforcement powers are properly exercised. In conducting this quality assurance review, the review team renders an opinion on the adequacy of given OIG safeguards, management procedures, and quality control. The results of our peer reviews are provided to the agency head, to Congress, and to the public.

OIGs, similar to other law enforcement entities, find valuable evidence located on computing devices and computing networks during the course of their investigations. The OIG digital evidence programs have aided in traditional criminal, civil and administrative investigation, and also in cyber crime investigations such as network intrusions and data breaches.

There are about 32 OIGs with digital evidence capabilities, and 260 examiners that support 4,000 criminal investigators.

As the success of this field has increased, so has the IG community's attention to ensuring reliability that digital evidence and the findings and procedures to support those investigations. In fact in 2012, we issued what we call the Quality Standards for Digital Forensics. These standards are derived from digital evidence standards, guidance published by the (inaudible) DE, National Institute of Justice, Department of Justice, Computer Crime and Intellectual Property Section, and the National Research Council. The CIGIE Quality Standards for Investigations, the Federal Rules of Evidence and case law were also foundational in developing these quality standards for digital forensics.

Since 2012, we included the digital evidence in our quality assurance reviews that I described above.

We'll try the next slide. It might be a little bit too small for you. If not, I apologize, I don't know if you have it.

UNKNOWN SPEAKER: It's small.

CARL HOECKER: Oh, yeah. It's tiny. Let's see. Here we are. Yeah. I don't know if there's a way we can make this larger on the screen or what. If not, I'll walk you through it.

So what I tried to outline here is the topics and the areas of our quality standards for digital forensics. And they come in two areas: management standards and personnel standards. On this slide, if you could see it, there's two areas underneath the management standards, and that is digital forensics capability and quality management. And so what the OITs are responsible to develop is policies to ensure that they have legal authority – the examiners have legal authority surrounding integrity of the evidence and the forensic documentation.

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Under the quality management piece, that OIT is to develop administrative review process, process for technical review, validation testing, and a review of their own quality system.

When our review team comes in to look at the management standard piece, they look at the policies, they look at quality management system, they look at cases to ensure that sufficient legal authority was there, they look at the documentation of the results from validation testing, they look at the integrity of the evidence, and if the reports were properly reviewed.

The next slide, if you could see it, is second standard, and that deals with personnel standards. The two areas under personnel standards are qualifications and proficiency. So the qualifications, that IG is supposed to set up an education, experience, look at the character of folks, make sure they're hiring the proper – like do background investigations, etc. Technical concepts, problem solving, and entry-level training.

And under the proficiency area, that IG is supposed to set up a continuing education program and proficiency testing. And when our peer review people come in, they look at the training records, they look at the minimum hours of training and whether they have done the competency examination.

What I've tried to show you in my slides, and I apologize for the small print, is to give you an overview of how the OIGs in the federal IG community do kind of a quality assurance in our digital forensics area. It's a subset of our investigations function, so that's how we handle that.

Thank you very much.

LINDA JACKSON: Okay. So thank you very much to our speakers. So now we will open it up for questions. So, Troy, you were first on the draw, so go ahead, and then I see Gerry and Phil.

TROY LAWRENCE: First I'd like to say thank you to all four of you for coming and giving us your afternoon.

UNKNOWN SPEAKER: (Inaudible)

TROY LAWRENCE: I was thanking them for coming and presenting for us today.

So from the IACP, would it be fair to say that digital evidence probably exists in just about every type of criminal prosecution, homicides, robberies, rapes, burglaries, you name it?

JAMES EMERSON: They potentially were awash in digital evidence.

TROY LAWRENCE: So wouldn't it also be fair to say that even small police departments, the 25 officer departments, may also have digital evidence in their cases as well, not just large police departments?

JAMES EMERSON: I would agree, and I think that research probably bears that out within the last three to five years.

TROY LAWRENCE: Okay. So using the numbers that you had up on the screen earlier, we have approximately 13,000 law enforcement and tribal agencies across the U.S. Thirteen thousand that have 25 or fewer officers. So let's assume that half of those police departments get digital evidence. We're looking at 6,500 police departments. Let's limit that down to just ten percent of all the police departments. That's 1,300 local police departments that would have to become accredited with mandatory accreditation. When I looked on the

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ASPLAT (sp) website, they had 69 total DE labs. Is ASPLAT or the other seven accrediting bodies, are they able to handle 1,300 more accredited labs within a five-year period?

JAMES EMERSON: I would argue that they are not.

LINDA JACKSON: Perhaps that question would be most appropriate for an accrediting body.

TROY LAWRENCE: Okay.

LINDA JACKSON: Because I think that would be their perspective. So do we have another follow-up question for – or anything else?

TROY LAWRENCE: I do.

LINDA JACKSON: Okay.

TROY LAWRENCE: Bill, you said that you have 19 intrusion investigators, they're assigned to your lab. Are they considered computer forensic examiners? Were they kind of cubbyholed into that sub-discipline or is there another sub-discipline for them?

WILLIAM EBER: They are a sub – did that work? They are a sub-discipline, so there are intrusions and then there are intrusions. So if you have intrusions that are on a where you have a system that has been intruded upon, then you can actually go in and you can perform some forensic work to be able to find out what allowed the malware to be on the system. So in that case that is a forensic process. In other intrusions, not so much. So there are – I would say, I mean if you asked me, I would say probably about ten percent of what we do in intrusions is actually forensics.

TROY LAWRENCE: Okay. You mentioned that your quality manual has to be vague enough to allow for the discipline to grow and to take on new techniques. By writing it so vague, does it lose its quality? By writing it so vague it's – you can do pretty much what you want. Doesn't that defeat the purpose of the quality manual?

WILLIAM EBER: So within a certain scope, right? So there are – within 17025, within Section 4 and 5, they lay out exactly what the parameters are. And so by writing your SOPs to bake in those requirements that are outlined in 17025, you can still do that and still write them sufficiently vague to allow for the movement.

I think to your more pointed question with regard to does it erode the quality of what it is you're doing, you have standard operating procedures that you follow regardless, and so those standard operating procedures are specific to the sub-disciplines that you're going after. You know, thou shalt image, you know. Thou shalt use a write blocker. You know, all those things happen – those are all written down in a more granular fashion. So, you know, the act of writing it that vague does not adversely affect our quality.

TROY LAWRENCE: Okay. It seems that all four of you have said that accreditation may not be the appropriate response for the small state and local labs. That there are alternatives out there, like the OIG's office. That there are other potential ways of getting the quality by having the quality manuals, making that part of a certification or making it part of an oversight, of something of the digital forensics labs. Do we even have an idea of how many digital forensic labs or units are out there? Does anybody track that information? I don't know.

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JAMES EMERSON: No, I think Jim probably had the best numbers I've seen in the last six years with regard to examiner numbers from their Association. The other thing I wanted to say is we've seen state labs actually drop accreditation more recently because of legal concerns. And I want to qualify that. The explanation is that the ISOs are, you know, at odds with the nature of the evidence, the nature of successful prosecution, and ergo we've seen attorney general movement at a state level to move away from accreditation because of that disconnect. We need custom standards that speak to digital and don't hold digital hostage because, as you pointed out, the numbers of accredited labs are anemic enough as they are already.

TROY LAWRENCE: Thank you, guys. That's all I have.

LINDA JACKSON: Okay. So Gerry, you were next.

GERALD LAPORTE: Gentlemen, thank you very much for your presentation. I thought it was very enlightening. First thing I want to say is I don't want to even pretend to know what goes on in your world. It just seems very extensive. But I do know that certainly digital evidence is, you know, I've said this many times, will probably be more important than DNA in five years from now in terms of investigations and how it helps things. So I just want to offer a couple of my comments.

And I'll start off by saying I'm an advocate of accreditation. So we had these very same discussions in the early 1990s in forensic laboratories. Talked about how accreditation was going to hold us back, it was going to increase backlogs. Went through all of these same discussions. You know, how is the science – isn't this going to hinder the science. Isn't it going to hinder how we move things. So I'll just tell you that we had those very same discussions back in the early 1990s.

The other thing is one thing that I like to look at sometimes, like to look at private corporations. So my opinion is not the opinion of the government, but I will say that private corporations are generally known to operate much more efficiently and better than the government. They do analysis. They look at cost-benefit.

So we look at Target Corporation. Known to be a pretty profitable corporation. They have a digital evidence laboratory. They're accredited. That would tell me at least that Target has probably done some sort of analysis to figure out whether this is a benefit to their corporation and to the evidence that they analyze. So I like to use that as an example of saying, okay, somebody probably has done something at that corporation to make this assessment and they've deemed accreditation to be a critical component in what they do.

The other thing is I know that a lot of times the digital evidence folks like to sort of separate themselves from the, as I hear, sort of the wet chemistry laboratories and say, you know, we're not a typical forensic laboratory. But what gets overlooked with accreditation is that it's a quality management process. It's not necessarily a science process. It's really meant to enhance the quality control and the quality management in your system. It's no different than having a good business process.

And then my final comment is undoubtedly I think you have a lot of challenges ahead of you. There's no doubt about that. It's kind of – and I'll just give you sort of my – just a little bit of my advice, and that is in a sense you should try and embrace accreditation and figure out how to work with it better. So it sounds like there are a lot of challenges, and I'm not going to debate that. But you should probably try and figure out how to work with it because inevitably it's going to be something that will – in ten years I guarantee you we'll be having a whole different discussion, and it's just going to take over your community very quickly. And at some point in time the courts are probably going to get in the middle of this somehow and your evidence is not going to be

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let in for whatever reason. So I think it's all about now trying to figure out how to work with it as opposed to sort of fighting against it.

LINDA JACKSON: Thanks, Gerry. I'm not sure if it was Phil or Jim, so we'll take Phil then Jim.

PHIL PULASKI: Great presentation, guys.

Jim, I have a question regarding – you made a distinction between investigative and scientific. So I want to help you with that distinction and see if you can give me a digital example.

So I know a laboratory, and there's a case, and it involves a vehicle, and there's a paint chip. The paint chip is collected and is collected as a paint chip. So the investigator calls the lab and speaks to the lab examiner and wants to know what's the color of the paint chip. And the lab examiner said I can't tell you. I've got to write a report. This is not a joke.

So any jerk could have looked at that paint chip on the ground and said blue. But the lab was very concerned about giving out a result, blue paint chip, you know, it got wrapped around the wheel. So when you say investigative versus scientific, anybody can look at my screen saver, or if there's some sort of data on my screen and read it. That's not scientific, that's investigative. But I'm wondering if I go to one of these kiosks and I extract that data, do you consider that investigative or scientific and what did you mean by the difference between investigative versus scientific?

JAMES DIBBLE: Good question, and thank you for that. To clarify, I think that there is a bright line where we leave the investigative dimension and enter into the forensic realm. There are plenty of definitions out there about what constitute a digital forensic service supplier where science starts to take over. The illustration I use was using a device, connecting a phone, using a device, a forensic extraction device. Just happens to be this one is produced by Cellebrite, which is one of the leading manufacturers out there of these devices. Connect the phone to it. You do a logical – and when I say logical, the difference being logical is what you see on your phone. If you open the phone right now, look at your Inbox, your Drafts, your Deleted areas, you have access to data that is resident on that phone. That's the logical data. The physical data would be that information that's actually been marked for deletion that may still be there, may be present, but you have to do a little bit more mining for it. You have to use specialized components of this particular tool.

For a police officer who is working a drug case, or maybe has a missing juvenile, or maybe it's an Alzheimer's walk off person, where time is of the essence, it's a timeliness issue, for police officers to be able to – first responders, get this device, walk into a kiosk, and actually look at the logical information on there, SMS messages, text messages, email, whatever. And to be able to extract a logical report which requires absolutely no scientific evaluation on their part, I think is purely an investigative function. And I'm concerned the direction we're going is to say you know what, that's part of the scientific examination process, ergo, we're going to remove those kiosks and no longer make that capability available to our first responders.

PHIL PULASKI: Great. So in other words if I were to analogize the cell phone to a ledger, if I were seizing the ledger as a police officer, I open the ledger and I read what's in the ledger, nothing scientific about that. Investigative. Essentially we're saying if I use this particular tool, the Cellebrite kiosk, that it's going to be the equivalent of opening the ledger. Is that a good – okay, great.

JAMES DIBBLE: Yes. That's good. And actually I liked your paint chip remark as well because I can't tell you what kind of a paint chip it is because I'm not qualified to do so.

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PHIL PULASKI: Thank you.

LINDA JACKSON: Jim?

JAMES GATES, JR.: Thank you. And like fellow Commissioners, I think the briefers are giving us a very informative look into their world.

I have a question that's sort of out there. It has to do with the concept of fusion, namely as we get more and more types of sensors online, one can imagine the future having algorithms, new pieces of IT technology that will allow us to take what we didn't know was evidence and fuse it with other platforms and come up with more data that you could think of as post-forensics. And so what my question really is where – this is going to be something that is ongoing because we're not going to stop the progress in information processing because we see it happening all the time. And has it gotten to the stage yet where this issue of fusion of data that you didn't know was relevant, has that started to play out in the digital forensics realm where one could imagine, for example, a defense attorney saying, you know, I have this new technology, it shows that what you concluded on the basis of your technology just wasn't valid. Is this a threat that you folks are looking at or thinking about?

JAMES DIBBLE: Thank you for that question. It's a very valid question. One that I think most of us as practitioners wrestle with, is emerging technology and the advancements that are made in the field of technology. You know I used the example earlier of ten years ago we didn't even have smartphones. And as I have witnessed the growth, expansion, and the specialization of tools and methodologies over the years to examine evidence, exactly what you're saying becomes paramount. Look at DNA evidence. It didn't exist – there are people sitting probably in prisons today where DNA wasn't even an option for them. And certainly applying evidence or concepts and methodologies today to cases that have been decided, or evidence that had been considered in the past I think is probably a very important aspect of what we do going forward.

I know one of the things we wrestle with with our organization is one of the reasons why we require recertification of our certified members is that every three years they are required not only to pass an extensive comprehensive written exam, but also a practical examination where they have to demonstrate that they are on the methodologies and the training as of that year. So you can't rest on your laurels in the field of computer forensics. You continually have to be going back and reassessing where you are in the state of development.

I will tell you right now there's many of us, too, that have been somewhat plagued over the question, or the statement, I wish that was available two years ago when I had a homicide case and I was trying to find out who brutally raped and murdered this four-year-old girl. You know, unfortunately in some cases, you can't go back and relive the moment, but you can certainly, whenever needed, you know, use the current methodologies to go back and look at some of the former practices and then re-verify some of the evidence.

We talked earlier, too, that one of the nice things about digital evidence is, once I've obtained a working copy, my image, I can pretty much do anything I want to that. It doesn't go away. And I have it. Twenty years from now, provided the appellate process hasn't been completed and it's been destroyed in accordance with, you know, your policies, you still have that evidence to go back and reexamine it using tools that have just recently been developed.

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So it is an ongoing issue, but it really is going to be up to the individual examiners, I believe, because I'm not aware of anybody at this point that actually will like even take a cold case and go back and use modern methodologies and tools on those.

JAMES GATES, JR.: But if I may have a follow up. My follow up – I mean, you go exactly to the point of my question, namely, is storage capacity. I mean, once you have this data, should there be policy or law around how long you store this data?

JAMES EMERSON: Sir, I'm going to give you an opinion because this is not my lane for IACP. What I have seen the Association do is to, in each and every case where a new emerging technology has made itself functionally available to law enforcement agencies, develop and innate sense of urgency to follow with policy because technology has a habit of climbing into the field without the requisite policy being out there, you know, at the same time. So I think that that's a – we're chasing our leader, so to speak, in that case. The technology itself is the lead, and the policy is trailing, and we're trying to catch up as quickly as possible in each and every technology that makes itself available.

LINDA JACKSON: Timothy, I think you were next.

TIMOTHY SCANLON: So Phil covered some of what I was going to say, so I'll be pretty quick.

The first thing is I do think of all the areas we're addressing right now is that digital forensics has the biggest gray area of police officers doing the work in the field, using kiosks and devices, and the full-blown lab systems. And I guess my question is, probably to IACIS or to all four, is IACIS has an extremely robust certification program. It's very strong and very powerful. It's well done. While we're arguing, I don't think we know which standard you all would fit under, really, at this point. I think there's some debate over which standard would best apply. Do you all see a method of certifying people at the kiosks? You know, make sure he's Cellebrite certified, or NK certified. And if so, if they do run the report, would your lab still take that evidence and do additional analysis, and do you require reports of the people who previously looked at the device?

JAMES DIBBLE: That's a great question. And the direct answer is this. IACIS prides itself on being vendor independent. We train to the basics. We train how the tools actually perform. In essence, we don't want pushbutton forensic practitioners. We want qualified, experienced examiners that can actually tell you where the tools are acquiring this data from so that they can then validate it and propose, or at least have opinions as to the significance of the evidence.

We do all depend on tools, having said that. We are vendor independent, but we depend on tools. And what we try to do through our training process is expose our candidates, our CFCE certificates, to some of the various different types of tools. In fact we've even created a course specifically for contrasting, comparison the various tools that are out in the digital forensic market today so that they can see what the strengths and weaknesses of those various tools are.

So we all need tools, but I think more to your question, we aspire to train our practitioners to understand how the tools work. So when they go into court it's not a matter of this is what the results are, but I've independently validated or verified some of this information on a bit level because I know where these tools are getting this information from.

Does that make sense?

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LINDA JACKSON: Julia.

JULIA LEIGHTON: So a couple of comments. And excuse me if I didn't hear you correctly, but I thought I heard in the first presentation that there was a concern that where the Commission was going was cutting off access to evidence by requiring accredited labs. And I think if you go back and look at our document on universal accreditation, it's clear that that's not what we're doing. And so to the extent that that's a concern in your community, I hope you'll take a closer look at what the recommendation was and that we only asked that federal prosecutors when they were in a position to essentially order some work be done, that they first seek out an accredited lab to do the work. But that there was nothing about evidence not being able to be available to federal prosecutors as a result of it having previously been done in a non-accredited lab. So to the extent that that was a concern that was framing some of your comments, I would ask you to go back and take a look at that. I'd also ask you to take a look at the footnote that we included in that document that addressed admissibility, and that the document was not designed to answer the question of admissibility for two reasons. One, we don't consider accreditation a panacea of insuring quality in any particular case. And that we were thinking about evolving technologies and specialties that might be in research laboratories at universities that would be informative to a particular criminal case.

The other thing that I see, and I believe it was Mr. Dibble's presentation, that you raised the concern of between a process that captures data versus those that interpret data and generate reports. And I'd ask that you take a look at how the Commission has defined a forensic science service provider because I think we addressed a lot of the concerns you all have been expressing about this workload, and what are people on the street going to have to be able to do before they get to say anything or do anything. I think we addressed it in that definition where we are very clear that it is not just the capturing of data. It's not the collecting of the ledger book. It's not the looking at the ledger book. It's the writing of a report or providing testimony that starts to trigger the requirement that you be accredited.

And the last one falls a little bit on Gerry's comment, and I don't think it's an easy one to answer here, but I guess I'd ask you to think – your community to think, and for you all to think as this moves forward about what really meaningfully distinguishes you all from hospitals and medical labs. That's a world that's evolving constantly. It's a world that's advancing constantly. It's a world that's looking to advance constantly. It's a world with pressure from patients and doctors to produce new and better all the time. And it's a world that makes decisions that have huge impacts on the individuals with whom they interact. And they go through a series of accreditations and quality assurance programs as well. And it seems to have, for the most part, improved the delivery of the services. And so the extent that you all are thinking about how do we go forward, how do we get better, even in the world that we live in of this evolving, improving, and ever-changing technology, I think it would be useful to look towards medicine and see if there really is a meaningful distinction between you and that field or if there are lessons you could learn from that field about how to do it in yours.

But thank you, and thank you for your presentation.

LINDA JACKSON: Pam, I think you were next.

PAM KING: So I just had a couple of – I thought it was on. Now is it better?

UNIDENTIFIED FEMALE SPEAKER: You have to get close to it (inaudible).

PAM KING: Is it better now?

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First of all, gentlemen, I want to thank all of you for coming and talking. I think this is an area that we all need to have some information about. In order to sort of further that dialogue, I did also want to compliment what, at least I perceive in digital forensics, is the commitment that you've made to certification of examiners, which is something that I think maybe some other areas of the forensic community could learn from. So I think maybe in that area you've done a very nice job.

But my understanding of accreditation is accreditation is something distinct and different than certification and has to do with quality assurance and quality management. So it's a system check versus an individual person check.

And I understand the concerns that some of you have, but in listening to that and looking at the documents that this organization has put forward, I'm not sure that we're actually at odds with each other, which is what I kind of think I'm hearing you folks, or your community, believe.

If you look at the two documents we put together, universal accreditation basically just says that this Commission believes that organizations should become accredited. And the only other document that we've so far passed is the one regarding critical steps for accreditation, which really is not saying 17025 is the way to go, or 17024 is the way to go, it's just saying, hey, here are some steps for what it is that can help with these quality assurance components that are put together. So I've seen some slides today looking at other ISO standards. I've heard suggestions about what your community needs in those types of areas. So can you give me some feedback about whether or not – are you saying that you think that forensic digital evidence is so unique that accreditation in any form to meet these quality assurance sort of ideals is absolutely could not be achieved? Or is what you're saying is there are things that are unique within our community that this Commission could help with in doing that by either looking at different ISO standards, or assisting in partnering with the digital community in order to find ways to make accreditation more viable? Or what – I guess that's where I'm sort of losing it and I could use some better feedback, as I'm hoping many others in the room could.

JAMES DIBBLE: I just want to add my part, and then I'll turn it over to my colleagues. And this is from my experience.

We have a very robust training and certification program within IACIS. They both emanate from a very exacting set of core competencies. The training and the certification, both sides of it. And those core competencies are based on best practices. And they're living, they're breathing. They do change over time because that's the world we live in with digital forensics.

But my suggestion here is that accreditation, and this is my opinion, is somewhat onerous only to the effect that number one, it's an unfunded mandate. We have police departments right now that chiefs and sheriffs have to decide we're being inundated with digital forensic related issues, and I need to pull one of my resources. A patrolman, a police officer, whatever. The brightest one we can find to work in this field and mitigate this issue.

Now, the next step is I can't afford the overhead of having multiple staff pulled off the street and put in to focus on this particular area. But I can afford to have one. So the biggest bang for my buck is to go out, invest in this person, get them the technical training they need. So they send them to organizations like us, where we provide – and I can say without a doubt – and those of you that don't know much about IACIS, I would just suggest you get on a website and become intimate with us because it is the best, I think, training, especially for the dollar. For less than \$3,000.00 we provide two weeks of training, which is every aspect of computer

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forensics, and we send the practitioner away, the student away, with over \$1,000.00 worth of equipment to get them started on their certification track and go back and immediately start using in their offices.

Case in point. Right next door. I have been doing on a state gambling commission. And the idea that we have a fully functional forensic unit on both sides of the state. I'm the only examiner at the time being because we had to cut one of ours. But as a gambling commission, to have a fully functioning forensic unit is an anomaly, if anything.

But I also find I'm doing work for the United States Secret Service. I'm helping out the FBI when they need help. And the countless number of local organizations across the state. Police and sheriff's departments. I assist the Spokane Police Department because they're inundated. I was able to convince their Chief to put one of their brightest young ones through IACIS training, who just recently got his certification. Having gone over and actually observed his process, I am more impressed right now with the standards that he has implemented in his department absent any requirement, than I am with some of the accredited work I've seen come out of accredited labs, to be quite honest with you. Which speaks more to my issue that I think there is some common ground here. Not saying that accreditation is the wrong thing or a bad thing. In a perfect world, if accreditation could be provided at every level, at no cost to the organization that's having to implement it and maintain it, that would be great. However, I live in a real practical world where we're talking bullets or beads. These officers have to make a decision, police chiefs and sheriffs, do I put people on the street or do I put them in the lab because I can't have them in both places.

PAM KING: So are you saying that there shouldn't be any quality assurance at all?

JAMES DIBBLE: No, I'm not saying that at all. As a matter of fact –

PAM KING: So what does that look like in digital forensics then?

JAMES DIBBLE: Okay. It's interesting you say that because one of the core competencies that IACIS has inserted in our training mechanism and as certification is the competencies. How we do our job. And also it ties in very closely with our ethical standards, professional conduct. So we do, and that's one of the things I love about IACIS is when I look around the globe, or look around the United States, doctors are licensed through the state. Lawyers have licenses through states. You have practitioners that are licensed by the state so if there are any complications or any war stories or horror stories, certainly licensure is an issue. What I see right now is IACIS, through our certification process, has a very robust ethics and standards policy where we hold our certificants to the highest standards. Which means that they need to implement these standards within their own working unit. So outside of having an department that requires it, we're working from the inside to, as part of their certification expectations, is that they develop these standards for themselves. And I've been happy to report that those locations where I go, we do have certificates. They have taken upon themselves, in the absence of any requirements from their departments, to write very robust quality assurance and standards and policies that they adhere to.

LINDA JACKSON: Matt?

MATTHEW REDLE: I've got one comment and one question. And I guess the comment goes to you, Mr. Dibble, just because of the last interplay with Pam. I would suggest to you that accreditation sets a floor, not a ceiling, when it comes to management excellence. And that that's really what we're talking about when we're talking about accreditation.

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My question, then, goes to the three of you gentlemen, and your organizations. I'm not convinced that ISO 17024 or 25 are necessarily the right accreditation vehicles for all departments and all aspects of digital evidence. But I would ask, have you looked at the other options that are out there with respect to accreditation to an ISO standard or for phases of the digital evidence operation and whether or not there's a different standard that would be a better fit?

JAMES EMERSON: So I think that the universal accreditation policy recommendations started a dialogue for us which has led us to understand that maybe even creation of an ISO is within the realm of answering your question. But I do think that it's driving us to take a look at exactly what you've suggested. We should take a look at it because I regularly get retorts from our members that, you know, 17025 was created when there were Bunsen burners and it's not relevant to what I'm doing day in and day out. I don't know if that's an effective, fair retort because I don't run an accredited lab. But at the end of the day I do think that we need to seek a common ground, you know, that's – the only fear here has been for IACP's analysis of the situation was that we were going to exacerbate backlog within a defined window. We were going to, in a perfect storm, break something that we didn't need to break. And I don't think we reject accreditation as a concept. I think we need to move towards accreditation that is proper for the uniqueness of the challenge. And so to answer your question, I think we have to look at those other ISOs to see if we can either take pieces of them and create something new or adopt one that's closer to the mark.

And I think our British colleagues are doing exactly that right now at the national level.

WILLIAM EBER: And I'll just jump in real quick. Just from the standpoint of apparently ISO thinks that 17025 may not be the best because they are looking at potentially reworking that. So as I indicated in my presentation, if we could have – if we could take advantage of the fact that they are redoing 17025, we can influence – we, when I say "we" I mean the community – if we can influence the supplemental, and maybe that's through the OSAC, maybe that's through the NCFS going and asking the OSAC to take this on to help influence the supplementals that are created by the accrediting bodies, then we can make the standards more in line with what it is that we're trying to accredit.

JAMES DIBBLE: I just have one comment on this subject, too. I kind of alluded to it in my presentation, but I'm not absolutely satisfied that any of the current standards adequately describe what we're trying to do. To me it seems like it is trying to put a square peg in a round hole in many instances. And my suggestion once again is who says that any of the current ISOs are appropriate? I don't know that ANZI (sp) standards are a viable alternative as well. Again, my suggestion would be, we're on the brink of legislating something very dynamic here, and what I'd like to see is it done correctly and that this Commission – I mean the laudable – very laudable purpose ahead of you. And what I'd love to see is to sit back and take the subject matter experts in all the various areas of digital forensics that are being thrown into this cauldron, and let's develop a standard that is going to adequately represent the discipline so that going forward – never we're going to get buy in. Your people are going to say this makes sense. And if it doesn't make sense, then we have kind of a forum to work out the details. But going forward, I think, we're on a precipice here of either going backwards or going forwards, and I would suggest let's go forward and maybe look at developing a new standard, if you will, that will adequately do the job that we're trying to do here.

CARL HOECKER: I do think we need a clearer picture of what accreditation looks like, and that may be tied into exactly your question, sir.

LINDA JACKSON: Arturo.

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ARTURO CASADEVALL: So I want to say a word for accreditation as somebody who hates having to get accredited and yet sees it. So I'm in medicine. I'm in the subspecialty of infectious diseases, and society requires me, every ten years, to take an exam and accreditation, and I hate it. It's a full day of work, at least, and I require seven or eight months to prepare for this. 99.9% of what is in the exam is irrelevant for practicing in Maryland or in New York. But the one percent affects it, and what it does is it forces you to do a review of systems and actually raises the level of what you're practicing. And what I would say is that the process of accreditation is very intricately tied into standards because the two sort of feed off each other. So, for example, in the field of infectious diseases, accreditation is related to the guidelines which are constantly changing. And, you know, do I really need to know what the susceptibility of malaria is in Thailand relative to what it is in South Africa? No. But if there's a case of malaria, I know there are differences. And then I go and kind of look it up.

And I think that this – society is moving to accredit most technical fields. And it is surprising to me the areas in which there is no accreditation, like law. You would think that in an area where things are changing all the time, that you guys should be taking accreditation exams, too.

Anyway, that was my plug for it.

LINDA JACKSON: Okay. So we're actually running into our subcommittee report, so we're just going to take – Phil, you want to speak again and then Jim, and then that would be it.

PHIL PULASKI: So I have another example. If you liked the paint chip example, you'll love this one.

So you have a person murdered. It happened to be a cop in the particular case. And there's video, and there are actually two video systems. So you get, you know, Detective Jones, who has expertise from his own home computer and his own home entertainment, and you go and you look at that video to see who just murdered this person. So I don't know if that, in our definition of forensic science service provider, because there is data extraction. You're working with the owner of the video. That video system was created by Joe Blow, who is probably gone. There's two people in the world who know how to, you know, use it. One guy is not there. The other guy who happens to work there in this bodega, and we're working our way through it. So how do you validate that tool? You don't, but you have to get to that, and you need to get to that fast.

So if there's a distinction between investigative and scientific, which is still fuzzy to me, I think that there need to be examples like what I just discussed that fall outside, maybe, the realm of accreditation because you can't get every member of your department accredited – oh, I'm sorry – you can't necessarily get a system going that is going to include whoever is out there that needs to get that video.

Then I'm not sure – so the second thing is – I'm not sure – have you read the ISO, you know, (Inaudible) lab with the ISO standards? Have you gone through them? Because there's not that much that is unique. In other words, a quality system involves technical reviews, administrative – so whether it's a digital program, or whether it's determining an unknown substance, whether it's a controlled substance or not. So I'm not so sure that it would be different. There may be aspects that would be different. But a quality system is the underpinning of accreditation. I don't think anybody can argue with that, a quality system. So I'm not seeing, and maybe you could articulate, the specific differences that you see or problems that you see with the ISO standard.

JAMES DIBBLE: Well, first of all I did like your example, by the way. It's better than the paint chip. And I can also kind of identify with that specifically because it wasn't too long ago when we had a rather horrendous

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crime involving – I work on the Internet Crimes Against Children Task Force. And periodically we get cell phones and mobile devices of children that have either been abducted or are being exploited in some fashion. There was just a case like this where I did get some video, and because of the time constraints, being able to take that video and enhance it using over-the-counter video production tools, which are nothing more than applying filters to it, we were able to clear up and make an identification of person based on just that. So, again, I consider that to be more investigative than forensic.

Now it's very possible that could be sent off to the lab for some more scientific approach to enhancing the video, but it certainly was necessary and worked if for no other reason than for the exigency of the case right then.

Getting back to the ISO standards. Yes, I have read the ISO standards. Not just 17025, but 020, and the other ones I listed. And quite frankly, my head starts to swim after a while. I understand that at the very core of all of this is quality. I get that. And nobody is going to argue against quality. Again, our organization, believe me, we debated this amongst all of our members on an international scale because other countries are dealing with the same issues. And the bottom line here is while we fully appreciate and can even get behind accreditation, the mandatory application of it in its current form, we cannot get behind that and support it because it's going to have a devastating impact. My suggestion is we go back, take a re-look at the processes that we're throwing under this bubble of digital forensics and the science service provider, and maybe take the best of the existing standards that are out there, or create a new one. And then let's kind of have another talk about accreditation. Especially if we can find a way to make it affordable and doable at every level of law enforcement.

But again, I'm just going to say, as it is right now, I just can't see it happening. It's trying to force square pegs into round holes, applying ISOs that really weren't, I think, wouldn't totally fit. Hopefully that helps.

PATRICIA MANZOLILLO: Okay. Jim did you have one final? No. Okay.

Thank you very much again to our panel, and – and to everyone's questions and thoughtful comments. So I think – you want me to summarize the takeaways for – about the –

LINDA JACKSON: Sure.

PATRICIA MANZOLILLO: Sure.

So, of course we had our initial draft recommendation on accreditation for digital evidence, which we put out to promote discussion. To involve the community. And we got quite a bit of public comment. And then, of course, we didn't rush – we haven't rushed as a subcommittee to review those comments because we wanted to have the panel discussion. We were waiting for a new digital evidence commissioner to join the Commission and also our subcommittee. And so now we've had this information, we have our digital evidence subject matter expert group. And so at this point I think we'll start taking all of this, including many of the issues that were brought up today, obviously the size and scope of the community, the challenges associates with the ever-changing technology of digital evidence. I did write them down. Of course they're escaping me now. Handling the volume of the scope of the community if that is even possible.

Also the individuality of a single-person laboratory, the challenges of peer review. How to promote quality systems while maintaining the quality standards that have already been achieved under certification of individual examiners but leveraging our critical steps to accreditation.

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And then also most importantly, which I think has been a recurring theme, is also what are possible tasks. We've heard about how the different tasks in digital forensics may delineate things. We addressed this challenge with the initial universal accreditation where we specifically addressed how certain things it may not apply to and that may be very appropriate at this time as well.

So at this point the subcommittee will take back everybody's comments and all of the information, and I think we will start working through our public comments as well as redrafting our recommendation.

Did you want to add anything on that?

LINDA JACKSON: The one other thing, we did, you know, put together a subject matter expert group that we invited to our meeting that we had the day after the last Commission meeting, and that group was instrumental in providing education to us as a subcommittee as well as kind of talking through some of the important issues like who and what functions this accreditation would actually apply to and having these discussions about investigative, looking through the file cabinet versus doing an actual kind of more scientific test. And one of the discussions that we did have with the fact that there was such a large availability of kiosks and that sort of thing, that it really wasn't the person that came to necessarily hook up a device to the kiosk, but really who was in charge of selecting the tool for the kiosk, who ensures that the kiosk tool is kept up to date and is appropriate. And that those types of – and who is providing the training to the end user on that kiosk. That those types of responsibilities is actually analogous to the calibration labs that are certified for breath testing instruments where the breath testing instruments are kept, at least in Virginia, all over the state, the laboratory is the one who is in charge of certifying the accuracy and calibration of those instruments, but we don't perform any of the tests. Those are all done by officers. And the officers are not in an accredited environment, but the laboratory that maintains the breath test equipment, even though they're off site, is accredited. And so that was something that we talked through as well, which seemed to have applicability for consideration with these kiosks.

PATRICIA MANZOLILLO: So I think we'll move to the rest of our subcommittee report.

LINDA JACKSON: Which I need to – really? Those pesky passwords.

UNIDENTIFIED MALE SPEAKER: (Inaudible).

PATRICIA MANZOLILLO: Oh, the proficiency testing?

LINDA JACKSON: Right?

PATRICIA MANZOLILLO: Right. The recommendation for proficiency test document, it starts on page 124 of the Binder Number One.

LINDA JACKSON: I would request that in the future these binders have bookmarks that work a little easier. It's been a little difficult with all these different documents.

So the views document that the Commission voted out on proficiency test documents has been converted partially into a recommendation to the Attorney General with this document. And the – there are four recommendations, two of which are directly related from the views document that had been approved by the Commission earlier to require all DOJ FSSPs to participate in a proficiency testing program applicable to the

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areas in which they conduct forensic analysis within three years of acceptance. It was our intention as a subcommittee that this would apply to digital evidence.

Secondly, to encourage all federal, state and local forensic science service providers to participate in proficiency testing programs by all means possible and with any available enforcement mechanism. Basically that just gives the Attorney General the recommendation that we hope that any way that the Attorney General can, to encourage that participation.

And then the third and fourth are based on discussions that we had had as a Commission to try and work on the proficiency tests as a whole, not just the participating in them, but acknowledging that it would be most appropriate to ensure that those tests were sufficiently rigorous and representative of the challenges of forensic case work. And also to encourage, which we believe that the federal government labs as a whole have a large amount of buy-in power, you might say, with these proficiency tests, that they could encourage external vendors to provide proficiency tests, that those vendors would be agreeable to share their aggregate data with entities who are doing research and analysis. And just today one of – a representative from one of those vendors came up and expressed their support with this language, and so I found that very helpful.

Does anyone have any questions or concerns? As of yet we have not received any public comments on this particular document.

TROY LAWRENCE: I have serious trouble with recommendation number two that says that we will encourage all federal, state and local forensic service providers to participate in proficiency testing programs by all means possible with any available enforcement mechanisms. How about we just end it with we encourage the proficiency testing and leave it at that? Why are we putting threats that we're going to try to enforce this on you even if you don't want it?

PATRICIA MANZOLILLO: Julia, normally I think you have a response to this one at this point. I'll put you on the spot.

JULIA LEIGHTON: That's not a problem at all. I think that the issue is that we can both promote something but that, as in any endeavor, it's also sometimes you need a stick as well as the carrot. And we're turning to the Attorney General and saying use both. And, yes, it's because we're serious about it. Because it matters. I think that one of the things that's been a theme here is that quality management should not be something that's a luxury. It actually should be part of anybody's operating budget. And the treatment of it as a luxury, or an afterthought, is inappropriate, perhaps unavoidable in the fact that it's grown up without that kind of rigor. It didn't grow in that kind of rigor and it's going to take time to get there, so yes, there may be some need for some carrots. But at some point it's also part of your operating budget. And I think the message is not just to the federals but to the states to start thinking about their budgets that just as you want a hospital to make quality part of its operating budget, you also want your forensic science service providers to make quality part of their operating budget, part of how we do business.

TROY LAWRENCE: I completely agree with proficiency testing. I think it is absolutely necessary. I agree with quality systems, quality – an entire quality system for the lab. Absolutely agree with it. But for the federal government to come in and tell me that I'm going to enforce this upon you, it's not – it's not the federal government's role to come in and beat down the state and locals because they want something to happen.

JULIA LEIGHTON: I guess you misunder – and maybe we can make this clear. We actually – the Attorney General doesn't have the authority to do that except inasmuch to say if you want the federal money, then you

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have to do this. If you want federal business, you have to do this. There is no other mechanism. So I – perhaps we can reword it to make it clear that the stick is if you want something from the feds, the money, the support, at some point we're not going to pay for you to do this, we're going to say you have to do this to receive the funds you're seeking from the feds.

LINDA JACKSON: We can consider the language, though, because by all means possible, if it's stopped there, that actually implies a carrot or a stick. It doesn't limit anything without the additional language. Thank you.

Gerry.

GERALD LAPORTE: Just a quick comment and a little concern about number four. So when proficiency testing organizations collect data – first of all, anybody can take a proficiency test. Graduate schools do it all the time. They give them to their students. So if you are collecting data and that's going to be used for research purposes, that data should be identified just so that we understand that, you know, you're not taking results from people that are not trained, or graduate students, or whatever that may be that are taking those proficiency tests. So as long as that data is being coded correctly so that if it was, you know, examiners from an accredited laboratory, or examiners with so many years of experience, or employed full time in a forensic laboratory, whatever that is. So I just want to offer some words of caution on that data.

LINDA JACKSON: I agree with you that that type of data needs to be collected to be able to discern its true meaning.

Okay. No one else? Yeah.

PATRICIA MANZOLILLO: So the next draft document that went out for public comment, (inaudible) the views document and recommendations for accreditation programs. And that starts on page 126.

And so this is a document that we had introduced the possibility of developing at one of the previous Commission meetings. We had written the universal accreditation recommendation, but then we felt that there was some value in the evaluation and review of existing accreditation programs for forensic science service providers. Continuous improvement. And obviously we've talked about what the limitations are of the existing accreditation programs. But what we decided to put in here, and this was a sub of our subcommittee that included both practitioners as well as representatives from the accrediting bodies, were the bullets that you find on page 127.

And many of these things are already being done to some extent, or are already in some of the accrediting bodies' programs. And they often do many of these things already for their own compliance – and I'm probably misusing the word – with 17011, or to be recognized under 17011. But we felt that they're increasing some of these things, or including more of them. Things such as witnessing, or direct case observation versus just purely reviewing five lab files that have been pulled out prior to an assessor's visit. These things could improve the overall accreditation program.

So these were some bullets that we came up with to put out there for comment and discussion.

Obviously, and I think this is one thing we did not include, and we probably absolutely should, is that all of these things would require additional costs. With any improvement or additional work that's going to come, there would definitely be additional cost, and you'd have to worry whether or not that could be paid for.

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So that's where this is again out. We've received on public comment so far and the period is still open, and we're looking for additional feedback.

LINDA JACKSON: Four.

PATRICIA MANZOLILLO: I'm sorry?

LINDA JACKSON: Maybe four comments.

PATRICIA MANZOLILLO: Four on this? Oh, I'm sorry, I thought we'd only – okay.

Any other questions or comments on this one?

Oh, okay.

TED HUNT: I was the guy who posted comment, so I'm not going to go through all of those. You can read them at your leisure. But just a summary of some concerns.

First of all, in this view, it seems that all of the accreditation bodies are lumped together without being differentiated. And there are a number of different bodies. This doesn't make any distinction or acknowledgement that they are discreet bodies with their own separate requirements. And I also incidentally think that some of these are actually incorrect. I'm a former member of the ASCLAD (sp) lab board, in full disclosure, and currently am on the new ANAB (sp) Accreditation Council, which is more of a high-level body than the Board was. So with that disclosure, I think there's some inaccuracies. But my primary problems are, number one, all the bodies are lumped together. Number two, the alleged underlying issues and problems are not explicitly explained before the recommended changes or modifications are put forward, so the reader and the balance of the folks on this Commission would have no idea of the underlying condition that these recommendations or these views are attempting to rectify. There's no explanation, no analysis, no expounding upon the problem before the solution is put out in bullet point format.

Number three, the recommendations are so vague, at least to me, as to be completely unhelpful. I don't know what they mean, and I don't know what the scope of them is meant to be.

So without belaboring these points any further, I explained my problems online and posted them. I would request that you attempt to be more specific. Define the problem and the issues and name names if you think that there needs to be improvement and what those shortcomings are and by whom before recommendations or views are set forth.

And justify your views. Why are these recommendations or these views going to rectify the problem and how before they're just thrown out there as just a kind of a lump sum of views about how things could improve without any underlying explanation of the problem that the subcommittee feels is present.

PATRICIA MANZOLILLO: Okay, thank you. I would say that was one of the original goals, and I would say a template in trying that balance between having too much background versus trying to get the point and the view out very short. That's probably contributing to some of that. But definitely understood and will be taken back to the subcommittee.

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Okay. Well thank you. We'd welcome any additional comments or suggestions on how to improve this document.

LINDA JACKSON: So there are two documents that we put forward that are views documents related to certification. The first one, which starts on page 128, is the views document on the accreditation and recognition of forensic science certification bodies. The second document, which is on 138, is the certification of the forensic science practitioner. Both of them have the same appendices because the appendices are all background information on the certification bodies relating to forensic science as they exist today. And we thought that those were supportive of both documents and we didn't want someone to have to refer to the other document to look any of that information up. And so that is the reason for the duplicative appendices in those two documents.

We have received just one comment for each of these documents. Does anyone have any comments or concerns that they would like to discuss?

Bill.

WILLIAM THOMPSON: This is just a minor point, but Appendix C you talked about three different bodies you identify by number but you don't say which ones they are. Is there some reason for that? I was curious to know which was which.

LINDA JACKSON: Yeah, you should answer that.

PATRICIA MANZOLILLO: Primarily because we didn't really want to – we weren't trying to call anyone out to say one was deficient or not. The whole point was just to show that these are existing certifying bodies and that these are the types of variations that exist in the current certification.

WILLIAM THOMPSON: So just as an example of the variations that can exist.

PATRICIA MANZOLILLO: Right. These actually are the requirements from three of the existing certification bodies in forensic science, but we obviously – we weren't trying to make a point about one was better than the other.

WILLIAM THOMPSON: Yeah, I understand you're not trying to criticize. I still think you should say who they are, maybe in a footnote.

JULIA LEIGHTON: You know, I think there's a tie between the document that came before this document and the panel that we just heard from, and the theme I see is we hear this constant this costs too much, this costs too much, we can't do this, we can't do this, this is going to be expensive, this is going to be hard. And we have this system of private providers providing some level of proficiency testing and certification and accreditation. And I don't think you have to be an economist to be able to figure out how that's going to play out, that to the extent that people are heading towards this and are super cost conscious, they're going to be going for the cheapest provider of it, and that that's going to be the provider in many times that is going to have to make it easier, simpler, to produce, and therefore not as rigorous, not as hard. And so I think these three documents – these two documents – the certification, the proficiency testing, the issues with the accreditation system, and what we just heard about how the community feels about the costs involved in quality management and rigorous testing, we have to grapple with them and that they're all part of a bigger picture of how do we work with improving the accuracy and the reliability of the work done by laboratories and by individuals within

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those laboratories and assuring that we've got people in those laboratories that are capable of doing the work and are, in fact, doing the work they're capable of and not having it dumbed down because it's expensive to do. And I think that it would be really helpful to keep hearing from people about that and about ideas of how we can get towards that short of a regulatory framework. Thank you.

ARTURO CASADEVALL: Could I just follow that with a short comment? It is important also to consider the cost of not doing these things. The societal cost of not doing these things may be many times greater than the cost of doing them. And it's something that doesn't show up in the bottom line because, as you know, it's hard to quantitate.

LINDA JACKSON: Thank you.

Phil, did you have something? No? Nelson?

NELSON SANTOS: Just a question. Did you consider the licensure issue as was presented by Texas? It seemed like a pretty nice model.

LINDA JACKSON: We definitely discussed the licensure model. One of the limitations to the licensure model is that the licensure program has to be implemented in all 50 states separately. And so as a views document, with the certification bodies that are already present, it seemed like where we could go first, and that licensure might need more work to put together some sort of model that could then be utilized in the different states.

Gerry?

GERALD LAPORTE: Just to add to Julia's comments, which I think are critical. Even if you look publicly at some of the major lab failures in this country, Detroit, Massachusetts, St. Paul. When those labs fail, which most of those had to do with quality assurance issues, that cost millions and millions of dollars. All of those labs could have got accredited for the next 50 years compared to the costs that came afterwards to try and fix the system. And I mean I don't know how you can – how we can emphasize that enough, but the cost obviously is a very important and realistic consideration, but the quality of the work that you're doing, it's got to take a back seat.

LINDA JACKSON: True. Arturo, did you have another comment? No.

PATRICIAN MANZOLILLO: Yeah, I think down there. Matt.

MATTHEW REDLE: So, Gerry, do you keep track of how many of the work products this Commission has generated that call for you to provide funding?

GERALD LAPORTE: I don't keep track of them, but I get asked a lot of questions. I know John's over there smiling, too, so. But I would say that just about – just estimating anecdotally, but probably 75% of the recommendations that come out of here, you know, will actually – there's funding that we have available to handle all of that.

LINDA JACKSON: Are you saying the funding would actually cover all of that or would be applicable to all that because it would be impossible –

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GERALD LAPORTE: It would be applicable.

LINDA JACKSON: To handle all that.

GERALD LAPORTE: Yeah, sorry, I'm not going to say it would handle it. It's applicable. Thank you, Linda. But, yeah, I mean we have multiple programs that cover all of these – the whole gamut of what we talk about at just about every meeting.

JULES EPSTEIN: Yeah, I just wanted to follow up on the money talk. While I agree with the sentiment that spend now or spend more later, that's not a winning argument for this Commission because people have different budgets. A police department's budget is not the budget that we'll spend later. And so I hear it, and I support all this, but we should recognize the budget talk and the general notion that society pays more now or pays more later if it doesn't pay more now isn't a winning argument or a utilitarian one here because different arms of government have different budgets. So just wanted to say that and I think we should focus our attention elsewhere.

PATRICIA MANZOLILLO: (Inaudible).

LINDA JACKSON: Yeah. Well, he's got his mic on, so Troy and then Phil.

TROY LAWRENCE: Oh, I didn't know it was on. I just had a quick question about the Appendix – I'm not sure what number – letter A, where it lists out all of the different certifications that are available. I notice that there are several digital that are not listed, and in fact there's one from IACIS, the – I don't see it on here right now – the CECS has not been around for ten years. So I'm not sure how old this data is. I would love to be able to provide you with a bunch of digital that we could put in this document before it goes out final.

LINDA JACKSON: We would absolutely appreciate that.

TROY LAWRENCE: Okay.

PHIL PULASKI: So it was the cost discussion that caused me to put my tent back up. I'm just wondering if a cost-benefit analysis was done, what is the additional benefit of certification of personnel in an accredited laboratory versus the cost of getting them accredited including the civil service aspect. So, you know, people who are in the laboratory, who have been in that – they hold that position, you can't just undo their collective bargaining agreement and say okay, now if you want to remain employed, you have to be certified. So I'm just wondering what expert benefit there is and what did that do to the balance of cost versus benefit. Was that discussed at all because in speaking with some of my forensic laboratory colleagues in Savannah, Georgia, the accreditation wasn't the big issue, but certification was, and a lot of folks said the following, which I think is pretty logical. And that is, the examiners are trained to competency, usually they're on probation at that point. You can fire them if they don't get trained to competency. When you train to competency, it's your own lab, you know, so you're training your own people. It's not a third party who's testing you. But you're trained to competency in what you do in that laboratory. And that that's more meaningful than balancing off a third party, who's independent, who's testing you on material that you may not do in your laboratory. It's going to depend on the discipline. So a latent print is a latent print. If you're examining it in the NYPD lab or the Houston lab, generally speaking the science or the practice of that is the same. So I just wondered if you guys could kind of consider that as you move forward.

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LINDA JACKSON: We certainly did consider some of that. Cecelia Crowse (sp) gave us a presentation of her laboratory's efforts to provide – basically have all of their examiners certified. And they have sworn folks, and union folks, and all sorts of complicating factors. And she absolutely pointed out the challenges in that not only with getting the initial certification, but maintaining their certification with the costs that go into that. And so I'm not going to discount those as being things that need consideration.

To your point about a cost-benefit analysis, no, you know, we certainly didn't do a cost-benefit analysis.

UNIDENTIFIED MALE SPEAKER: (Inaudible).

LINDA JACKSON: But, sure. But I would say with looking at certification versus accreditation, I certainly agree with the fact that you get a lot of those things through your training program and your original competency with your accreditation. However, I would also say that unfortunately training programs in all laboratories and forensic science service provider agencies are not created equal. And that having a certification exam in an area where there is not necessarily mandated training standards for a certain discipline does make it so that you are more likely to have your examiners be on the same level as what would be expected for that discipline.

UNIDENTIFIED MALE SPEAKER: Right.

PATRICIA MANZOLILLO: Did we address everyone who had questions? I still see a few tents up, but I want to make sure that they're not – Jules and Matt.

UNIDENTIFIED MALE SPEAKER: (Inaudible).

LINDA JACKSON: (Inaudible) tents.

PATRICIA MANZOLILLO: Yeah. That's all we have for our report, right?

LINDA JACKSON: That is correct.

PATRICIA MANZOLILLO: Okay. So, again, we welcome these four documents that we have presented here today as well as of course we're still working on our accreditation of digital evidence. The other four, though, are still out for public comment, and please, if you have anything, let me or Linda or another subcommittee member know, and we will incorporate those comments and make sure that they are addressed. So thank you.

NELSON SANTOS: Thank you. Yeah, I just wanted to make one comment since I didn't get to talk about digital evidence. I guess I'm fortunate to have both wet chemistry and dry digital evidence labs that I oversee, and I can tell you that they're both accredited, so we definitely believe in a quality system, but I also have to admit that they are very different. The changing technology that occurs in the digital evidence arena makes it very difficult to validate the tools appropriately. And I think I heard them say that they have one tool, and if can give you an example, Google, you search Google and you get Phil Pulaski, and you search another engine and you get Peter Newfeld (sp). So the same tool, the same search engine gives you different answers. That's what happens in digital evidence, so that's why they use various tools. The reason I bring this up is that I think it's not as easy as we think, and I agree with you Gerry, but I think one of the issues that we're facing in encryption and it wasn't even mentioned. I'd like to see how we're going to get into devices in five years. And I

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think that's going to be the challenge because how do we break – how do we have a validated tool to break an encryption that nobody can get into?

So these are real issues, and I think we need to have further discussion. And I talked to Troy yesterday a little bit about it. It might be worthwhile to put a task group together on digital evidence to kind of look at a multiple variety of issues, of recommendations that we passed already and ones we're looking to the future, and see if there's anything in the digital evidence arena that's impacted slightly differently. So I bring that up now that we do have Troy. And when we had Bill before, I think these issues of digital evidence were coming up before, we never really discussed them. So I just wanted to make that comment.

TROY LAWRENCE: Okay. Let's take a break til 2:30, and then we'll finish up for the afternoon. Right?

UNIDENTIFIED SPEAKER: (Inaudible.)

TROY LAWRENCE: I would say that we don't need a half hour, but I've never been able to get people back in a half hour. So if you can get back here as soon (end audio)

PART 5

NELSON SANTOS: Okay, so let's continue with Scientific Inquiry & Research. Jeff.

JEFF SALYARDS: We have two documents for a final vote today. They're both related. One is a views document that starts at page 149, if you're playing along on the PDF. It is a views document on the technical merit evaluation of forensic methods and practices. And the second document -- the second document is a recommendation based on that views document. We've had a lot of discussion in our subcommittee and many of us think this could be, you know, in some ways, contentious, but in other ways the most important thing that we've considered as a subcommittee. And so I'd like to share with you how our voting went. You okay over there, Dean?

We voted on both of those documents together whether they should go forward today, and the vote was 11 to four in favor of bringing it forward. But I'd like to kind of tweeze apart that vote for you. The views document by itself, we're probably much closer to 15 to zero or 14 and one in favor. The recommendation document, if you just looked at recommendation one and two, we are probably also about 14 to one in bringing it forward.

The real rate-limiting step here is recommendation three in that document, and whether or not it would cut too deeply in the current OSAC operations. So I want to make sure that we have time to talk about that, but I think it would serve us well to take those in reverse order. Let's vote on the views document and deal with any questions you have. And then we will move into the recommendation document and we can take as much

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time as we need to talk through that issue and see if we either just need to vote as a commission, and it might be something where it narrowly passes or narrowly fails, or if we can coalesce towards some friendly amendment that might fix that. Although I'll caution you, we've tried hard to do that as a subcommittee, hours and hours yesterday, and we can't seem to find the magic words that makes everybody happy.

So, on the views document, we had a lot of help from public comments. Ted always -- you know, I would echo -- it's so helpful. You write such thoughtful comments. I think we've incorporated all of those. I don't think we've really changed the views document in any substantial way, really only in clarifying ways. And that was mostly around we were trying to draw a distinction between this fundamental underlying scientific validation. Is this really the right way to be detecting the substance or the right way to be comparing these two items, versus a performance check or an internal validation or a local validation, is this method that's presumed to be scientifically valid actually working properly in the lab?

And so in our efforts to do that and borrow from different documents, we were inconsistently in our word choice throughout the document. So we've adopted the term "technical merit," which matches some of the language in the OSAC. And I think we've tidied that up pretty well. So, at this time, I'd like to take any questions or concerns you have about the views document. Okay, Ted.

TED HUNT: From a definitional standpoint, I agree there's some improvement here. I do have some questions because I am still confused a bit about some things. And let me kind of lay out the questions here as I go. Number one, you speak specifically to now methods and practices, I believe. Does this apply to guidelines as well? Number one. Number two, exactly what is being proposed here in terms of NIST's function? Is this a review after data and validation is generated or is this NIST performing that validation itself, in terms of a wet lab or a dry lab validation where they actually go through the method and see if it works or not? I think that's something that's still very vague.

Number three, the proposal is that NIST be an independent scientific evaluator, and there is some mention that there's some other independent bodies out there who could do this without being named, and in the interim certain methods could go to these other independent agencies, and that would be just fine until NIST gets up and running. And then, lastly, it seems to me that this is a set of recommendations that's specifically geared to quantitative methods. There are a lot of qualitative methods out there. And a lot of these criteria don't necessarily speak to those methods. So are these disciplines being set up for failure because of the fact that this is explicitly quantitative and population data type information that is not available yet in a lot of qualitative methods? So how are they going to fit in, pattern comparison disciplines for example, into this criteria? And I think that's enough to start with at least.

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JEFF SALYARDS: Ted, if I can clarify, can you give me an example of something you're calling a "qualitative method"?

TED HUNT: Well, yeah, for example, let's say fingerprint comparison, latent fingerprint examination, document comparison, QD, even farms [ph] and tool marks [ph] to a certain extent, although there is some measurement involved there in a quantitative means, you know, footwear, tire tread, et cetera. So those types of comparison disciplines, they currently don't have population data to put into a likelihood ratio or some other type of statistic that generates something that can be explicitly measured. How are they going to be compared against these criteria?

JEFF SALYARDS: Okay, so let me take your three points, good points. I think methods and practices, we were not trying so hard to rigorously define those. It was suggested that we add the word "practice," just so people couldn't say, "Well we have a practice and not a method," but we were trying to just be inclusive there. The NIST roles, I think, is a critical question. And I think there are several places in both the views document and recommendation document that support this. I think there are two roles, and right now NIST has volunteered to wear both of those hats for these initial three projects. So one is the actually in the laboratory validation, generation of data, collection of data. The other one is then looking at that final collection of data and making a declaration of, "Yes, this looks like it's correct."

I think both the views and the recommendation documents suggest that somebody NIST or somebody like NIST needs to be wearing that first hat. This is a contentious term, I hesitate to say it, but a "scientific gatekeeper," if you will, you know, the FDA role in the medical community. The generation of the data may be similar to the medical community, could be by an independent scientific body, but it could be by a completely proprietary profit-motivated drug company that says, "We have to sell this drug and make money someday, but we've done this stud and it shows that it's -- we believe it's valid." And then someone like the FDA would review it. So I think we're proposing here that NIST would ultimately serve in that gatekeeper role, but right now they've said, "We will begin to show people what we think right looks like around a handful of disciplines."

TED HUNT: In practice, let's say OSAC is considering a particular method. Before it gets on the registry, the idea is that it goes to NIST, and NIST actually gets that method and performs that method itself, accumulates the data or the validation, basically what's described as developmental validation data, and makes an assessment of the validity of that method. Is that what you're talking about for every method prior to its --

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JEFF SALYARDS: So that's not what we're talking about right now, but we will be when we get to the recommendation. Right now, I think the view is saying that forensic science, by necessity, by just history, has now got things a little bit out of order. We are practicing things and developing methods for things that might be lacking scientific validation. And so if I -- the elevator speech of the views document is, geez, that's not really the preferred way of doing it. We'd rather validate something and then have the method validation, and then start developing methods and standard documents and those sorts of things. So how that actually plays out is where we cut deeper in the recommendation. So if I could ask you to table that point until we really get to recommendation three, I think that would be helpful. I don't think the views document digs that deep.

TED HUNT: Okay, and then one more point, because this cuts across both documents, and I notice that the recommendation proposes to put the views in as an appendix. So they really are kind of inseparable in that way. And depending on which sentence you read in either document, it seems to alternate between a vision of NIST doing this for methods, or alternatively to investigate the science that underlies the method. And I don't know if that was meant to be written that way, but it's alternatively stated that way. So both are included, the method itself, or, in the next sentence or the next document, investigate the science underlying the method. And I guess, finally, I'm a little bit confused about what these resource documents are, what their purpose is, what they're to look like, and could you give an example of that vision?

JEFF SALYARDS: I'm not sure what you mean by -- you're talking the final product or the --

TED HUNT: Yeah, in the recommendations or the views, there's this resource document that's referred to that NIST would generate.

JEFF SALYARDS: Right. So I think --

TED HUNT: What is that?

JEFF SALYARDS: So I think NIST is talking about that looking like some sort of book chapter on what's everything that's known about this method.

TED HUNT: About the method, not the science?

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JEFF SALYARDS: Ted, I don't know that I draw the same distinction that you do about the science of the method, like, I'm not sure that I understand the difference.

TED HUNT: Well there's certainly more to a discipline, let's say latent prints, than a method to go through the identification of the latent print. There's the underlying research there that exists. So one is specific, one talks about the method to reach a particular result or to interrogate that evidence to see if that result is positive or negative. One is the underlying science, kind of like what AAAS is doing investigating the underlying validity or the basis in scientific studies for the particular disciplines. So I guess the question is how broad or narrow is the vision here? Is this looking at the underlying science in the discipline itself, and seeing what's there, or is it the method itself that's being proposed by OSAC, because there's a big distinction, in my mind at least?

JEFF SALYARDS: Yeah, I'm having a hard time answering because I guess, for me, I don't see the -- I don't think you declare a discipline valid. That would be like declaring pediatrics valid.

TED HUNT: And that's what's confusing me. But the way it's worded is it talks about investigating the underlying discipline or the science underlying the method.

JEFF SALYARDS: I'm not sure -- I guess to me those are not confusing. This is about the science. Is this method scientifically supported, is it -- are there data that show --

TED HUNT: For example, there's one passage that says, "NIST should assume the role of independent scientific evaluator within the criminal justice system for technical merit of forensic science disciplines." "The merit of the disciplines," a discipline is not a method.

JEFF SALYARDS: Please, Peter.

PETER NEUFELD: Just to help out a little bit, first of all, the title of the document, okay, is "Technical Merit Evaluation of Forensic Science Methods and Practices," okay.

TED HUNT: Right.

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PETER NEUFELD: It actually then, because you made the request, you wanted these terms defined, it actually defines a test method. And the test method is defined in footnote one, and it uses the ASTM definition for a test method, which is that a test method is "a definitive procedure that produces a test result." When people talk in this document about the underlying science, they mean the underlying science that's utilized in the discipline to produce this method, okay, that created this method. So does the method have a foundation in robust science or does the method not?

Obviously the method -- there are different methods used by different forensic disciplines. So the term "forensic discipline," like you said, we're not -- no one's doing an evaluation of pediatrics or whether there's such a thing as toxicology. But if a discipline develops a particular method to arrive at a definitive result, then what they're going to do is simply do an evaluation of research conducted by others, of literature that's out there, of new studies, anybody can produce anything. And then NIST will be simply asked to do an assessment, an evaluation, and not just of articles like the AAAS is doing, but it may be new research, people who are proponents of a theory may even come from -- can from an NIH grant, it can come from a university, it can come from a forensic laboratory that wants to get involved in research, it can come from 16 different corners. They're simply going to be there to evaluate whether or not the science underlying that method meets technical merit.

TED HUNT: Okay, so it's the science underlying the method and not the method itself that's going to be investigated?

PETER NEUFELD: But it -- I'm sorry. Now I'm back in Jeff's situation. I think it's a false distinction that you're creating.

TED HUNT: Is there's a discrete method out there that OSAC puts on the registry or proposes to put on the registry, to me, maybe I'm missing something, that's different than the entirety of the science that underlies that discrete method.

JULIA LEIGHTON: Can you give us an example? It's really -- can you give us an example where you think there's a distinction between method and the science underlying the method?

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FREDERICK BIEBER: I can. I was planning to follow up Jeff with a question relating to Ted's comment about the burden on NIST. There's a lot going on in diagnostic genetics that goes beyond whether DNA science is legitimate. For example, detecting cell-free DNA circulating in the blood of a pregnant woman, or cell-free DNA from tumor cells circulating in the blood. These are methodologies that are probably beyond the scope of NIST as an organization. And I think that it would be sort-sighted to have recommendation to not be more expansive and go beyond NIST, despite the great capabilities of NIST.

Many of the things that I'd think about as a medical geneticist that go into the courts from drug testing to newborn screening to the genetic diseases that mimic child abuse that come up in both civil and criminal cases are really beyond the capabilities of NIST, partly because they don't necessarily have access to the right patient samples as controls for validation. I think that this document is maybe focused on what you would traditionally consider forensic science methodologies and disciplines, but there's a whole panoply of tests done in the medical world that have crossovers into the court system.

JEFF SALYARDS: I think Arturo had a great example of the -- even within the FDA, times that they're challenged in their expertise and how they handle that.

ARTURO CASADEVALL: So, consider the FDA, if you will, they are the primary people focused on drugs and development, pharmacokinetics, things like that. Guess what, people show up with devices. Tom was telling me about a device that people think can enhance performance by passing a current through the head. When that happens, you basically convene a group that includes people and material science and electricity, interactions between neurons and electricity, and then you immediately constitute the necessary expertise. The FDA does not have expertise in house for most of the things that it handles, but it knows how to find it and is able to get it very rapidly.

JEFF SALYARDS: Tony, I think you've been waiting over there.

TONI ROBERTS: To Ted's point, because I'm a little confused about what these documents are trying to achieve. So, in practical terms, how does this relate to the efforts of AAAS, OSAC, the Office of Science and Technology Policy, like, how do they complement, are they duplicative, are they trying to use something different than those organization? Just, like, in practical terms, what are you -- what is the gap?

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JEFF SALYARDS: So I think for most of -- so I don't know what AAAS is doing, they've been given a grant to review something. But in a governmental way, I think the OSACs, as they adopted the SWGs, have been more about the practical development of standards. And there's been a presumption, the right one, that these things are generally accepted as safe, that they're generally accepted as valid. And so you can have a lot of activity that follows that's good and right about what's the best practice, how do we commonly do this, but you could be wrong. It could be based on something that was never scientifically validated in the first place.

ARTURO CASADEVALL: So let me give you an example of that. You know, for 1,500 years the calendar and all "astronomical" were calculated by the Ptolemaic system, which placed the Earth at the center. And it turns out that you have a great system. You can teach somebody the protocols by which you can calculate when everything happens. The fundamental science is not correct, for the sun is not at the center of the solar system. That would be an example. You can have great protocols. You can have great numbers, and yet you could be using a system that is not scientifically valid, for it doesn't reflect reality.

JEFF SALYARDS: Marilyn.

MARILYN HUESTIS: To respond to Ted's comment, I think we're talking more about the underlying validity of the science. And so, for instance, an example would be many laboratories might use high-resolution mass spectrometry to identify a drug in a biological sample. But the question that NIST would be looking at is how valid is that method itself? You know, are there false-positives, false-negatives that can come from that? What are the dangers of applying that method to an exact method? So NIST is not going to look at 300 laboratories method for high-risk mass spec. They're going to look at how that technique can be applied and how valid it is.

TED HUNT: Okay, so if a particular subcommittee in OSAC puts out two or three different test methods, and the underlying discipline is the same, are they going to be considering each one of those separate methods or just the underlying discipline itself?

JEFF SALYARDS: So, Ted, I think that that question is best left for the discussion of the recommendation document. The view document doesn't take it that deep in the weeds. Jim.

JAMES GATES: This is just a point of information for our commissioner who asked about AAAS. We actually have someone here -- I'm sorry. I said this is simply in response to the question raised by our commissioner about the AAAS exercise. We actually have someone here in the audience who's intimately involved in that. So maybe, if it's not against our policies and practices, we can have her answer the question. I'm talking about Deborah.

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JEFF SALYARDS: Yeah, but, Jim, I think that's out of scope for this effort. I think it would create some confusion and get us down a rabbit hole of what they're actually up to. So I'd like to table that. We can do it during the public comment period, but I don't think it will help this discussion. Bill.

WILLIAM THOMPSON: Well, what you just said may preclude my comment. I've been involved in the AAAS effort. I've been one of the review panelists reviewing latent print analysis. And I was just going to say briefly, the AAAS effort involves a review of the existing literature looking at the scientific foundations of the field. And we've done really quite an exhaustive review of the very large literature of studies that validate or purport to validate latent prints. And I gather that's part of what these documents are asking NIST to do is something very similar for other efforts.

To me, speaking as a psychologist, to me, validating of a method, particularly in a method involving human performance, necessary requires empirical data. At some point, if somebody's claiming that they can compare, you know, shoes with footwear marks, you know, ultimately there needs to be some study using known source samples that looks at their accuracy. And the study will yield information on the hit rate, the rate at which same source samples are identified as same source and the false-positive rate at which different source samples are identified as same source. And, I mean, you may say, "Well these qualitative disciplines don't have a likelihood ratio," but if you divide the hit rate by the false-positive rate, that gives you at least one version of a likelihood ratio and tells you at least something about the strength of the method. So it's my hope that what the recommendation document means -- I do think there's a bit of ambiguity in the language here, but my impression and my hope was that the document was encouraging NIST not only to reviews of existing scientific literature but where they determined that the existing scientific literature had deficiencies, particularly with regard to the performance of -- the ability of human examiners to perform the way they claim they can perform, that NIST could actually do studies or commission studies to be done. I mean, Peter, is that -- was that the intent? [Inaudible].

PETER NEUFELD: Okay. It specifically says in the language, Bill, that NIST has the discretion to avail itself of lots of opportunities, rely on other institutions' research, relying on published literature, and, when it deems appropriate, doing its own research in house. And to also deal with Fred's comment, to also bring in appropriate people with subject matter expertise to conduct certain research. There's a zillion different ways you can do it. You know, one of the things we saw from the FDA is the FDA doesn't look at one type of validation material before it approves a drug or a device. It looks at a variety of material, and sometimes it, in house, does its own work. Obviously this is not as extensive as that. This is much more modest, but at least that kind of discretion should be allocated and would be under this views document to NIST.

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WILLIAM THOMPSON: Yeah, no, and I think, just to conclude, I think latent print examiners are actually in a pretty good position because there have been a number of these so-called black box studies where their performance under different conditions has been tested. And while those studies may not be ideal, at least there's some -- there's quite a lot of information that suggests that fingerprint examiners are pretty good. I think we have not seen that kind of black box study in a number of other areas. And if the intent of this document is to encourage NIST to either perform or encourage others to perform the kind of validating research that has already been performed for latent prints, you know, I'm all for it. I think it's a great -- I think it's a great idea. And I think one of the problems with forensic science now is that there's no existing entity whose job or whose mission it is to do that kind of validation. And so encouraging a government agency like NIST to make that a focus of their efforts I think is a really good idea and would be very helpful for forensic science.

JEFF SALYARDS: Ted, just to echo Bill's comment, your question about qualitative, I would agree. I don't think it blows them out of the water. I think the first step is a black box error rate study where we determine, "You claim you can do this, let's see how good you are at it." To me, then the maturation of science would be that we start learning about what is it you're actually comparing, and could that be quantified at some point?

TED HUNT: Yeah, I am aware of those print black box studies, but to the extent there's -- and I'm just quoting from the document -- population studies, you know, currently that data, as far as I know, doesn't exist in latent prints. Now, maybe that will come, and certainly research should be done to see if we can get there. But if there is a qualitative forensic discipline that doesn't have a data set yet, is it going to necessarily fail these criteria, such as population studies, sensitivity, specificity, precision, accuracy, stability, et cetera?

JEFF SALYARDS: I suspect that the forensic science disciplines that we generally accept as valid will prove out that way. If they have a hard time meeting that bar, then, as a scientist, I would say maybe they shouldn't be on the list; right? I mean, at some point, we have to say that. That's not a contrived list just to make it hard on people. Those are the hallmarks of science. So I -- I don't think we should have a lot of sympathy if something ultimately can't meet that bar. Jules.

JULES EPSTEIN: Two-and-a-half years we've been in this commission, and the elephant in the room has been where's the science. Our friend Paul Giannelli, who's not here today due to illness, spoke out two meetings ago saying, "When are we going to do something or talk about the science, that there's testimony in court right now that has questionable scientific underpinnings?" If I understand this document, it's a simple statement, a view of this commission that a reputable independent science-based, metrics-based entity should ask that question. I must say I find that unexceptional. I hope we all do.

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JEFF SALYARDS: Julia, you've had yours up for a little while.

JULIA LEIGHTON: Yeah, but it's what Jules said, but I couldn't have done it nearly as well.

JEFF SALYARDS: All right. Matthew, I think it's you.

MATTHEW REDLE: As a practitioner in courts of law and not a practitioner in science, I think that this really represents a unique opportunity for us. For God's sake, when I got handed a DNA case in 1991 and the issue was substructure in the population, thank God the FBI had at least a legal assistance unit that could provide me with some of the articles that were relevant to the issue at hand so that I could try to teach myself what was going on. What we're proposing here, I think, gives us a chance to have smarter judges making decisions on evidence and arguments made by smart lawyers because they have a beginning point that they can go to to start their research to figure out just what the hell all you scientists are talking about. And I think that this is a wonderful step for the science community to take to help educate the legal community.

JEFF SALYARDS: Jim.

JAMES GATES: First of all, I think Ted has a valid point about the looseness in the language. And I think we should go back and look at that, this whole issue of validation science and methods. This is a real question. I think I understand what he's talking about. And, you know, for me, I would hope that it's the science that we're trying to validate. But the other thing, I think Jules said it right, if the forensic science community is going to get the support of the rest of the scientific community, it has got to wrestle with this fundamental question about how good are you are at doing what you say you know how to do. This is about error rates, it's about accuracy. And I think this document moves us forward along that. Is it the millennium? Probably not. We can probably improve upon it. But I think this is an extraordinarily important step to take for this commission.

If we do not take this step, it is my belief that ten or 15 years from now there will be another group like this that will be wrestling with the same issue. And so I think it's time to face up to the issue that if we're talking -- this is something I've actually asked this commission before, namely is forensic science going to be science? It's an art of practice. It's very important, but I want it to be life science. I want other scientists like me to look at our colleagues and forensic science and say, "I understand what they're doing, and they are doing things that we do in science." You know, when we talk about something like the discovery of the Higgs boson, you

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know, that's something that goes on in this weird place in Switzerland, but we quantify how good we are, we say it's a six standard or five standard deviation that we're talking about. That means it's less than one chance in a million that we're wrong. And that's the kind of thing we want forensic science to be able to do is tell us how good you are. If you don't do that, we will not support you in general and say, "This is science as we understand it."

JEFF SALYARDS: Thank you, Jim. Stephen.

STEPHEN FIENBERG: From the outset, this commission has been asked to look at the issues put before it essentially by the 2009 National Academy's report. And the issue of foundational validity undergirding forensic evidence as it's presented in a variety of legal forums was forced where, in that report, and has been discussed in a variety of ways at this table, including a few hours ago in a different document that we clearly went through, issues of sources of error, the foundations for which one reaches conclusions. And in our discussion over the last year-and-a-half to two years about the OSAC process, as we have asked, where is the science to be evaluated? We've never received an answer. And this document is our first effort at saying where we hope to get the answer to that, and where there will be answer to foundational validity for different forensic disciplines as we try to move forward. As we try to provide what undergirds the standards that the OSACs are designed to produce. If we read the language for the OSAC structure, they're relying on the existence of foundational validity of the science, but nowhere is there a process to produce that. This is that effort, and I think that it is incumbent upon us to move forward with it.

JEFF SALYARDS: Arturo.

ARTURO CASADEVALL: Thank you. I want to echo the words of Dr. Fienberg and Dr. Gates. I want to relate to you an example that I have lived. So I went to medical school in '79 and I finished in '85 with an M.D. Ph.D. At the time that I was training in science and biochemistry, the clinical sciences were viewed as soft and they were not very well-respected. And there was a reason for that. At the time, the '60s and '70s, anybody could do a clinical trial. The idea of how do you do a clinical trial wasn't even well-understood. Studies were underpowered. People weren't randomized very well. And slowly there came a revolution within clinical medicine that, today, the rigor that goes into a clinical trial is tremendous. And they are constantly trying to identify new variables that can give you the information that is [indiscernible]. It was a culture change. The reformation came from within. It wasn't formed from the outside. But I will tell you that this could be done relatively quickly. And today I think that most people who do this feel that they do the work, you know, at a par that can stand the scrutiny of many outside field. And to support what Dr. Gates says, I think that this could happen very, very quickly in the forensic science fields.

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JEFF SALYARDS: So, John, Nelson, seeing no other tents, I move that we vote on the view of the commission technical merit evaluation of forensic science methods and practices.

FEMALE SPEAKER: Second.

JOHN BUTLER: So a couple people have left. Anita and Tom have left. I have their clickers and they have provided me with their votes. And Suzanne we have not heard back from, correct? Okay, so I will not be voting for her. So her clicker sitting here will not be used. Okay. So this is the views document. Yes, no, or abstain. It should be to 31, so I'm not sure if somebody else [inaudible]. All right. Let's do a reveal. 83% yes, 13% no, 3% abstain. So it will pass.

JEFF SALYARDS: Dean, if you could take a picture of that for me with your phone, that would be --. If I can direct your attention now to page --

MALE SPEAKER: It's committee in the digital world, Jeff.

JEFF SALYARDS: To page 158, which is the recommendation that follows. And clearly, we'll take discussion on any of the points. The actual recommendations there are three of, and they're almost out of order in a mirror image to the view document. And so recommendation three is about the OSAC registry of approved standards and the notion that only forensic science test methods and practices where technical merit has been established by NIST or in the interim by an independent scientific body, only under that condition should they be placed on the registry. And so that's where we spent most of our contention in our subcommittee, and probably where the 11 to four split was. Marilyn Huestis is probably the most cogent dissenting opinion there, so I'd like to turn over to her where she thinks that the real concerns lie there.

MARILYN HUESTIS: Okay, thank you. I think everybody fully support the idea of having NIST lead a team, not only just NIST but experts that they can bring in, to establish the scientific validity. However, very practically, this is going to take a very long period of time to do this, to evaluate all the data, to determine if new evidence needs to be produced in order to do that. And if they're going to triage that process, as they're doing now with identifying areas that perhaps need -- that there's most concern about whether or not there's sufficient validity.

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So I'd like to remind the commission that we're not the only body that is responding to the NAS report, and that it's a two-prong process. We have the commission and we have the OSAC. And I serve on the Toxicology OSAC Committee along with more than 500 other scientists, statisticians, practitioners on the OSAC, and all the OSAC is working very hard to develop standards. And it's a rigorous process, not perfect, but it's a rigorous process to develop these standards, go through the whole process, not only within subcommittees and multiple reviews, public comments, just like we do, but then it has to go through the FSSB and then it has to go to a standards organization.

So the recommendation three has language that basically stops all work of the OSAC. It specific -- and I don't know if you have it up there. Okay, yes, you do. So it specifically says that only -- that the OSAC and the FSSB will only place consensus standards on the OSAC registry of approved standards for those that have already received the technical merit review by NIST. So what -- I think that is completely inappropriate in that it will stop the development of these standards. I have no objection at all, and I don't think any of the other dissenting opinions, on the fact that this will come. But for those disciplines that have probably foundational validity, they're going to be looked at last. And so I have -- we tried on the subcommittee for more than two hours to come up with language that would satisfy everyone on the subcommittee, but I would -- and I have developed some language that --

JEFF SALYARDS: Okay, so Marilyn, I'm going to stop you right there. We're not entertaining new language right now. We're not entertaining new language right now.

MARILYN HUESTIS: Jeff, I wasn't going to do it. I'd like to finish.

JEFF SALYARDS: No, we're not entertaining new language right now.

MARILYN HUESTIS: I'm not going to mention the language, but I'm not finished; okay? So what I want to say is I strongly urge the commission to not vote this through with the existing language for recommendation three, but that we consider alternatives.

JEFF SALYARDS: Okay, so Marilyn represents four of us who have some real concerns, and I think those are valid concerns. Three of us? I think it was 11 to four.

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MARILYN HUESTIS: Four.

MALE SPEAKER: One changed; remember? So it went to 12-3.

JEFF SALYARDS: Peter, on the other hand, represents 11 of us who thinks that those concerns might be overstated. So I'd like to let him kind of give you the counter point.

PETER NEUFELD: So let me first say -- and Marilyn, with all due respect, I think you slightly exaggerated or misstated what the language is in recommendation three. It doesn't say that the work is frozen unless and until NIST weighs in. It specifically has a safety valve. And the safety valve, if you look at recommendation three, says on the contrary to what you said, it explicitly states that or in the interim is understanding that NIST will take a while by any independent scientific body. And then if you read the paragraph directly beneath that, what it says is, "It is the recommendation and hope of the commission that NIST will ultimately develop resource documents for all forensic science disciplines, but that process will take time. In the interim, proponents of a forensic science test method or practice can seek technical merit evaluation from another independent scientific body." So, number one, it's not exclusive to NIST. It is saying that other bodies can do this. That's number one. Because we were mindful of the concern that you raised.

On the other hand, what people felt was, very clearly, that foundational validity, which is incorporated in technical merit, as a process for, like, for instance, for clinical laboratories and other applied sciences, that before you set standards, there must first be a demonstration of foundational validity -- or technical merit, as we've changed the wording. And that to do that, that assessment, just that evaluation, should be done by an independent group, okay, just the same way the FDA doesn't have the pharmaceutical companies or users or the makers of the devices actually vote on whether or not something has foundational validity, it's done by an independent group. In fact, you want to avoid the conflicts of interest, the potential conflicts of interest.

It's not to suggest that these people don't mean well, that they have the best intentions, but that's the way we've done things scientifically in this country, and certainly it's the direction that we've evolved into. And all we're simply saying is, and I'm, frankly, not the best person to speak for this because I'm a lawyer on the group, is that before you said documentary standards -- and this is something we learned from recently Pat Gallagher, then Willie May, then John Butler and Rich Cavanagh, is this whole notion that as a -- I'm sorry. Before you set documentary standards, which is something that OSAC does, you first want some independent scientific body, whomever, to demonstrate that there has been foundational validity established. That's all. And that's all we're asking for for forensic science, so it can have the kind of maturity that Jim Gates was talking about earlier when we were talking about the views document, nothing more than that. And one

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would hope that you can find, in the interim, while NIST may be getting up to speed on every other discipline, some other independent scientific group, or develop an independent scientific group that can evaluate what you want to do. That's the least you can hope for. And the reason that those of us who are in the criminal justice system --

JEFF SALYARDS: So, Peter, I think your hourglass is winding down.

PETER NEUFELD: I'm sorry, what?

JEFF SALYARDS: I think your hourglass is winding down. I think you've stated the point pretty well. Marilyn, I'd ask both of you détente, and I'll give you maybe a closing argument, but let's hear from a few others. Julia, you've got your tent up.

JULIA LEIGHTON: So part of what I hear, Marilyn, is a plea for "We're working really hard, why stop us." And I'm not sure that it's really happening that fast. And if it turns out the work is, as Arturo described, all work setting up a standard for something that has no validity, we've then wasted a lot of time and sent people the wrong direction. So is it -- I really just want to take this on a very practical level. It's my impression that the OSAC's not actually producing standards daily, or even close to that, and that there's a lot of struggle to get these right and to get them moved forward. And it seems to me it doesn't actually stop the work of developing those almost simultaneously. And if you're right that the technical merit is going to be found, then it will move forward fairly quickly from there. If there are issues with the technical merit, it's going to be a little bit back to the drawing board for the OSACs in terms of the standards. But is it really going to be that big a disconnect? I don't see it given the pace of what's been happening anyhow. And yes, is it all of our collectives fault that despite the clarion call from 2009 that we address this, the technical merit, and that we haven't done it? Yes, but I don't see it as a reason to reverse the order now. We've known this problem's been out there. And despite our efforts to set up all these other organizations, we haven't been able to bite at this.

JEFF SALYARDS: All right, Linda.

LINDA JACKSON: So Marilyn has spent her life's work developing methods and validating them and publishing them in scientific papers, in scientific journals that are -- that meet all the qualifications that were in the previous documents that we put forward. And so for something like those methods in toxicology that have a huge amount of work that is already done, I'm a little not quite understanding what the process would be here

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and what kind of independent -- I mean, what does that look like, that independent body that would then either redo all of the work that she's done on marijuana in toxicology or evaluated as a whole?

And what does that standard then look like, because I guess one of the other things with looking at the standards that are being evaluated on the OSAC, some of those standards in ASTM, which is one of the SDOs that has most commonly been used, they're all called standards, but there are different types of standards. There are standard test methods where you follow an exacting protocol and get a test result. There are also standard practices that are -- they're a little looser, more like guidelines. And then there are other things that cover things like training and that type of thing. And I would hate for -- I see in the text that maybe the OSAC should be limited to things like training and terms and things like that while these evaluations are done. But those are still, a lot of times, documented in a standard. And I think this language is very limiting.

JEFF SALYARDS: Dean, if we can go just slightly out of order, I think Arturo has a direct comment there, and then we'll come to you.

ARTURO CASADEVALL: Yeah, just to add, I mean, I think that some things are definitely are very hard science. I think, like, GC-MS spec, that's going to work. I think you know that there is something that the range of hardness varies greatly. I think that -- and for some of these things, you know, I think by an independent body it's left vague because it may differ from the different groups. I mean, you could imagine an independent body could be a bunch of mass spec people who basically say, you know, "This is pretty good. It's based on 100 years of science. This is going to work." And then in that situation, developing the standards wouldn't be. But for others, you may require quite a bit of review, external review. So I think you have to leave it vague because of the simple reason that there is so much play within what it falls under the umbrella of forensic science.

JEFF SALYARDS: Okay, just -- and I'm looking around the room carefully. So, Dean, Jules, Bill, Vincent, Matt, Phil, Pam, I see all of you. I've got you sort of written down in order, but.

DEAN GIALAMAS: So I have a question and a comment. My question is, with respect to NIST, whether or not the subcommittee reached out to NIST to find out capabilities, skill sets, resources available to accomplish it. And my comment is one of an overarching one about process. And the reason why I say that is that this is a recommendation that's going to the attorney general. It's a little awkward that the recommendation to the attorney general is recommending to her that another entity that she has no jurisdiction over do some work. So I'm just a little puzzled by that.

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And I just don't know why it's not just the views document or enhancing the views document we already have. And I say that because we're recommending some things here, and then, on top of it, we're adding I think potential, I'll call it -- my term, if you like it, it's my opinion, if not, it's Troy's because it was Troy's tent that was up -- if this is like "commission creep," right, because what I see the role of the commission doing is that our job is to determine kind of the "what." And in some instances we're now starting to specify the "how," like what needs to be done. We're saying, "NIST will do certain things." I don't think we can say that in a document.

There's also to the point of what Marilyn is speaking to, and that is, you know, issues that for only certain things are we going to allow things. I'm wondering if maybe just word semantics might, you know, change that. In other words, is it better to say those should be prioritized rather than just exclusive? So those are the kinds of things that I'm wondering on the process, if this is really the right structure to present that to NIST. I just don't know if that was discussed.

JEFF SALYARDS: Yeah, no, it's a great question. I'm going to let John answer the very specific part of did we reach out to NIST. I think the process -- so you bring up two important points. One is, if we are going to have any sort of recommendation documents, I think then we do delve into the "how" some or we'd only have views documents. I think you bring up a great point that it's a little interesting that we're directly the attorney general to do something in commerce. But the other thing I'd remind all of us is we can wordsmith and change and agree upon one thing in a recommendation to the AG, and then she could say, "I like all of this except for recommendation three that you just spent six hours tweaking," right? I mean, she doesn't have to adopt the whole thing just because we've sent it to her. So that's an interesting point. You had a question, though, did we reach out to NIST? The answer is yes. And John, do you mind kind of summarizing that?

JOHN BUTLER: So, in the opening remarks that Willie May would have given if he was able to be here, which is the slide I have up right now, this is the comments that were given back six weeks ago to the subcommittee that informed the discussion. Basically, we want data supporting what you're doing. So you can get data from either looking at scientific literature and a follow-up, if you need to, on gaps, with more details from inter-lab studies. What we stated right there, NIST doesn't plan to provide a detailed evaluation of every method or practice. We can't. We don't have the bandwidth to be able to do that.

NIST could have -- initiates a series of invited reviews; at the last meeting Willie May talked about that. And so inviting NIST scientists or others to examine the scientific underpinnings. And then this publication could then be associated with further training that could be done. And then we propose that we start with three pilot projects for this very purpose, because we don't know what those would look like in detail until we actually start doing them. So the first would be on bite marks, which NIST does not have experience in. So we'd have to instantly reach out to other people and evaluate things. Second is firearms and tool marks, which NIST does

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have research and has opened a large database actually with NIJ funding recently, just a couple weeks ago, to be able to gather data on thousands of firearms to be able to do this analysis. And DNA, of course, which, of course, I know a little bit about that topic, and NIST certainly has more than 25 years' experience in that area, doing stuff. So those are the things we gave back.

We also provided this, which is also part of the initial presentation that was given in terms of where NIST's scope is. And so we're not going to answer everything, but as part of the -- I know we provided this as well. We can provide feedback through -- and this is kind of the outline of what the chapter would be, kind of the way we see it, the resource guide, which would be the scope of what's being measured, compared, and so on.

DEAN GIALAMAS: So I appreciate that. And I guess I'll maybe repeat kind of the question because I completely understand the limitations that NIST has, but what you just presented to me suggests that NIST doesn't have the resources, bandwidth as you said, or even the financial backing to be able to address what this recommendation has, which goes back to my original point, is this really a recommendation to the AG and what control does the AG have over it? I have no problem with the concept of what's coming out of here. It's really a process question probably more than a fundamental "Is this worth doing," because I agree with it's worth doing. I'm just questioning, given what you said. And I heard you very clearly, John, in fact, you were very specific on the three areas you could do, that you couldn't do them all, and the scope within the complete analysis protocol, if you will, within forensic science. I guess I still just have concerns about it. Don't need to address it.

JEFF SALYARDS: That's fine, Dean. As we go to Jules, I'll only offer, as a federal lab director, that if this were in the Department of Defense realm and I got a recommendation like this that even was an unfunded mandate, that becomes a very powerful document for me to go argue to the people who resource me and look at this large blue ribbon commission says I'm supposed to do this, so there might be merit in that. I just offer that. Jules, it's you.

ARTURO CASADEVALL: Just to follow up on that, they will have to go to Congress. Congress got to give them more money. If this is important to society, it's got to be done.

JEFF SALYARD: All right, Jules.

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JULES EPSTEIN: Real quick, a part of the process question is actually answered in our commission which says that the Attorney General -- we'll report to the Attorney General, the Attorney General will refer recommendations regarding measurement to NIST. So I think we're okay just on the "can we ask the whisper down the lane" separate from how's it going to get done. I guess now I'm going to go back to the document and just say that if I understand recommendation three -- I hope I'm at the right page. Sorry. I was out of bounds between documents. It says, "When technical merit has been established by NIST." And so I guess I'm just wondering about the word "established," because if "establish" means do it all over, that's a mess. If "establish" means that the different groups and the OSAC did their work, did the -- what's it called -- the technical merit sheet, and are submitting all of that, I don't want to call it a rubber stamp, perhaps I should call it a good housekeeping seal of approval. But it's not a reinvent the wheel. I just want to -- if that's what "establish" means, then that's, I think, easier, Marilyn.

I heard a separate concern of yours, I want to make sure I heard it right, which is, "Hi, we're the good kids on the block. We've been doing science for a long time." So they're going to say, "We're going to ignore you because we have the problem children to deal with," and that's a prioritization question. So did I -- just, I want to know, did I hear that as a separate concern? Can I just get --

JEFF SALYARDS: You can, but I've got an hourglass.

MARILYN HUESTIS: Okay, so the issue is -- and I'd like to refer this to Dr. Butler, too. This is going to take time. It's not a quick process. And as you can see there, selecting the areas that maybe have the most concern to deal with first. So the issue is not that we don't want it done. It's going to be years before they may get -- and I'm not saying we're the good guys on the block. But to get everything is going to be years. And so we don't stop progress that the OSAC is working so hard to do, to improve the field, too. They may come back and find issues and problems with every discipline, and then we have to change that.

JULES EPSTEIN: And so my -- I'll just wrap up, if I may. I've spoken to the process issue, at least partly, with Dean. To me, if there's some sense of establish to really mean this broader notion of not do it all over but really "confirmatorily" establish, I hope that takes some of the sting out of this. And my understanding, since by an independent scientific body could be some designee of NIST or some approved body that NIST says, "Fine with us," to me that seems to address a lot of these concerns.

JEFF SALYARDS: For most of us, Jules, I think that's captured in the paragraph that follows recommendation three. Bill Thompson.

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WILLIAM THOMPSON: Okay, I want to speak to the issue of whether this would, in fact, stop OSAC in its tracks, and I think I have a unique perspective on this. I chair the Human Factors Committee on OSAC. At some point, all of the proposed standards get passed by the Human Factors Committee, so I've seen a lot of standards, believe you me, in various forms and iterations. And one point I want to make is that I think the majority -- easily the majority of the standards that I've looked at I think would not be implicated by this document at all because there are standards about many different things, and most of the standards are not about processes that anyone would think require validation.

So, for example, there are standards on how to validate new procedures. I looked at standards for validating probabilistic genotyping. That doesn't require validation. It requires knowledgeable people to decide what's required. There are standards on training. You don't have to validate training standards. There are standards on how to photograph a crime scene, how to photograph a dead body. There are standards on many practices and processes for which no one, or at least certainly not anybody on my advisory committee, thinks that any kind of validation is required.

What's required is that there be a consensus among knowledgeable practitioners that these represent best practices. And so the majority of standards that OSAC is dealing with and issuing fall in those categories. But there are certain standards that, I think that as Arturo and Linda pointed out, relate to analytic methods, right, standards for how you compare latent prints or standards for how you compare footprints. For those, I think validation is an issue. And so the question is whether we want OSAC to proceed with standardization without validation. In other words, is standardization sort of a substitute for validation?

This is an issue that was actually raised by the OSAC leadership. And I know there's going to be a discussion of it tomorrow at a later strategy session, and one of the issues raised that they ask various OSAC committees, including my committee, to comment on is to what extent is it appropriate for OSAC to place on its registry an imperfect standard and a standard for which technical merit may not have been completely evaluated and so on. And the response from my advisory committee was we think that's perfectly fine for most of the standards, but when we're dealing with the basic validity of an analytic process, we think it's bad to standardize -- it's bad to have standardization -- our motto, "No standardization without documentation of validation." Placing the standard on the registry has a strong implication that the underlying method is valid when performed in accordance with the standard. And is that really a message that we want to send for areas and disciplines for which the validation has yet to be conducted?

So, you know, I think that ultimately this is probably going to impact relatively few disciplines and the problematic ones. I think most disciplines will find it fairly easy to show enough validation to meet this

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standard. And I think there's a lot for OSAC to do in the meantime. But, you know, I'm not at all worried about holding up standardization of bite mark analysis, pending further validation of the field. I think it's not a problem. I think it's probably a positive thing.

JEFF SALYARDS: Very good. Thanks, Bill. Vince Di Maio.

VINCENT DI MAIO: Wait a minute. Okay. Two points I want to make. One on the recommendation, I wouldn't use OSAC or FSSB as your source. Like all gods created by man, it has clay feet and it can be wrong. The second point -- now I'll get to why in an example, but the second point is you don't need a scientific body to destroy a wonderful scientific theory. You need one person, anyone my age or younger who's practiced medicine, mention gastric ulcers. Wonderful diagnosis, all due to too much acid for about 75 years. And then one guy said, "No, it's a bacterial infection," and nobody would publish his articles because he was obviously crazy. But besides being crazy, he was right. It's all gone as to etiology. One man toppled a god. And when you give to organizations like this god-like powers, it doesn't always work out. So if you want to have something about, you know, confirm, document, standards, I would do that. I wouldn't mention groups. I would just kind of be in a more generic term. But you want to feel human, think gastric ulcers. And I see some of the people around here know what I'm saying and know what it did to the practice of medicine. Thank you.

JEFF SALYARDS: Very good. Pam, I think you've had yours up for a while. You haven't spoken yet, though, on this issue.

PAM KING: Okay, this actually goes back to something that Matt commented on the last document we were talking about, and it has to do with the audience. The OSACs are setting standards. I think the legal community is going to look towards the standards that are set and make some assumptions, appropriate or not, as to whether or not those equate to being a valid science. And so I turn back to some words from a while ago that go like this, "Law enforcement officials and members of society they serve need to be assured that forensic techniques are reliable. Therefore, we must limit the risk of having the reliability of certain forensic science methodologies judicially certified before the technique has been properly studied and their accuracy verified by the forensic science community. There is no evident reason why rigorous systematic research would be infeasible. However, some courts appear to be low to insist on such research as a condition of admitting forensic evidence in criminal cases. Perhaps because to do so would likely demand more by way of validation than the disciplines they presently offer."

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It goes on to say some things not so flattering about the legal community, and then ends with, "Given these realities, there is a tremendous need for the forensic community to improve. Judicial review by itself will not cure the infirmities of the forensic science community." That's from the NRC report.

I bring that up because it seems to me that, to some degree, this recommendation -- I know that there's been a lot of discussion, which I agree with, with respect to sort of the nuts and bolts of it. But this recommendation is directed at that very sentiment and that very component. It is that, at least for me, as a judge, I don't want to see something that is good and [indiscernible] and coming out of the OSAC that's getting stamped by a group of individuals that are not well suited to be making those decisions. So I think this is asking the forensic community to do that themselves. So for that -- if that's what that means, then I believe I'm at least in support of it by theory, which is also what dean said, so.

MALE SPEAKER: Matt.

MATTHEW REDLE: During the interim period, is peer-review publication an independent scientific body?

JEFF SALYARDS: So, Matt, I think most people would say that it's not, because then you could just have dueling experts in court. If I reviewed this article and Jim Gates reviewed the same article, and who looks better in their suits that day. So I think Peter is pretty eloquently pointed out the courts need help. They need some sort of declaration of there's a body.

ARTURO CASADEVALL: Yeah. And I would add to that, to follow up on Dr. Mayo, that's what happened with ulcers, and the peers didn't believe it, and this took -- the data on bacteria and ulcers go back to the 1950s, but the field was not interested in moving forward.

MATTHEW REDLE: And if I could just respond to both of you. So the issue really, then, becomes where do I find my local independent scientific body, and are we going to end up having dueling independent scientific bodies?

JEFF SALYARDS: Well I believe, for those of us like the recommendation, we're saying that should ultimately be NIST. So, Steven?

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STEPHEN FIENBERG: I just want to remind people that recommendation one of the National Academy's 2009 report was for the creation of an independent institute whose activities included exactly the activities that we're describing here, and many more. And what we're grappling with here is, in the absence of a single independent entity authorized by congress and the like, how can we move forward in the current arrangement with the memorandum of understanding under which we're living? And it seems to me that, as Jules said, is that we have the position to be able to make such a recommendation.

The way in which NIST responded to the subcommittee, it's important to understand what that means. It was Willie May and John coming back and explaining, with their current resources, what they were interested in and willing and able to do. That's not what this document is for. This document is saying what should there be. And if we believe strongly that there should be such independent assessment, then there will be a mechanism, ultimately, to achieve that. And we propose an interim approach, and it seems to me that this is a way to move forward, and I strongly support the recommendation.

JEFF SALYARDS: We have about three minutes left, and so I'm going to betray my two colleagues and make the closing arguments. We've talked about this a lot in our subcommittees, and as the discussions have mirrored what we have done here today. I think there are some of us who have raised very fair concerns about this. Has this cut too deep, and could it be incredibly disruptive to the OSAC process, and is it the wrong process, or are the terms too vague?

I think there are others of us who think that this is aspirational, that it says enough of the right things and creates a pathway for us to move forward incrementally. But what I'm convinced of, as the co-chair of the subcommittee, that no amount of talking at this point is going to help, or wordsmithing, and so I would suggest that -- I move that we vote on this document and see where we stand.

JOHN BUTLER: Bridget has left and given Jules her vote and the clicker, so just in the interest of clarity there. One more time, just in case here. No, we only get one vote, but sometimes the battery doesn't go through. Okay, let see. Okay, 52% yes, 46% no, 6% abstain, so it doesn't reach the 66.6 percent so it does not pass. So we'll have to go back to the subcommittee to figure out what to do with it.

MARILYN HUESTIS: And can we recommend a possible change to recommendation three that might help the situation rather than go completely back to committee?

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JEFF SALYARDS: I think at this point we need to go back to committee.

NELSON SANTOS: Keep your clickers out everyone. Keep your clickers out there. All right, let's turn it over to MDI.

JOHN FUDENBERG: All right, I move to vote on our -- Okay. I'm sure you're all very interested in thoroughly reviewing all three of these documents at 3:30 in the afternoon on the last day, so I will spend a significant amount of time on these. First of all, before I begin, I'd like to point out and thank Danielle and Lindsay for the help that they've given us on our subcommittee, Jonathan McGrath as well. They've been a great help to us and have drug us through this process, and we really appreciate the help that they've been giving us.

So with that being said, we have three documents that we're going to review today. One will be up for vote. That's going to be the establishment of a national call center, and the other two are going to be introduced as initial drafts. So we can move right to the national call center. I know you've all read this document from start to finish. We've talked about the background. I can certainly go through that, but I would recommend we -- I'm available to take -- Vince and I are available to take any questions if anybody has any, and if not, we'll -- I propose we vote on the document.

JULES EPSTEIN: Marilyn, [inaudible].

JOHN FUDENBERG: So, Nelson, if it's okay with you, I think we should entertain a motion to vote on this document.

JOHN BUTLER: Okay, we're up for a vote there. Last use of clickers today. I suppose I should vote. Okay, 93% yes, 7% no, so it passes.

JOHN FUDENBERG: You got it. And if we could all sing happy birthday to Danielle right now. No, I'm joking, Danielle. We've not going to do that.

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One thing I would like to point out, in this call center document, that I failed to do before the vote, but -- I know, but this is very important. I need to put this on the record.

VINCENT DI MAIO: You voted us a million dollars.

JOHN FUDENBERG: No, this has nothing to do with the opinion of the commission. It's a very important point that I failed to mention, and that is, some of our previous documents have been deferred by the attorney general and given to the white house OSTP. This document, we feel very strongly, and I need to put it on the record, it does state it within the recommendation that we would like the attorney general to consider this. It's the missing person's data collection and reporting as a law enforcement function. I think the NIJ is one of the only agencies that has any interest in this, or not necessarily interest, but has invested dollars and has programs that are currently supporting this effort. So I'd like to just put on the record that we'd like the attorney general to consider this recommendation, rather than to pass it off to the White House OSTP, if that could be noted.

So the next document we're going to talk about is the establishment of a national call center. This is, I would imagine may be a little more -- ask for our community and basically for those of you that have asked questions about the document earlier, or previously, I'd like to point out this is not --

VINCENT DI MAIO: [Inaudible].

MALE SPEAKER: John, what did we just vote on?

JOHN FUDENBERG: Did I just say the "National Call Center?"

MALE SPEAKER: Yeah.

JOHN BUTLER: This is up there.

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JOHN FUDENBERG: The establishment of the National Office of Medical/Legal Death Investigation. I apologize.

MALE SPEAKER: Thank you. I thought you were doing a new strategy again.

JOHN FUDENBERG: No, I'm not. No, new strategy. We're not voting on this document quite yet, but I'd like to point out it's not meant or intended to have the federal government run or take over the medical/legal death investigative process. It's meant to assist and coordinate medical examiners and coordinators in meeting their funding staffing, accreditation, and certification, and, as importantly, research needs. It's an example that I could use as if a law enforcement agency is failing miserably and is not able to function, the DOJ comes in and helps them or takes over. The medical/legal community does not have that. No one at the federal level has any responsibility for the medical/legal community and they're basically left to do whatever they can get away with, and so some cases some very few offices act so egregiously that that's a big concern, and we are recommending that the attorney general basically establish a national office to oversee the medical/legal death investigative community.

So I can go right to recommendation so we can talk a little bit about those specifically, and there's two recommendations within document. And the first is just as I mentioned, that -- and we word it specifically that the attorney general should work with the White House office of Science and Technology policies medical/legal death investigative working group and other federal agencies and professional organizations to develop a permanent national office of medical/legal death investigation, which would coordinate ongoing support of the nation's medical/legal investigative systems to improve quality, and I'm not going to read the rest of it. You can read the rest of it, but I think you get the idea.

The second recommendation talks about the attorney general through the NIJ or the national office, newly established national office, with the NIJ, recommend ongoing funding and support to improve their recruitment and retention of forensic pathologists, modernization of facilities, and the creation of facilities in underserved areas. It talks a lot about regionalization of medical examiner and forensic pathology services, and it's supported by quite a few footnotes and documents that have been created by other medical/legal groups in the past.

So we have a lot of work to do on this document, and the only comment we've received so far as been from Ted. Ted brought some very good points up, and we did look at those yesterday. We are going to make some changes prior to introducing it at the next commission meeting. But with that being said, is there any other questions on this document? Phil.

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PHIL PULASKI: It's not so much a question, but just from the law enforcement end, from the chiefs, and I'm going to let them speak for the sheriffs. It's so important to have a national office that the various law enforcement professional organizations -- ICP, National Sheriff's Association -- can go to, can coordinate with, rather than trying to do it on an individual basis around the country. Even when there is a statewide medical examiner or coroner system, or statewide medical examiner or regional system, it's still very, very difficult. This would be extremely beneficial from a law enforcement perspective, and I think from everybody's perspective. But I can speak to the law enforcement issue.

JOHN FUDENBERG: Thank you, Phil. Any other questions? Yes, Dean.

DEAN GIALAMAS: I'm just curious if it came up in discussion, because what kind of struck me is, I'm not opposed to it, but almost -- and Phil's comments kind of brought it to light again, is there a distinction between a national office and maybe a professional organization or association that would do the same? I mean, what would be the difference between, let's say, major city chiefs, IACP, who deal with industry-related issues? And I know that with NAME and some of the other groups, there's those concerns. But what was the thought process behind the national office versus a, let's say, national professional organization that would oversee that?

JOHN FUDENBERG: Phil, did you have a comment to that?

PHIL PULASKI: Yeah. The concept here is this would be more of a mandatory thing. I so I don't have the numbers but John and the doctor would have. How many medical examiner and coroner offices are actually in NAME versus this is designed to be bigger and more encompassing and to maybe have more oomph behind it, because it would be of benefit to being part of this, in terms of funding and just being recognized, because there's so many small offices out there. Am I articulating that correctly?

JOHN FUDENBERG: Yeah, I think so, there are two professional associations within the medical/legal profession that have been around for hundreds of years between the two of them, and we're nowhere near where we should be. They each have their own interests, and we just don't feel like that's the answer. Yes, Judge.

PAM KING: [Inaudible].

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JOHN FUDENBERG: That is correct, yes. Any other questions? Okay, we'll move on to the next recommendation that, again, is up for just an initial introduction. Is the recommendation for next of kin -- this is a views document -- pardon me. It's the next of kin communication and interactions during a medical/legal investigation. This may seem -- we talked at length about whether or not this is within the purview of the commission, and I understand why it may not seem to be. But if we're going to call it medical/legal profession and forensic science, then I think this is a very important part of that.

Currently, we have offices that will not only not communicate with the next of kin during the investigative process, but once they have their determinations, they're not necessarily communicating their determinations with the next of kin, and it goes so far as to some family members that are waiting for the cause and manner of death from a medical examiner or coroner's office are receiving a death certificate in the mail with their findings. And I would imagine it's as bad as it sounds. If your child dies and you are waiting to see how your child died and you receive something in the mail telling the next of kin how that child died, that's a horrific process. I can't imagine it happens, but I am aware of quite a few offices that operate that way, and it's just not acceptable.

So what we're looking to do here is create a views document and pass it through this commission that says that the offices should at least have policies on how to do this. And I can read specifically the ask here that's the views of the commission, the medical/legal death investigation. "The coroners and medical examiners should have a policy to support these sensitive interactions. Information should include but not be limited to the notification of death." As you know, the majority of medical/legal offices are responsible for notifying next of kin after a death, and that's a very sensitive process and it should be -- offices should have policies, and their staff should have training on how to do that appropriately.

"Overview and rationale of the death investigation process, establishing realistic expectations of the investigation process, and the availability of information during the process, how the next of kin or designated family members will receive updates during the process. And, ultimately, the determination of next of kin and the access to autopsy reports.

We did receive, again, one public comment from Ted and he brought up some good points. We discussed those points yesterday, and we will be making some changes to the document to address those points specifically.

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VINCENT DI MAIO: It's more of a humanitarian document.

JOHN FUDENBERG: It is. So any questions on that? Dean.

DEAN GIALAMAS: Just a minor recommendations on formatting, that, to me, it's a little difficult to discern whether there's one recommendation or more than one recommendations, because in several instances you have some "should" sentences. I would just suggest maybe a structure that indicates either one clear sentence or a couple of clear recommendations, if that's the case.

JOHN FUDENBERG: Okay. Thank you. We'll look at that. Judge, did you have something?

PAM KING: Yeah. I was just wondering if you've had an opportunity to discuss any [inaudible]. So have you had any discussions with media and the coordinating efforts on those (inaudible). They're pretty rapid (inaudible).

JOHN FUDENBERG: We have not, but we'll certainly talk about that in the -- controlling the media is not so easy, as you know. I'm not sure how we address that in this document, but we can talk about it. Okay. Okay. Any other questions? Susan.

SUSAN HOWLEY: First of all, I really like this document. And speaking of the media, one thing that I think is missing is the interrelation of the notification of families with notification to the media. I do think this is really important, because so many families are desperate for detailed information about how their loved one died, and this can be particularly important in murder cases or in cases where the police may have first told the family that it was suicide and the family doesn't believe it. They believe it was murder. Or where there was officer-involved shooting, or all of these other reasons. It's extremely important for the coroner's office or the medical examiner's office to have that authoritative, sensitive, respectful, and transparent communication with the family about the cause of death.

One thing that struck me about this document, though, is it's a views document directed to offices that you all have spent the past couple of years telling us how underfunded and under-resources they are. So I would urge you to make this a recommendation; that the attorney general consider funding training and technical assistance to help these offices develop these protocols and learn how to do sensitive notification. That could

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be done by the Office of the Victim's of Crime. It could be developed, first and foremost, to notify survivors of homicide, but then you'd have them in place and they could be easily adapted for other cases as well.

JOHN FUDENBERG: Okay. Thank you. We'll discuss that in the subcommittee. And I think Gerry did mention that he's willing to pay for all of our recommendations. So I don't think that will be a problem.

VINCENT DI MAIO: Okay. John has done everything right, so don't criticize him for what I'm about to say, because I'm the one who screwed up the next thing. There was another document that we're going to present that was recognizing the autonomy and neutrality of forensic pathologists, but I forgot to post it, and get a final vote. So it's going to come as an original document next time. But it's not John's fault, it's mine. So if you want to throw shoes I'm the target. I think that's about it.

JOHN FUDENBERG: That's it.

VINCENT DI MAIO: That's it.

NELSON SANTOS: More comments or questions on that? Okay. So I say we go into wrap up, and also go into public comment a little early so maybe we can get out of here a little early. I'll wrap up just a couple item, and, John, if you have something, I'll turn it over to you afterwards. The SPO process, I think we need to do a better job of communicating what we're doing, I guess to you folk. The reason why we created the SPO was so that the commission's voice was heard in the operations and protocols. Yet when we bring the issues to the commission we still have problems. So I'm asking us to communicate what we're doing to the commissioner, so when we come and we make a suggestion which we all agree is good, that we can then have it going forward, because it kind of defeats the purpose of have an SPO if it then gets untrumped. And that's not to say that what you said doesn't make sense. It just seems to be a little -- we meet very often and we all kind of agree, and then we bring it here and we don't get the concurrence. So I just offer that we tend to communicate more to you beforehand so that it's no surprise. That's the first thing.

The other thing I'd like to bring up is the digital evidence. I don't know that we need to create a subcommittee. I don't think I want it that formal. But I would like to ask Troy to kind of develop a task group, maybe use the folks that are already SMEs that were used by the accreditation folks to take a look at digital evidence issues. I wanted to bring that to commission floor to see if anybody had any concerns or other ways that maybe we could do that. Do we have concurrence to kind of have somebody take a look at digital-evidence issues and

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how some of the older recommendations and recommendations moving forward might be looked at by the digital evidence community?

MALE SPEAKER: is there a motion. I make a motion.

NELSON SANTOS: Not really a motion. I just want a feeling. But now that I get a motion, that's good. Yes.

PATRICIA MANZOLILLO: Yes. So, Nelson, if we proceed, could Linda and I and the subcommittee get some direction on how we should proceed with -- because we have ongoing things and should we hold off or --

NELSON SANTOS: No. Actually, I was thinking of using the same folks but not really have them as part of the accreditation certification, have Troy kind of lead the effort to look at all issues digital evidence. I don't think we, for the first year-and-a-half, we concluded digital evidence, and I think those recommendations are still out there, and I think it would be wise to look at those and see how they would impact [indiscernible]. So I'm not asking you folks to do anything. I'm asking Troy to kind of put it together and report back to the commission on various recommendations that are out there. Is that okay, Troy? Yeah.

Obviously, accreditation is the big one, and certification, but this is independent of that.

JOHN BUTLER: [Inaudible].

NELSON SANTOS: Yes.

[Inaudible.

NELSON SANTOS: Correct. I was talking to Troy yesterday, and he expressed some concerns about the older documents having the digital evidence view. There was no voice. So I said, well maybe we should take a retrospective look at what we've done and see which one of those products impact how that could impact digital evidence. Moving forward, we have the accreditation and certification issues that they're currently

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looking at, so. But I don't think we should create a subcommittee with three meetings left. I just want to have somebody take a look at it formally.

Yeah, Linda.

LINDA JACKSON: I was just going to say that one thing that's had a lot of discussion -- with our SMEs group that was put together, the one thing that's had a lot of discussion is what functions within digital evidence actually meet the definition of forensic science service provider, and that's something that a couple people had written down a few things that I can forward to you. Because I think that how the different functionalities within digital evidence fit into our definitions is something that really does need to be defined a little better.

NELSON SANTOS: Okay. And the final thing I have is I believe Julia, or someone, mentioned last meeting about if the commission were to sunset, you know, how can we memorialize what we would like to continue to do, and some of you actually submitted some ideas. I want to reiterate that again, and if, indeed, the commission were to sunset in April, what is unfinished business that we want to look at? And I have some comments here. I'd like to just make that request once again to write down, send them to John, myself, or John, so we can capture that. Julia.

JULIA LEIGHTON: Are you done with that, because I have a proposal to make.

NELSON SANTOS: About that?

JULIA LEIGHTON: No. No. About how we use the rest of our time today.

NELSON SANTOS: Oh, okay. Sure. Yeah. Yeah, this is an open discussion on it.

MALE SPEAKER: Nelson, can you send or have John than send out an e-mail requesting that, and it will be more likely that you'll get responses again.

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NELSON SANTOS: You heard that John?

JOHN: Yeah.

NELSON SANTOS: Thank you. The only other thing that I wanted to mention, and then Julia, is just the timing, as we had mentioned before, we have September, December, and then April.

JOHN BUTLER: January.

NELSON SANTOS: January.

JOHN BUTLER: December, January.

NELSON SANTOS: January. So January is actually is an iffy one because of the change in administration. But I had -- as Victor was saying yesterday, the House doesn't seem to be supporting this at this point in time. Anyhow, if we plan accordingly, as if we were going to sunset in April, I think it's important that any recommendation that we were getting out we should have by next meeting. Views documents, I think, give us a little bit more time, because the AG doesn't have to act on them formally, but I just want to reiterate that. Julia.

JULIA LEIGHTON: Well with that in mind, and recognizing this is going to be an incredibly unpopular proposal, rather than ending early, I mean I think that we give arbitrary time to different topics, and we should go back to the discussion we were having and see what progress we can make, if any. It's so rare for us to be able to get together. It's expensive to do, and so my proposal is that we spend the time that medical/legal saved us and go back to the conversation and see if we can make any headway on the recommendation that to close up.

NELSON SANTOS: I certainly am not going to speak for the entire commission, but that is fine with me. We have a protocol. When it fails, it goes back to the subcommittee, if you just want to see if we can take advantage of the discussion, I think it would have to go out for revoting anyways. That's what we've done

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historically. If the commission as a whole wants to remain and continue to discuss -- I assume you're talking about the technical merit recommendation?

JULIA LEIGHTON: Yes.

NELSON SANTOS: Yeah.

JULIA LEIGHTON: I just think otherwise -- because the subcommittee doesn't get the benefit of every commissioner's thought about how this dialogue is going, and the more guidance we can give them, the more likely it is we can come up with something by the next meeting.

NELSON SANTOS: Okay. Just by a show of hands, though, I'd like to see, is that what folks want to do? Yes? Raise your hands if you do want to continue to have a discussion on the technical merit recommendation. Can you put them up high since we don't have the clickers.

[Inaudible].

NELSON SANTOS: Okay. Okay. So that's what we'll do then. Before we go there, John or John, do you have anything? Next meeting at NIST, September 12th, 13th. And Phil is going to organize the collegial meeting.

MALE SPEAKER: Collegiate.

NELSON SANTOS: Collegiate, yeah. John?

[Inaudible].

We'll do the public comments. If it goes for an hour, we'll do them at 5:00. Otherwise, when we end, we'll then do it after that. Jules, Do you have a --

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JULES EPSTEIN: I have a comment [inaudible].

NELSON SANTOS: Okay. All right. Jim, are you ready to start that too? Any other comments not related to the technical merit recommendation? Okay, let's start then.

JEFF SALYARDS: I would suggest that we put up Marilyn's proposed language for different recommendation three.

JULES EPSTEIN: Can I just add a preliminary thing? Because I just want to ask, I thought we should do a quick show of hands. Is recommendation three the sticking point, so that we're clear on that, because many people who voted against this voted for other reasons, then I'm not sure that that's right. But I'd like -- but I think we should --

NELSON SANTOS: Yeah, I think that's a very fair point. So I guess by show of hands, is recommendation three really the crux of your sticking point. If the answer is yes, put your hand up. Okay.

[Inaudible].

NELSON SANTOS: Are you asking for the comments that were made? I think there was a couple of other comments that were made. ASCLD made a comment.

[Inaudible].

JOHN BUTLER: You want the adjudication?

JEFF SALYARDS: I guess by a similar show of hands, how many people felt like there were other problems with the document, it was not just recommendation three? Okay. So a smaller handful. All right. So I think there's

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probably some meat for us, maybe some dividends as we learn about recommendation three. Marilyn crafted what she thinks might be alternative language. The reason that I sort of shut her down was it wasn't really a friendly amendment. Our own subcommittee said, no, that's not a suitable substitute for what that recommendation three was.

NELSON SANTOS: Just before you go, I just want to make it clear, even if we all agree, this has to go back and then go forward. I just want to make it clear. We can't break from protocol. So I'm willing to entertain this, but let's not say, oh, let's just do it. Let's do it. So that's why I cut you off before. So let's discuss.

JEFF SALYARDS: So I think it would be helpful if you read that. Is that the new language right there? Yes. So the new language is up on the screen. And then one concern would be -- so first of all, does that scratch the itch for any of us? Does that help it? And then something to consider that we'd have to deal with in the subcommittee is, the paragraph that now follows recommendation three is very similar to the new recommendation three language, so we'd have some editing to do. For some of you who voted yes, you might decide, no, that recommendation three now softens the document too much and I no longer support it with the new language. So we probably need to sort -- get a sense of, as a group, you know, where are we headed. So, Jim.

JAMES GATES: First of all, I thank Jules, because I didn't think a general solicitation around the table would get us very far very fast. So finding what the crux of the matter is critical. And I think the next thing is, can we get Marilyn to speak a little bit to what it is that this new language accomplishes since -- so I think that's the most important next item.

MARILYN HUESTIS: Yes. So the very first thing that I think would be really important is my esteemed colleague to the left wants to say something, and I think he should say that first, then I will.

WILLIAM THOMPSON: All right. I have, I guess, a correction. So I said -- so earlier the issue was, would the language recommendation three shut down all progress on standards in OSAC, and I said well I certainly didn't think so, because a lot of the OSAC standards development has to do with things other than the fundamental validity of test, methods, and processes. And I said it certainly seemed to me that all those other things could continue on. But my colleague to the right then argued very forcefully that the plain language of recommendation three, as currently written, is inconsistent with what I had just asserted because the plain language of recommendation three says "Only for those forensic science and standards methods whereby the technical merit has been established by NIST."

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So, you know, I think she may be right, that reading that literally, I mean I think that would be a foolish interpretation, but it might be the interpretation that would be given to this. That would shut down things like coming up with standards for how to collect evidence, how to photograph the crime scene, how to clean test tubes or whatever else on things that have nothing to do with the fundamental validity issues. And we certainly don't want to do that.

I mean, it occurred to me that, you know, kind of channel -- I ask myself often what would Jules do? And Jules would wordsmith. It did occur to me that there could be a very minor change in recommendation three that might address this concern that Marilyn has raised, and to change it to read "The forensic science standards board should commit to placing consensus documentary standards on the OSAC registry of approved standards for forensic science test methods only where technical merit has been established." In other words, limit this conclusion to forensic science test methods, and then, you know, ruling out -- thereby ruling out validation standards, training standards, and all the other kinds of standards work that OSAC is so usefully performing, and limiting it just to test methods. I don't think this will satisfy my colleague on the right, but it seems to me that it might address the problem that she was complaining about in my comments.

It narrows -- so, yeah, it's a way of narrowing the issue.

NELSON SANTOS: Marilyn, go ahead.

MARILYN HUESTIS: So, if it was in an ideal world, it would be terrific, for any new technology that comes forward to do the foundational validity first, if we had a body that has unlimited time, personnel, and resources, that they could do that first, and then the discipline-specific experts could develop the test methods and practices. But that's not where we are right now. We have cases going forward. We are in the middle of it. You have disciplines that have been active for hundreds of years in some cases. So I think recommendation three, if we could somehow -- I mean, and we worked very hard in the subcommittee, and I will tell, as I told Bill, the committee truly was saying that no standards go forward until NIST evaluates the technical merit.

So if we could come up with language. I tried. And it's true the committee was not satisfied, because they felt it diluted too much the important effort to get the foundation validity established. So there's no issue with doing it. I'm saying the work, the work that the OSACs are doing to improve forensic science now, ought to be able to go forward, and it will be reviewed by NIST or an independent scientific body that NIST oversees,

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because our subcommittee made it very clear that their needs to be one body that gives the blessing. But NIST may establish other scientific bodies or review data produced by other scientific bodies.

So my attempt was to say let the OSACs go forward, and then when the technical review is completed, they may identify deficiencies or problems that require additional collection of data or additional review, and that will be fine. Those standards -- if NIST comes down with that technical review, those standards that don't meet that will have to be revised. And the OSAC standards are meant to be revised. They're living documents that, as technology changes, as the data changes, they may be revised to keep up with it. So I don't see any issue or problem with that.

But please remember that, you know, we're not the only body that's working to improve forensic science. The OSACs is a very large effort, overseen by NIST, to try to also improve the science, and we know it's going to take time. John, could you estimate the amount of time? And we talked about the new center of excellence that NIST has established to look at pattern evidence and things. That process is a long-term project. I thought five years, and you said there's really -- it's open-ended; right? So these things are going to take time, and we have to enable other improvements to occur at the same time. So what I had simply -- we tried many things. This was sort of the best, but it did not reach approval by other members. So if anybody could wordsmith to satisfy it so that the OSAC standards could go forward but be subject to the NIST technical merit review and cause for revision, that's what I think would answer the question for everybody. Thank you.

JEFF SALYARDS: Okay. Jim, real quick, and then we'll do Peter and Julia.

JAMES GATES: Thank you, Jeff. I think I understand the objection. And in my mind -- so let me offer a perspective. In my mind, this is -- in some sense, I guess I want to say that, for me, what's going on -- first of all, I think all of us on this group, and certainly us scientists, have the high level of admiration for what NIST does. And when NIST approves something, that carries weight in our world, a very special kind of weight in our world. And so, to me, the solution would be sort of that you have sort of different classes that you put in this, that you sort of stage it, and that maybe no one -- maybe no method gets to that ultimate class currently, but that we work towards moving things there. I mean, to me, there's kind of a this is the best that we have now, but our aspirations are this. We're not able to meet them, but I still think that a clear statement of those aspirations with full NIST endorsement, I would hate to see that lost with the work coming out of this group.

JEFF SALYARDS: So, Jim, there was an interesting point by Arturo from the medical community; that they have some areas where it's not necessarily validated but it's the best practice. It's a standard practice, and they say in the absence of a validation, we're at least all going to kind of do it the same way. But that would require

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OSAC -- that's a bylaw change on their end and a know nomenclature change on their end. So, Peter, you had your tent up, and then Julia and then Bill.

PETER NEUFELD: So one of the fundamental problems with this language is that it actually, from what I've learned, stands the scientific method on its head, in the sense that you're assuming validity, so you're assuming foundational validity so you can articulate a standard. And then if, subsequently, we learn that foundational validity is not there, then we will either modify or suspend the practice or method. And I think that's a mistake.

The problem that you articulated at the meeting yesterday, Marilyn, was that you were worried that it would be very difficult to get an independent scientific group in the interim until NIST sort of gets up to speed with the various disciplines to move forward and give you that kind of assessment of technical merit or foundational validity so standards could be promulgated, as I recall. And after you offered this language, you then offered other language as an alternative. And I think it's possible that the other language as an alternative might be a more viable alternative, because, number one, it still requires foundational validity be established first, before documentary standards, but it allows for the immediate creation of a realistic independent scientific body that can act in the interim and only in the interim, because that's what you were concerned with.

And that language more or less, that you also, you know, raised at the meeting yesterday is an alternative, which this group should think about. And that language goes something like this, that for an example, once you talked about the interim scientific body, one example or one time of interim scientific body could be for the OSAC itself to create a technical merit resource committee composed of independent scientists appointed and named by NIST, whose duty it is to evaluate the technical merit.

Now if the OSAC structure created an independent scientific body and that became a predicate before standards can be posted by the FSSB, that would be an independent scientific body. It would be much easier for NIST to find independent scientists than to do the work that they're talking about right now, and it would allow perhaps some of the more robust disciplines to immediately meet the technical merit by a disinterested independent body, as opposed to by a group that is not independent. And there's no question that the majority of membership in the OSAC would not meet that independent criteria as it's used in science, because almost 60% of the scientific members of OSAC are practitioners in the forensic community, which is not to, in any way, diminish the significance of their work or their integrity, it's just not an independent scientific body. But this would be a way to give you the independent scientific body immediately or almost immediately, and

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still make sure that in the interim, until NIST is up and running, technical merit or foundational validity has been established.

JEFF SALYARDS: Okay, Julia.

JULIA LEIGHTON: It's hard because I haven't seen that. That strikes me as an interesting proposal and one that I hope the subcommittee will take a close look at. I guess because I'm not on the subcommittee and you guys are going to have to work backwards on that, I want to just raise a couple issues. I think recommendation one and two of this are terribly important, and I don't want to see that dropped. So I want us to come back, at the very least, with a vote on one and two. But I'm not changing my view that if we redo three here, we are turning scientific methodology on its head. Let's be clear, that's what we're doing, and it's, Frankly, what's been going on for hundreds of years. And I'm not going to give my stamp of approval, but if it's what it takes to get the scientific method in play, then I'm willing to make some compromises. But we're compromising on the scientific method.

So whether or not the thing to think about is the language Peter just talked about, or whether it's a combination of talking about provisional standards, so let's not even say that they may need to be revised. They're provisional because they're based on an unknown right now. So if some other language like provisional, which means you will have to revisit them, it's not maybe, but they aren't real standards yet because we don't have real validation. But maybe they can be provisional standards if that helps move this forward, and add to it some of Bill's language that carves out an area of standards for which we don't need validation.

But my last pitch is my first pitch, that we need to get one and two. We need to get the scientific methodology going, and if what we embarrassingly have to say is that we're still willing to go a little backwards to try and get there, then so be here.

JEFF SALYARDS: All right, Phil, Greg, Tate, Tony. Phil.

PHIL PULASKI: I think Julia just answered one of the questions I had. So I was -- I knew that the scientific method was, you know, the sticking point. But I was then wondering if the practical sticking point was that when you put out a standard it can be interpreted as meaning that the standard for whatever it is you're doing implies that there's a scientific validity. So I was kind of looking at language similar to what Julia said, which

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would make it clear that this is a standard, but it's provisional because the underlying scientific validity has not been established. So I was kind of looking at language in that manner. But I like the idea of provisional as maybe meeting halfway. I don't know. Is provisional --

JEFF SALYARDS: All right. Greg.

GREGORY MOTTA: So, to maintain my consistent theme, I just want to ask, when it goes back to committee, consider the language throughout the document. So at various points it talks in terms of forensic science service provider. Then you'll recall that the committee elected to deliberately broaden that term to include criminal, civil, and regulatory. So anyone who does this for either criminal, civil, or regulatory, it really doesn't have a linkage to what this group, I think, thinks of traditionally as the heartland of criminal forensic science areas. And so the OSACs, in comparison, are tightly aligned along the criminal traditional forensic science areas, and digital evidence.

So if you were thinking -- so I guess what I'm pointing out is the document needs to be scrubbed to be consistent with the definitions that are used. If I am the FCC and I have a radio frequently spectrum lab that I use to disallow part 15 products, I'm going to wait a long time for NIST to validate my practices in this list. So the bulk of the document talks in terms of, really, forensic scientists that are used in the criminal justice system. In fact, it specifically says that in the paragraph below, which is what appears to be its focus, not civil or regulatory.

JEFF SALYARDS: So, Greg, we'll like look at that. But I think the document talks about OSAC, so it would be the things that they're take on, so. Okay, Tate.

TATE YEATMAN: Yes, I just wanted to respond to Peter and that in the subcommittee -- I'm sorry. In the subcommittee yesterday there was a discussion about establishing a resource committee in the OSAC of independent scientists that could establish this technical merit so that the work of the OSAC could move along. But there were members of the committee that felt that it would not be independent because it was still under the OSAC umbrella. So that was discussed as a potential way to remediate this language an allow the OSAC to move forward but have an independent and the scientists evaluate the technical merit.

JEFF SALYARDS: All right, Tony and then Arturo.

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TONI ROBERTS: So, this is a little bit futuristic and theoretical, but I still want to throw it out there. So let's just say we engage in this in five or ten or whenever we're done, are we done? Like, is that it? Are we still going to -- because to me, even though I look at latent prints today, I started off looking at cell, created cell biology. And in my experience in that field, it is evolving, it's not we're done, like, we're done with cell biology, let's forget about it. I mean, to me, that's not scientific. To me, science is continually an evolution process. You're asking questions. You're answering questions. And I get it, we're at that cross section with the legal system and at some point we have to come to a decision. But what's the maintenance plan? Like my experience with the OSAC has been we write a standard, we're going to review it every two, three, five years. So that's -- I mean, I get it, we're not there yet, but have we thought about those types of questions?

JEFF SALYARDS: Good question, Toni. Arturo.

ARTURO CASADEVALL: Well, I mean, just to go back to your last point, in science all knowledge is provisional. Cell biology, all knowledge is provisional. And if forensic science is going to be the status of science, mostly some point adopt that, knowing full well that in any one day it needs to come up with recommendations, and they need to be accepted. But I would argue that, you know, this is the single most important recommendation that this -- I believe this commission can make, and it failed. It, I'm sure, will come back in September, and I'm sure that we -- you know, we will continue at it. But at the heart of it is, it's now seven years since the NAS report. It was 2009; right? Seven years have past, and the issues that were raised on it remain controversial, unresolved, but the truth of what -- the criticisms hasn't really gone away, and here is an opportunity to begin to go forward, and this will not go away. This delay will delay until September, but it's a delay. And I think that delay should not be the strategy. The strategy should be to embrace the criticisms, deal with them, and basically put a lot of this in the scientific footing for this century, and that would, you know, we'll go back to committee and we'll work together, I'm sure. And I want to say, at heart, I believe what Julia says one and two are critical. Three I'll compromise on.

JEFF SALYARDS: All right. Barbara.

BARBARA HERVEY: I liked Peters idea, because the heavy-duty disciplines should fly through a separate committee, and that's going to help in court. I don't want to be in court and have something up in the air and people questioning what's going on as far as validity and having to come back to it every so often. I mean, we have enough of that going on now, so I liked his idea, for whatever it's worth, and how odd for me to agree with Peter.

JEFF SALYARDS: Tim.

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MARILYN HUESTIS: Peter didn't like it yesterday.

TIM SCANLAN: So just one quick comment. I think there's language issues that we kind of touched on that probably need tweaking. But one question I have is, we started talking about until NIST gets up to speed, have these independent bodies come in. But does that fly in the face of the views document we just voted on, that says, "NIST should assume the rule of independent scientific evaluation within a justice system for this purpose." So we just voted that NIST is going to assume the rule, but now we're doing this document that says other independent people can do it? I think we just voted that NIST is going to take on this role, so we've got to get on the same page; right?

JEFF SALYARDS: So I think the recommendation was how do we get there in the interim, and we've even had some of that language, of in the interim there might be other bodies. But, also, don't confuse the two hats; right. Who actually performs the work and who declares it valid, I think are two different points hiding in there. Vince.

VINCENT DI MAIO: I voted no, against it, and the reason I did was I like just the term "independent scientific body." I don't like naming specific organizations like NIST and OSAC and such, because suppose I want to go to an academic institution, and not NIST or OSAC, and get my advice, my testing and such, do I then have to run it through NIST or OSAC? I mean, you know, if you say "independent scientific body," you don't rule them out, you just give a greater freedom and, you know, more places to consult. That's what my feeling is. And I just can't vote for specific organizations in this instance. It's too important.

JEFF SALYARDS: Jules.

JULES EPSTEIN: Thank you. So one thing I'm hearing, which I'm trying to do what Jules would do, okay, is trying -- it sounds like one principle is a narrowing principle so that we're talking about not all standards coming out of OSAC but some, so we need a term of art for those "some." And I'm looking around, from what I could defect, there seems to be an understanding of the kinds of standards we're talking about, and we need a term there. So that might be part of a fix, because obviously also, once we narrow the range of standards, it's less work for whatever institution or unnamed institutions in Vince's world; right? So that's part one.

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I am loathe to go with provisional. I like the idea, Arturo. I like the idea of Julia. Let's get a compromise and get something in there. Provisional to me, is a term of art that says, well, it's passed some muster right now. I'm concerned about that. But I want to ask a practical question, because I'm just not sure what we're fighting over. No, it won't be on the registry until NIST signs off, but it will be public. In other words, if a group in the OSAC says, "Here's recommended practice A," right, and it's an improvement over what people are doing now, people are going to use it. If it's the same as what people are doing now, they're going to keep doing it. But this is before something gets branded as a standard that's scientific, there should be a sign off.

So, Marilyn, I hear it, and I don't want backlog, and I want to get standards out. In the real world, if your OSAC group comes up with something professional and well researched and rigorous, people are going to start using it. So that was just my thought there.

But I also think this can be fixed again -- and I'll stop -- by once we do the narrative. And I do think, Vince, it has to have a name group, because every one of us will disagree on who is the independent scientific body. And that was the good thing about NIST, it has this reputation, this standing in the community that sounds like a lot of people feel comfortable with; that it should be NIST or its designee does this. Maybe with a timeframe. But I think that's at least where I'm comfortable at narrowing and hopefully meeting a lot of the concerns that we were articulated. Thank you.

JEFF SALYARDS: Rebecca, we haven't heard from you on this as all yet.

REBECCA FERRELL: So, first, let me say I'm happy to be here. I've really enjoyed listening to all the discussion. I haven't said anything here but I have in subcommittee and wanted to address the concern about whether it's NIST or not, whether NIST is named or not, and I may repeat what some other people have said. But here's the evolution of my opinion about this. So I voted no on the subcommittee because I wanted more details. How is this going to work? Who are the people going to be that make these decisions? How independent is it? What is the effect going to be on the OSACs; right? And there will be an effect on the OSACs?

But I've also attended several of these meetings before on the side. I agree with Stephen and Julia and everybody. This is what you all have been talking about and saying you wanted to have happen. And what I asked the subcommittee yesterday was, you know, even given all of my reservations, is this the time that it has to happen in order to move forward? And if so, if it's true that a recommendation has more teeth than a views document, given the fact that we know that the deputy attorney general can do whatever she wants with that recommendation, but if that's the statement and it has more teeth, and if, as Peter just brought up, there is a possibility -- which I would support -- of some interim independent body -- I don't know how that

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will get decided or who will decide how it's independent. But if that's a solution to recommendation three, then I would really support that. And I think the most important thing is to get the first two recommendations through and compromise on the third.

JEFF SALYARDS: Thanks. Bonner, I think it's your turn.

BONNER DENTON: I think it's very important that we have a single independent gatekeeper that has a recognized track record and high standards. NIST, which, for years, was known as the National Bureau of Standards, now the National Institute of Standards Technology, is such a group. Other groups can provide background research for NIST, but I want one group that puts the gold standard stamp on validation for a technique, and I think NIST today is the right group to do that. At some future date, there could be a whole other entity set up just to do this. But to get us started, NIST exists, and I think they have the background and the knowledge of standards that is necessary to give the gold stamp to a particular type of validation.

JEFF SALYARDS: Matt, and then I think we've got Ted and then Marilyn.

MATTHEW REDLE: So, for those of you that are counting noses, I voted against it, and I voted against it solely because of number three and the issue that I saw that it presented. I believe, with Julia, that one and two are critical and need to pass. I would support Julia's suggestion of a provisional status being created. I don't have the same concerns that Jules does about the word "provisional." I think it means that we've come back and look at it as soon as we can. But the other thing that I -- and it's something that Tate brought up and something that Jules and I were talking about here just a moment ago, and it kind of goes to Bonner's suggestion, or statement rather. I think that NIST can create a group in the interim, and for the purpose of deciding what things may be provisional and what things may not, and it's on -- it's the responsibility of NIST that we're entrusting with this overall obligation to determine technical merit for the purpose of granting the provisional status. So, for whatever that's worth, in terms of ultimate votes, that's kind of how it see it.

JEFF SALYARDS: Ted, I think that's you.

TED HUNT: Just a quick point that goes to a question raised by Jules just moment ago, as to what do we call these things. For those who don't know, OSAC has a taxonomy of standards, and Peter mentioned that in the title of the document, methods and practices are mentioned. As I understand it, that specifically relates to what OSAC has defined in that taxonomy as a test method and a practice, which are two distinct types of

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standards in the OSAC world. So between now and the next time, I would just urge everybody to take a look at those definitions, because that kind of gets to the conceptual difficulty I had about exactly what is the scope of what NIST is being asked to do.

JEFF SALYARDS: Barbara, are you good? Okay. Marilyn.

MARILYN HUESTIS: So, I think what happens in the OSAC process is the subcommittees come up with documents. And I think you said it very well, Ted, some are practices and some are methods. Then it goes through the next level, which is the not the subcommittee but the -- like, the chemistry OSAC. Then it goes through the human factors, the statistical group, whatever, and then it goes to the FSSB. But then it goes to an independent external standards board. So the issue about provisional, I don't have any -- I don't know the answer, but I don't think you -- a standards board is independent. And I don't know, Fran, can you speak to that? But I'll be done in just a second. But I don't know that we can do that. We have to find that out.

The second thing, Jules, about labeling and narrowing the focus, okay, so, I'll give you a good example. So labs all over validate their methods from terrible to great; okay? So the OSAC Toxicology Committee has worked for three years to come up with a method validations is considered a standard on how that will be done. And it specifies exactly how many controls, what levels, how you define linearity. How you look at robustness, temperature. It spells out how you must do that. Right now labs are doing it any way they want.

So this is an example where that -- that is now currently at the standards board; okay? So it's passed all the levels. It's there. That's critical to improving the practice of method validation. That is doing a lot to help support the foundational validity of how you determine a method. So I don't know that you can narrow it. That's not a method for how do you analyze X. That's a practice on what we consider the way to do it.

So it's critical that these documents continue to move forward, because they're going to improve forensic science considerably. We can look into the question of is it possible to call it provisional. But remember, just what Tony was talking about, the whole idea is that these are going to be looked at and looked at and looked at, because technology and science is going to continually change; okay, whether it's got the NIST blessing or not.

So when we talked about it, first of all we talked about can we just put one and two forward without three? But people felt that that was not appropriate, some people. We talked about an independent scientific body

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within the OSAC, but, Peter, you did not want that because you felt it was within the OSAC umbrella and rejected that. So, I mean, I think what's key is I don't know if we could do without three and we could -- one and two would go forward, or how do we keep things moving so that we are improving forensic science at the same time? So we'll look into the provisional. And there's a lot of FSSB people here who might be able to answer that. Fran might be able to add something.

JEFF SALYARDS: I think we've learn a lot around the table from all of you. It's very helpful. One thing I'm going to take away with our group is, I don't hear any real energy of I only like it as a package deal. I hear a lot of you saying recommendation one and two are really important and I'm willing to compromise on three. And so as a result, I think, as a subcommittee, we need to explore, should we submit them individually. We vote on one, we vote on two, and we do our best to vote on three. But I don't hear anyone, really, around the table saying, if three doesn't make it, I don't like one and two. So we'll tackle that.

There was some great -- and I wouldn't say even compromises -- but synergies offered around how the OSAC might create a technical review resource committee, that if the right people were appointed to it, it could function that way. So we'll look at some of those options, and I think we can come back to you with another try.

MALE SPEAKER: Jeff, realizing this is a very important issue, and obviously the discussion was probably about as in-depth as we discussed in the last few meetings, is it worth it to you to take a straw poll to see whether people -- if it was just limited to one or two, whether people have an interest? Because to Julia's point, I want to make sure, if you go back and do something, you come back with something that's going to be fruitful for the commission to discuss and not just continue down the same path.

JEFF SALYARDS: Sure. So by way of a straw poll show of hands, how many people would have voted yes on just recommendations one and two? How many people would have voted no on recommendations one and two? Okay. All right, very helpful.

NELSON SANTOS: Okay. I think that ends the official meeting, and I will turn it over to John to, I guess, really end it officially and then call for public comments.

JONATHAN McGRATH: So do we have any public comments? All right, seeing none, I want to thank everybody with all the work everybody's been doing. As a commission member at the subcommittee level member, and

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here, too, thank you very much. This was a very good discussion, and hope everyone enjoys their summer. We'll see you in good Gaithersburg in September. Meeting is adjourned. Thanks.

END OF TRANSCRIPT