Transcripts of the Attorney General's Initiative on DNA Laboratory Backlogs (AGID-LAB) Working Group

Monday, March 4, 2002
The Great Hall
U.S. Department of Justice
Washington, D.C.

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ADVANCEMENTS IN DNA TECHNOLOGY

MR. MORGAN: As part of our continuing effort to explore the causes and the solutions to the DNA backlog, we've really been dividing the issues into two areas. The nontechnology issues as they were discussed by Tim Schellberg, things like expansion of the covered offenders, and that kind of thing. And then the issues that will be addressed by this panel, which are the technology issues.

And I would further divide those into two areas. First, what are the gaps and technology that currently exist, both the gaps and what technology and the gaps available technology that is actually at the crime lab.

And in the second category I put the opportunities. That is what do we need to be looking into for scientific research and development. And to that end, we have four panel members. Two from the state crime lab directors, who are state and crime lab directors. And you'll also be hearing from similar individuals at a later panel.

And what we really want to get from them are what their problems and needs are right now. And from these gentlemen, in particular, what solutions they're applying.

I think you'll find that these two states, Georgia and North Carolina, are putting some very innovative solutions on the table right now with the available technology.

And also try to learn what they see as the needs and opportunities down the road. And then from the science side and from the research side what - find out from them what technology they would like to see put into the state and local crime laboratories, which is an expert systems, and what they think will be available down the road such as chip-based technology.

And the four individuals we'll be hearing from are - first, we'll be hearing from Dan Ehrlich. He is the Director of the Bio-Mem's laboratory at the Whitehead Institute at the Massachusetts Institute of Technology. He is responsible for the NIJ effort in developing a DNA chip system.

His engineering group develops next generation instruments for DNA sequencing, either for forensics or other biomedical applications. He has a very long publication record in lasers, medical electronics, and miniaturized devices from molecular assays.

And I'd like to turn it over to Dr. Ehrlich right now.

MR. EHRLICH: Thank you, John.

I have just prepared a few - very short remarks reminding you of the system that we're developing and updating you on its status, and I know this is a very interactive group, so I'm going to keep it brief.

As many of you know, we have been funded by the NIJ. Thank you, Lisa Forman crew, to develop next a highly specialized chip-based system specifically for forensics. This is chip-based

because the data quality factors and the speed of a chip-based system exceed that of a capillary system.

We're also developing specializations to make it easy to use. And I want to give you a quick description of how that turned out in the design. We've been working on this extensively for a period of 14 months now under the NIJ funding.

The key features of the system are that it's able to obtain extremely high speed due to the short analysis channeling of a chip-based system. It is capable of being evolved to a very compact size. I'll tell you where it stands right now in terms of portability. It has extremely high signal quality factors, which we intend to exploit for specific forensic needs such as mixtures and other particular forensic needs.

And it is - we've tried to partition the system to match the needs of the lab. The basis of this system is electrophoretic separation. It uses the standard technology that which is already in wide use in the labs. It, therefore, does not, or should not require new qualification or verification procedures that you have not already established. And that was a key to other chip-based systems. However, they would have required extensive validation. We don't believe that's the case here.

It is being developed initially for bench-top use. And as you'll see actually it's very well suited to a case study application. It can evolve in various directions depending on how the community decides it needs it to go in the future.

Let's me show you where the system is. I do not have this as a Power Point slide. Fortunately it's impossible to get into the format. So what you'll see is there are actually two units here. There's the bench-top unit.

This is the first of three prototypes which the first one has completely been assembled as of this month. The second too will be at the end of this month. You can see there's a bench-top unit. The chip slides in the top door of the bench-top unit. That is connected by fiberoptic link and electronic cables to the support unit, which includes the laser needed for the detector and electronics.

The strategy - this all may very well bust in a very robust format by a vendor which who we subcontracted to use to making mill-stack back equipment. Therefore, it's capable of being moved around in these two units and it would be able to take a lot of the abuse because of the fiber optic link.

So this is the compromise that's been made on portability at this point. It's a bench-top unit but it is very portable. In its current format, the bottom unit can be replaced in the next generation machine and actually largely, nearly completely eliminated using solid, state laser source and summary design of electronics.

So that's how it's currently looking. And I guess I can go back to the Power Point slides. The working element is a 16-lane chip. This is what the chip looks like. It's actually a very long

device, and that's because we wanted to get the highest possible data quality out of the forensics assay.

It's possible to make much smaller devises, which optimize at high speed for a type of fast-screening application, but this size is required in order to obtain the very highest quality data which we believe is the first priority for the application.

On this device, I make further other points up here. It can be loaded with a robotic fluid handler. In fact, we use a very inexpensive T-can robot about an $8,000 device which also would be able to set up the PCR reactions. It also can by manually loaded.

Runs in 15 to 20 minutes if data quality is the objective. Can run in short is one to two minutes for a fast-screening application. And that's part of the appeal of the chip-based system.

This shows some of the structure which is in the glass device I just showed - just held up. It shows the 16 channels. Up near the top of the device you can see the press injector structure which is used in which the sample is so-called cross-injected into the channel. That's one of the key features that allows it to outperform a capillary.

This is a short video clip of the sample loading into the channel. What you see is the DNA sample initially brought the orange-colored substance brought down from the sample loading well across the analysis channel. And the analysis channel is horizontal in the slide and the detectors on the left.

You can see this intense concentration of the DNA sample as it is injected into the channel as part of the loading. This is what - a very key feature that allows it to perform at such a high level.

We have run a fair number of samples thanks to the various collaborating labs. These are from the State of Virginia lab. We are able to have run all of the current and even the experimental multiplexes in a single channel. So we have 16 channels. Each capable of handling full multiplexes.

I'm summarizing now. I think I've touched on many of these questions. It will do a standard multiplex in about 15 minutes with very, very high data quality, sixteen channels. There are issues which remain as to how to integrate it into a standard forensics lab usage.

And this we will begin our collaborations, which are scheduled for the two Florida labs, the Virginia lab, and the State of Massachusetts. And these will be very imminently and certainly in the next quarter and will begin to figure out how to integrate these into the lab practice and to find out if we require any changes in the lab practice, but I don't believe we will. We will figure out how to connect this with automation.

One question we got is: Will the chips be disposable not in the first iteration? There's no requirement to do so anymore than there is in a capillary system, but certainly it's possible to evolve to a disposable, probably plastic-based chip.

Will the system be portable? Well, initially it will be portable in the sense I've just shown is it's going to be a very robust system which could be transported without loss of alignment and so it should be transportable in that sense. It has a potential to go further.

Software. We're going to hear from Mark next. We'll be integrating with Mark Perlin's expert systems software.

When will it be ready? Well, it will go into its first beta test in the next quarter. Over the course of a year, we will be interacting strongly with the state labs. And state personnel will be coming into our facility and running the prototypes. And so sometime we'll have the detailed schedule as to what happens after that is in discussion at the moment.

I've already mentioned who will do the beta data. And we welcome additional input from people as they may have it. So just contact me or Lisa.

And how much will it cost? We always get that question. I don't know. There is not a detailed plan to bring it out into the labs at this point, but it's certainly designed as an inexpensive system. All the choices were made such because we know that this community is capital adverse. So that's my summary.

MS. HART: Could I just ask one quick question and part of it is a conceptual one on my point of view. Obviously not coming from a scientific background here, but conceptually how exactly is this to be used?

In other words you're talking about let's suppose somebody is taking a rape kit or let's suppose somebody is at a crime scene, how would this - when would this chip come into play and who would be using it and how does it get to the lab? I mean, I don't know - it's beyond me.

MR. EHRLICH: We saw this as taking and probably being inserted in a sequential fashion into the crime lab. The first thing it would do would be simply to replace current analysis systems which are not as expert of doing the application or as well as streamlined in doing the data logging and all of the overhead related to casework. So this would go directly into the state crime labs and be used as to streamline the current practice.

It does have potential to be used in other applications, including closer to the crime scene probably still with an expert operator but this - the first stage of this would be to go directly into the labs to replace and streamline current practice.

MS. HART: But the idea of having a portable system is ultimately so that it could go outside the lab?

MR. EHRLICH: In principle it has some considerable ability to do that, because it's a small machine and it's been - all aspects of it are small, but in principle can have a little power consumption and those kinds of things.

There is some additional lab practice, which also would have to be brought to the crime scene, for example, which would include the sample preparation steps and so on. So that is a bit more complicated technically as well as having very social issues.

MS. HART: Thank you.

MR. MORGAN: Our next speaker will be Mark Perlin. He is the President of Cybergenetics. He, in general, develops biomedical information and automation technologies.

Some of you are certainly familiar with one of his previous products which was the - he directed the development of the TrueAllele automated data scoring software, among other past projects. He is the CEO and founder of Cybergenetics, hold adjunct faculty appointments, and computer science at Carnegie Mellon and in Human Genetics at the University of Pittsburgh and will be discussing expert system software.

Dr. Perlin?

MR. PERLIN: Thank you.

So they'll be talking about the automatic meat interpretation of various forensic DNA data, expert system technologies for reducing the backlog.

Just a quick note. What is this data for the two or three of you who may not see it every day? The first on type of data is when you have one person or a pristine profile, you get one or two peaks representing the two alleles.

And then in casework across a number of loci you may end up with many contributors. For example, here there were four peaks corresponding to four alleles. It can get more complex from there. So this is what we're talking about data at one locus or one genotype.

In generating STR data, over the last ten years we've seen quite a lot of technology and automation. We've gone from a cottage industry to having automated sample preparation and extraction, automated thermocycling, and automated sequencers.

In the U.S., as we start the process of interpreting all of this STR data, though, we end up with lots of people who may use computers as part of the tasks, but spend a lot of time of looking at data and then chatting with each other and discussing it and looking at every peak.

So this has led to an interpretation bottleneck where the data generation, which is done by machine, largely overwhelms the human review. So what's needed is some kind of computer automation that provides the quality and assurance and the integrity of our databases and can be used for casework and mixtures. And the key goals here are having no error, having very high input, and having no staff or small staff.

(Laughter.)

MR. PERLIN: So TrueAllele technology is something that works in eliminating the NDIS review bottleneck. The idea is that the information, the raw data and the original data comes from any gell-based sequencer or capillary instrument.

The computer automatically without human intervention, running on most any computer, Macintosh, Windows, UNIX, does all the necessary steps, color separation, and image processing and tracking, single analysis, ladders and so on, down through quality checking and reporting.

And the output of this is quality assured profiles, which can be put onto a database. I can't go into the thousand of things that the system does and the dozens of things we had every week. So I thought I would just tell you about one thing, a data quality rule.

The system has dozens of rules, which if used, is to check every genotype. This is an example of one rule. They're all, of course, user-customizable to whatever the thresholds are, whatever a user wants, whatever the groups' SOPS might be.

This is a third peak rule. And it's designed to be in accordance with a state standard operating procedure for how they would want a third peak to be recognized. The idea of the system is that if you passed these 20 or 30 rules, then the data generally, and you'll see stats in just a second, have no problems and don't require extensive or any human review.

However, the 10 or 15 percent that might be flagged, the computer has diagnosed it and it tells the user what the issues might be and then we suggest that a person looks at it and make a decision.

So the TrueAllele process is something that packages up how this software is used. And looking at what we do we find that the software itself is barely 5 percent of the lab's using this.

Our concept of it - this is a desktop system. This is a photo I took from our office the other day. This is how we office data. Essentially it's a factory of computers that just sit there happily processing data. And a person is involved in another room or in the same room. And what the person does is, like on a production line, checks what the systems check have been.

So the computer does all these checking and quality assurance and calling and whatever needs to be done. And then a person monitors that the computer has a sanity check and is working the system properly. Then at the very end that 10 or 15 percent of data can be looked at.

The three-foot of this of just looking at the data that needs to be looked at in our validation studies comes out at about 100 genotypes measured as one locus of one sample per minute to cross several platforms. The validation studies were done. Once we had the original data, the concept is the expert system did most everything. Then the computer would make a decision of accept, reject, or edit.

In production, a person would only look at edit. However, in validation, we would review all the data and the person would agree or disagree by accepting, rejecting, or editing.

The validation results from Palm Beach, FDLE, New York State, Virginia. We continue to work on various studies that generally show that 85 percent of the data across these platforms, FM Beyer 3,700, 3,310 and so on, do not really need to be looked at or looked at that carefully. And that there's basically no error.

When we do get anything at all one, even one in 10,000, one in a 1,000 issues coming up, we then go back and retune the system to that lab's specific needs so that in the end there is no error, but we maintain the efficiency. So the result is the computer can do about 85 percent of the data without people looking at it and the designations are correct, which may help eliminate that backlog.

With mixture interpretation, some of you may know we've been doing quite a bit of this on automated casework. In doing the analysis and the reporting, we've built about, I guess, the tenth system, prototype system, in the last three years on this. And I'll give you a quick note about what it's doing.

There's a lot of complex math. This is a simple bit that was published in general forensic sciences in November. And there's I don't know how many man-years of effort, but have gone on into making this mathematics into something very robust for general casework. I won't go into mathematical or statistical details today.

The first thing that we're validating is a rape kit process. And, again, I say it's a process because 95 percent of the work in how we design these things is thinking about how do we get from the original data all the way through to what the report will be in a way that might be useful with audit trails, ports, and so on.

So the original sequence of data comes in. And then if it's batched data it goes to TrueAllele. And all we do here are the quality assurance tests. Nobody actually looks at the designations at this point. We're just making sure the data is of high quality and looking at the controls.

The output of this initial batch processing is a quantitative peak database. And every peak has its quantitation (sic) attached to it, and that's the input that's used for the automated mixture analysis. And then the system does the interpretation, the reportings, generates figures, statistics and so on.

The first run-through we did, we'll talk about in a second, on a per-case basis, there was maybe five minutes of human time spent in the generation of quantitative databases from the original sequencer data and about one minute of human time just looking over what the case did. It's still too slow.

The LMA rape kit validation, we started off - we actually have data from a number of groups. And as we move the technology, we start doing studies.

With Illinois data, we looked at 25 cases. These are non-suspect cases. We looked at the mixture plus the victim and then infer the suspect. The linear mix analysis that's reported in the literature

is the starting point for that. And then the computer goes off and does a lot of sophisticated statistics for the other 99 percent of it.

So what you end up with - I'm intentionally showing you a case that's somewhat ambiguous, but let me just walk you through it. The computer automatically generates thousands of pictures like this. Here is the known victim profile. This is D-18. This is the observed mixture data. This is - on the third pane, a model of what it might be with the mixtures computerized and the different contributors inferring this genotype.

In most loci, this is a 25 percent unknown suspect. Most cases, the third panel completely matches the second panel. That is the model matches the data. However, in real data, you often have ambiguity and the result is the computer will compute - it may say that initial answer of 1519 has a 60 percent probability, but it goes through and reports the probabilities of any ambiguous loci telling you what the genotypes are. It can do it at the full genotype level.

It's most useful for CODIS applications to report at the individual locus level. Most of the time it gives you a unique answer, but when it doesn't, it tells you the extent of its uncertainty. The results are objective, complete. It looks at basically everything. It's accurate.

We're working on efficiency, five minutes per case is okay, but there may be more cases coming along. It's fully automated.

What I found most striking in this first validation is that it occurred to be only after the fact when I sat down with the forensic scientists, but I've never seen it peak from the data. It was just all done by computer from the peak database. And it generates all these reports such as these statistics and the various useful figures.

So where we're going with this is looking not at how to infer profiles, but how in this case if you had,say, two crime stains, each in yellow, with a low level contributor, how the computer can pull out the exact probabilities of each genotype. And then from that, of course, using CODIS pull out who the perpetrator might be.

I hope in two months or so we'll have some testing on new stuff for multi-scene interpretation. Here, again, yellow may represent a bit of contributor for multiple scenes. And the goal is to pull out relatively unique profiles that can be used with a goal of one day having computers doing continuous DNA surveillance on quantitative peak-based data of the type that you see in your lab across the country giving you the ability to identify people, apprehend them, but also to convict them, because all of the statistics are done up front and you know the exact certainties with which these profiles are unique.

I'd like to thank our collaborators who have provided us with the data, the Florida, Virginia, and New York labs, the people in our group, NIJ, who has been very generous with their support, and our host, the U.S. Department of Justice.

Thank you.

MR. MORGAN: That's great stuff. Thank you.

George, are you cued up first or is Mark?

MR. HERRIN: Mark is.

MR. MORGAN: Mark is, okay.

The next person on our panel is from North Carolina. It's Mark Nelson, the special agent in charge of the molecular genetic section of the North Carolina State Bureau of Investigation, a charter member of SWGDAM, and an inspection team captain for ASCLD-LAB and an NFSTC. And he is also serving as program manager of the National DNA Audit Program with NFSTC.

Mark?

MR. NELSON: I'm going to give you a little bit different perspective today from a state laboratory level. And I'm going to do this by taking you on a historical trip first, because I think it's important that we look at where we were as to where we're going.

Going back to the old days, we started our laboratory in 1989. We were using RFLP Technologies. And I start today talking about databasing first and then switch to casework.

We prioritized our samples. We did sex offenders and murderers first. And we got pretty far along that process and the STR Revolution came along.

And the point that I'm trying to make with this slide is we have to be very careful about changing technologies, because they're going to directly impact our backlogs. So we went from having a database that was partially complete to having a database we had to start all over again. So it's very important that we be careful of our technologies changes.

The reality for dealing with these types of things, of course, is the only people who can get blood out of a stone is the IRS, and resources are very limited. So with that in mind, we decided to set forth two types of strategies. A short-term, which we would outsource our samples and then simultaneously work toward a long-term goal of building the infrastructure within our own laboratory and using new technology to handle the samples ourselves.

So our first strategy, we did outsource samples. We did get NIJ assistance and were very greatest to that. They did come to our rescue. In one year, we outsourced 8,500 samples, and in the next 14,000 convicted offender samples.

And this year George and ourselves, I believe, are the only two laboratories that sought NIJ assistance to do our own samples in-house. And one of the reasons for that is we were using our long-term strategy in developing new technologies to help us in this.

But the other thing is that we found that 30 percent of the effort of outsourcing we had to do in the front end and the back end. And it was - just made good sense to go ahead and do it all. Why not do the other 70 percent in-house.

It gives you some idea where we were last year. We had 47 percent - I'm sorry, two years ago, of our backlog untested. This year we had - or at the end of 2001 we had 9 percent. And of those 9 percent, two-thirds of those are now in CODIS and the one-third will be in CODIS by the end of this month.

Of course, one of the nice things about the NIJ grants was that we do a lot of unsolved cases and we obtained the 17 percent roughly hit to those unsolved cases. And the numbers are actually outdated, because last week we got a hit to another one of these cases.

So some thoughts on outsourcing. The backlog is down to the point where we could handle it ourselves. It gave us the time to validate the automated technology that we needed to handle these things in-house.

The other thing that we knew is that federal funds aren't going to last forever. It would be a new baby that politicians will want to kiss one day, and the funding will eventually dry up. And as long as we get federal funds, we may not get our state legislature to give us the funds that we need on a continuing long-term basis.

So with that in mind, we decided to pursue simultaneously our long-term strategy, which is using new technology. In '98, we put robots in our labs. Unfortunately that particular robot didn't do what it was advertised to do. But in 2000, we did put kides (phonetic)and robots in and they did perform. This is the exact robot that we used in our laboratory.

The beauty of it is that it will handle 96 samples simultaneous. It takes three hours to do a run. And we're routinely making two runs a day, or we're getting about 200 samples through our laboratory a day. And these are convicted offender samples now, not case samples.

We coupled that with another robot which is an automated pipetting station. And if we actually got this thing to work with one micro liter in volumes. And it does all of our amplification setup stages.

And we actually had individuals in our lab that were getting repetitive motion disorders from doing all of this pipetting states. And we have now eliminated that by getting machines to do that grunt work for us. And it does it much, much quicker.

Well, the next bottleneck that we ran into is we were using blood on paper. And the analysts were hand-punching these samples. And there, again, they were complaining of sore hands. They're doing so many of these things. And we were concerned about sample mix-ups.

So we evaluated some automatic hole punchers, and we found one that had a bar code reader on it. It would automatically generate the sample order, if you will, in this 96-wheel plate. It will not allow you to put the same sample in twice.

And it's an exportable file that we can carry through the entire lens system through the whole process. And now it takes twenty minutes to punch a plate instead of two hours. This is the unit that we used. And you can see the bar code reader on the top there.

The next bottleneck that we had was we were using a gel-based system. We were running ten gels per day. It's actually ten times two because we used two different amplifications reactions. And we were processing 250 samples a day.

Well, that was done during the day. We want something that will run at night so that we can during the day extract and get these robots to prepare the samples and then run them at night and have them ready for us the next morning. So we now purchased two capillary electrophoresis units so they'll do that for us.

The next bottleneck: Reviewing the data. And this was a real bottleneck. So we are looking now towards expert systems, which Mark just talked about, to help us with these efforts.

And hear my thoughts. And, again, now say that these are my thoughts that I don't represent those in my agency. I would recommend that NIJ use the $1.5 million in key-c funds that they have to purchase expert systems and put hem in the databasing laboratories. That's where they're needed in the labs that do databasing, because we deal with large quantities of samples and batch formats.

I would further recommend that that be part of CODIS software for those databasing labs so that when we get a new CODIS upgrade, if there's a new expert system upgrade, we automatically get that to us through the CGIS WAN. I think that would be a wonderful thing that NIJ could do for the community.

Let me switch now and talk a little bit about casework. You just heard about chips. Certainly they're going to give us a faster turnaround time on those rush cases. I really like the idea of doing it in the laboratory where they'll bring us a rush case, and they want the answers like right now.

We keep an analyst in the laboratory all night. We can get them a result by 8:00 o'clock the next morning. What I'd love to be able to do is do this in twenty or thirty minutes while the officers are waiting there. That would be wonderful for us and then eventually take them to the crime scene.

How should we use the chips? I get terrified when I hear about we're going to give officers DNA chips. I think that what we need to do is make sure that it's a qualified DNA analysts that's doing the testing. You have to be in order to put it in CODIS and do a search against CODIS.

And what I would really foresee is we have agents or scientists or police officer scientists that go to crime scenes and utilize this technology to develop the suspect profile, run it against CODIS. If we get a hit, we can then get a search warrant, find the guy, serve the warrant, do your sample, and then issue a lab report and attach it to an arrest warrant and he goes to jail. The case is over with and done.

I've given some thought to chips and how we could use them at the scenes. And one of the first things we talked about obviously is speed. But if we have to look at the questions versus the lung samples, because quite frankly from the time it would take me to get from my lab to a scene, is about the same time it would take for an officer to get from the scene back to my laboratory with a bench-top type unit.

So the real speed lies when you get a hit, and you can then process that suspect standard right there at the scene. That saves a tremendous amount of time. But I think the real benefit to us is it's going to lower the risk of contaminating of the evidence.

You'll have a scientist on the scene which is going to increase the credibility of your evidence in court. And finally when you go into these scenes, and I've been on over 200 murder scenes in my career, there's blood all over the place. How do you select which samples to collect?

And by being able to screen right there on the scene it will allow us to get those critical samples when you only have to do ten of them before we find the suspect's blood at a murder scene. And I think that's where the real benefit is going to lie.

So where do we go from here? Again, I'm full of ideas and I'm giving them to you. I think we need to switch the funding emphasis from outsourcing to building the infrastructure in the state and local crime laboratories so they can handle their own work.

And to do this we would need immediate funding for equipment, supplies, space, and most importantly people. Because with casework, it has to be people-based. We just don't have the resources to do all these cases if we don't have the people.

We were not able to participate in the backlog reduction - casework backlog reduction because we lack the people to even process the front end and the back end of these things and enter them into CODIS. And I think that's a real shame.

So how can we do it? If you can't fund the people, maybe you can provide incentives to states to beef up their crime labs by tying it to hopefully a carrot instead of a stick, i.e., some ideas.

If you want federal highway funds, upgrade your crime labs. If you have more cops under the cops program, upgrade your crime lab. Put people in there. That may be the kind of incentive that we need because 98 percent of the crime scene work is done at the state and local level. It's not done at the federal level.

And the way that you guys can impact the casework is by providing us with the resources or the incentives to get our people to give us the resources so we can do a job we're required to do.

So priority one. Let's make sure we stabilize the type of testing we're using. We're talking about backlog reductions. Ninety-five plus percent of all of the cases that are out there that need to be tested can be done with STRs.

Sure the snips and the mitochondrial and lyochromes and stuff is very important but only to a certain percentage of the cases. So let's look at the majority of the problem first and concentrate our efforts there. I'm not saying we should cut down on the research end of it. But if you really want to put your bang where your bucks are, you're going to have to go to working unsolved cases with the STRs so we can compare it to the database.

My laboratory was in the process of setting up a minor lab. We had to withdraw that because we felt it was more important to be able to address 150 unsolved cases in a year instead of only ten mito (sic) cases.

So my final thoughts. Outsourcing is a short-term fix, and we have to use the resources available now through technologies to increase our capabilities, and we need to build up the infrastructure in our crime labs.

MR. MORGAN: Thank you very much.

There was things that you said that really stuck in my mind as a former state legislature and that is when you mention that 98 percent of the crime work it occurs at the state and local level. And we do need to keep in mind that this is really an area where the federal government is here to provide a helping hand to the people who are really having the problem. And that is the state and local crime labs.

Our final presenter on the panel is George Herrin. He is at the Georgia Bureau of Investigation Laboratory, and has made several stops around, including Rice University, Texas A&M, Cellmark Diagnostics.

He joined the Georgia Bureau of Investigation 13 years ago and was responsible for the establishment of their DNA testing program. He is now assistant deputy director of the Division of Forensic Science there and has shared responsibility for the establishment of their quality system accredited to both ASCLD-LAB and ISO standards.

Some of their statistics to the end of February 2002, they've done a total of 81 forensic case associations. Ninety-five links to specific offenders and 224 aids to investigations, which I think stacks up pretty well across the country.

George, take it away.

MR. HERRIN: What I would like to do with a slightly different twist, if I can get this Power Point to go forth. I want to give you a little bit of a background about what DNA testing at the GBI laboratory system is like.

We have seven laboratories in our system and two of those laboratories have DNA testing in them. But out of those seven laboratories, we only have 15 staff members involved in DNA testing. And you'll see that that's a fairly low number compared to the number of amount of output that we're doing.

And I broke it down here. And Mark and I would really like you to pay attention on this one slide here, the fact that seven scientists are involved in reviewing offender data. And I think this goes back to what Mark Perlin was saying is that we need expert systems to help in this.

Now, in calendar year 2001, we entered 31,793 samples into CODIS. We're an all felons state. We do all felons as they go into or leave the system. A prison system who have stayed in a state-paid-for bed. So if a person gets out on probation or something, we don't get to collect those samples.

It's also nearly over a little over 3,700 forensic biology service examinations. And this includes everything from blood examinations to DNA typing to semen identification. And as you can see, we did just a little bit less then a 1,000 DNA-type examinations, and 164 of those were no-suspect cases.

This has been an ongoing project with me since I was involved directly with the DNA program and that was that we would put a lot of emphasis on doing the no-suspect cases, because the CODIS database is useless without the no-suspect cases being worked. You're just spending a lot of money and a lot of effort to produce a database which is trivial and not going to help you at all.

Now, where are we standing right now? This is active cases that we have in a backlog. We have a little bit over 11,000 services which are incomplete as of last week. Most of those are not in casework. We're fairly well caught up in casework. Most of those are in the offender samples.

We're working very, very fast to get the offender samples done, but we haven't gotten there yet. We hope to be at a zero backlog in offender samples by the end of this year, and we're going to do that using the technology that I'm going to show you here in just a new minutes.

Now, for the equipment that we're using for DNA testing, we also went with a robotic system. We have two of the kides and bio-robot 3000, which are the customizable units from Kiajon (phonetic). Each of those systems can process about 350 samples a day.

So we have the capability of processing nearly or extracting DNA from about 700 samples per day. We have two ABI 3100 CE systems. This is the 16-capillary system and then 1 ABI 310 system which is used for a backup or for problem samples.

And then we have three of the 9600 or 96-well thermocyclers involved in just doing the convicted offender samples. And in all of those cases we did - you see we have multiple instruments of each type and we did this as an effort to back up so that we would have redundancy. If any one instrument fails, our program does not shutdown.

For casework, we have five of the 9600 thermo cyclers and then seven of 310s. We're hoping in the next year or so to get another 3100 to support casework samples. That's going to depend a little bit on funding.

Now, the average caseload, as I said, we only have 15 people or staff members statewide devoted to DNA testing. And as you can see, that means that there's a lot of casework being done per scientist. 314 services per year or 26 per month on average. That's a lot. This involves everything from screening of the evidence to locate the stains, to the actual testing of the items for DNA and there were 115 DNA services a year or 9.5 per month per scientist. So it's an extremely fast work pace in our laboratory.

Offender samples, we only have one scientists currently tasked full-time for processing the offender samples, because of the robotics, once scientist and one technician. So that one scientist is tasked with doing nearly 16,000 samples per year or 1,324 a month. So they're really moving.

Now, the reasons for the high productivity is that we've gone to extreme automation of extraction procedures. All of the extractions are done with robot. We're using a buckle-swab collection. You just break the swab off and put it in the test tube and the robot takes it from there and you don't have to touch it again.

Standardization of procedures. Our procedures are exactly the same in each one of our laboratory sites. There's absolutely no variation whatsoever. This makes for a lot of good things to happen in which I'll talk about in a minute.

Computerized record storage: LIMS. We are 99 percent paperless work environment in our laboratory. We keep no paper records whatsoever.

Accreditation. A lot of people don't like accreditation, but I think it's a very good thing. And then the professionalism of the staff obviously.

Now, what is the impact of having a LIMS or a laboratory information management system. We can keep an electronic chain of custody. We don't have to continuously sign chain of custody documents. Every piece of evidence, including the offender samples is bar coded.

Standardized reporting for casework samples. You don't have to worry about how to report a statement. It's already in the computer for you.

Electronic signatures on the reports, we don't have to manually sign reports anymore.

Internet distribution of reports. We have a website that all of our reports are distribute through. We don't mail reports anymore.

And ability to batch up and date the status of services in a batch of cases. If you want to do them, you know, 90 to 100 services at a time, and digital photography and input of all analytical results. All of the results are on the LIMS systems so they can be reviewed right there in one place for a case. You don't have to be looking through your file cabinet for paper to review a case.

Now, why standardized? Training times are decreased and made for effective. Procedures are easier to troubleshoot when problems arise. And data review is streamlines, not streamlined enough, but it is streamlined.

Now, the value of accreditation is we have recognition in the community. We have fewer challenges in court, and it does help foster the atmosphere of continual improvement and process optimization. There's not a month that goes by that we don't improve our processes in some way.

What are the bottlenecks? The labor-intensive manual methods for casework sample DNA extraction. There's been a lot of emphasis over the last eight years and then proving the typing systems that we used, everything from the chips to the capillary systems. There's been absolutely or very little emphasis on doing the front end of this whole process, which is getting the DNA out of the samples. That's where we need to be putting our focus.

The evidence screening prior to DNA analysis. You can't do DNA on everything that comes into the laboratory. There's not a laboratory or a government in the world that could afford to do that. So you have to be able to screen the evidence. There needs to be a better way to screen the evidence.

Data interpretation and review for offender samples. I don't think that I agree with Mark Nelson here that data review on offender samples could be automated. And it certainly would be much better. I'm a little bit cautious. I think Mark Perlin's program of TrueAlleles will be helpful, but there's always going to have to be that human touch, I think, in the casework stuff or at least for awhile.

Obvious problems of having a big backlog. You have unworked cases. The victims and the suspects are in a state of limbo. Additional crimes are perpetrated because serial offenders haven't been identified. We had a case in point of that in Georgia where we had a serial offender who committed 2-something rapes because he wasn't in the database.

Delays to the criminal justice systems and then wasted investigative resources. I can't tell you how many hours investigators waste just because they're going down the wrong path. What are the intangible results of having a large backlog. You have a decrease morale of your staff.

Continuous request for rush analysis. I've got to have this tomorrow.

Increased staff turnover. When the morale goes down, the staff leaves. The staff burns out. And evenly if they stay, they don't produce very much.

And then the new technologies, and that's what this is all about, the new technologies don't get implemented, because you've got such a crushing load of casework, you don't have time to implement anything.

Now, the current high-through put technology that we're using and is the robotic extraction of the offender samples. Multi-capillary array or high-density jail-based typing systems, the 96 - the 90 - what are the 3700s that you're suing in Florida?

Commercial kits that enable simultaneous termination of all CODIS site. We've just switched to the single kit from Cook & Elmore or ABI, I believe, so that we can get one amplification. And then software that can be semi-automate through the use of macro programs. And that's the genotype or the - what's the one FM-bio that - star base.

And all of those things help, but they're not the answer. What could really help? DNA extraction procedures of casework samples using robotics. This really needs to be a focus. We need to look at being able to extract DNA from sexual assault cases or even just blood cases robotically rather than by manual methods.

Software interpretation and comparison of offender profiles prior to or forced submission to CODIS. And by this I mean that you run it through two separate computer programs and then compare the results from the two programs. Those that have complete concordance get automatically uploaded. Those that you have a discorded result or a problem, then you manually review those. That would eliminate probably 95 percent of the manual review that's done now.

Contract employees off-site or internal to help in processing until backlogs have been eliminated. One of the strategies that we took in handling the backlog that we knew that we were going to develop with the offender samples was hiring temporary employees to do the front-end work of entering the samples into the database or into the computer.

And this is what will vary the level of temporary staffing based on the volume of samples that we have to deal with.

And then finally screening of sexual assault cased slides for presence of spermatozoa using robotics or instrumentation.

This is one thing that takes a lot of time that not many people think about. For an averaged analyst to screen a sperm slide - a semen slide for sperm might take an hour, if there's only one or two sperm on that slide. If you could do that with a cell-sorter-type of instrument then you would really speed that analysis up.

And that's the end of my talk.

MR. MORGAN: Thank you very much.

We'd like to open up the questions for the panel.

MS. CROUSE: George, I'm just curious. I know that most of the people in the forensic laboratories are familiar with the users group internet system that use to kind of just get out and talk about some things that are happening in the laboratory.

And one of the recent questions was: How many samples per case do you have? And I'm just curious how the State of Georgia, because there was an answer from you guys, in which you do three samples per case, and how did you do that?

MR. HERRIN: Well, what we try to do is we try to really thoroughly screen the case prior to sending it to DNA and pick the one sample, the one unknown sample that's going to be the most probative to answering the question in the case. Was the suspect involved in this particular crime? Or was he possibly involved in this particular crime? And if not, then we go to the next sample, you know, if we don't get an answer from that. But we always start with not more than three to four samples per case, and, you know, two of those being know samples.

MS. CROUSE: So if you do a case and you have a sample and it does not match the suspect but they might have another suspect or whatever -

MR. HERRIN: We'll continue to screen suspects as long as they bring them in.

MS. CROUSE: But you'll take them all the way through DNA and then start over and then take them all the way through DNA?

MR. HERRIN: Uh-huh.

MR. MORGAN: More questions?

MR. FERRARA: And this is directed to Mark and Dan. Has there been any thought given to marrying TrueAllele to gene trace down the road or -

MR. NELSON: Yes.

MR. EHRLICH: Yes, we're planning to do that. We've already been - had a lot of discussions and meetings.

MR. MORGAN: Barry?

MR. SCHECK: Mark, you mentioned something about customizing some people's SOP and then editing.

MR. NELSON: Yes.

MR. SCHECK: Does your program provide for making a record of all those edits because I can assure you -

MR. NELSON: Absolutely.

MR. SCHECK: - people are going to ask for them.

MR. NELSON: The software keeps track of a lot of audit trails. And one of the ones that we are actually testing out now for New York and Virginia the program keeps track of all the edits. Now, what we're doing is taking many of the audit trails the program kept inside in generating reports. So that when something is edited, you know, what was edited, who edited it and what it was, what it was changed to and so on.

MR. SCHECK: So if somebody were to go back, you'd be able to see -

MR. NELSON: What the change was -

MR. SCHECK: - they were -

MR. NELSON: - and who made it.

MR. SCHECK: - and you'd be able to produce a whole electronic record of that from beginning to end?

MR. NELSON: Exactly. It is being generated.

MR. MORGAN: Sue?

MS. NARVESON: This is for Dan and the chip technology issues. Just to clarify in my own mind and perhaps to help Sarah with the question that she asked.

When we talk about chip technology and total port ability that we could actually take to a crime scene, what you're working on right now is the analysis portion of the ultimate, which I see as being able to take a blood sample from a crime scene or a biological sample from a crime scene, put into a small device and actually have the extraction PCR set up and amplification and analysis done in one compact unit.

MR. EHRLICH: Well, we're not explicitly working on the two front-end steps you mentioned, which were the extraction and amplification. In principle, that can go on chip in some future version. There are some technical issues related to the optimizing the chemistry so that it doesn't interfere, the amplification doesn't interfere with the assay.

But the scientific is working those types of issues so it's not out of the question in the future. Mark made points, which I agree with a lot, about the necessity of having an expert operator in the loop.

MS. HART: Mark, you mentioned some questions about staffing issues. You raised some staffing issues here. Even if there were unlimited funds, would you have sufficient pool of competent people to be able to hire to a level that you would need to hire to do what you wanted to do? And the second part, you had also talked about the idea of having analyst doing crime scene work. Would there be a sufficient pool of qualified people to move into that area and would it be cost-effective given how much they might be required to be paid?

MR. NELSON: The answer to both questions is: No. There's not enough qualified experienced people out there. And what we get is a lot of applicants from some forensic science programs, they know a little bit about everything and nothing about anything in particular.

I would really like to see an emphasis on forensic biology track where they actually come out and they've got all the course work necessary to have the experience they're use to the platforms.

And Paul has an excellent program with VCU where he has a forensic science foundation right there in his lab and he trains them on the platforms. And essentially they go through his training program. And I think what we're going to have to do is we're going to literally going to have to tie the university training programs to a crime laboratory in order to get that qualified pool of applicants.

And as far as people going out to scenes, no, we don't have enough people qualified to do that either. In most police departments, unfortunately the guy that has to collect the evidence and get dirty is the lowest guy on the totem pole, because the best investigators want to sit down in their nice suits and talk to people. They don't want to get their hands dirty and crawl around in the blood and the gore.

And we got to get scientists out there to collect these samples and be able to know enough about what the crime lab can do with these samples so that they're collecting the right samples for us.

MS. HART: Given the fact that you think the detectives are concerned about going down there and getting dirty in the gore, I guess as you described it, is it realistic to think that scientists are also going to want to do that too.

MR. NELSON: Well, in my laboratory, all my scientists are also police officers. And all of us get down in the blood and the gore at crime scenes and do what we have to do.

MS. HART: Okay.

MR. NELSON: So, yes, you can do that. You have do find a special kind of person, but, yeah.

MR. HERRIN: But if could speak to that just a second. In our laboratory, all the crime scene work is done by investigative agents. The scientists do not go to the crime scene, except in very rare circumstances.

I think that there is a fairly good qualified pool of applicants because we have to turn down about 20 applicants for every position that we have. I think that one thing that could be done, though, that would be NIJ sponsorship of fellowships or something in the laboratories, I think that would be a very good program that would allow us to train people as they're going through college, you know, getting their undergraduate degree to get, you know, have a trained - a pool of resources to hire when they get out of college.

MR. MORGAN: Dean?

MR. GIALAMAS: I was just going to put in a comment about the crime scene. At LA County Sheriff's Department all of our criminalists do respond at the crime scenes. That's one of their functional duties as scientist. We do respond out to an average of about 10 to 15 crime scenes a week, so we don't attend all major crime events, but most that occur withing the county.

And our numbers fail in comparison to the numbers you've seen. I mean, our DNA analyst can only turn out about three cases a month, because of the fact that they have added responsibilities between court training, crime scenes, and now doing DNA casework. So their time is split.

And I think what you will see across the country is variations from one extreme to the other. From my extreme, where we're attending many crime scenes. To the other extreme where you have DNA analysts who are just in the laboratory and are not required to respond out to crime scenes. And that has a great effect on the overall service, but I want to echo what we've heard, and that is that I can tell you from the crime scenes that are criminalists have attended to we get a much higher quality level of evidence that comes out of those crime scenes. And because they're involved in the collection and being there, they can be more selective in choosing the stains that will yield some better probative results.

MR. MORGAN: Maureen Casey?

MS. CASEY: I just wanted to make a comment as we're talking about the utilization of resources and backlogs and the best use of the scientists. And I think it goes to the issues we were speaking about earlier about law enforcement education.

I think part of what we need to look at is that, in addition, to educating the law enforcement professionals, the bosses about the uses of DNA that if we educate the line officers and the evidence collection technicians and those folks, not only about how to collect but what to collect what's most probative, then we get a balance on the best uses of the resources that are out there.

So I think that while in the idea if we could have a criminalist or a scientist at ever crime scene that'll be great. But as the expectation of collecting DNA at burglaries, as well as sexual assaults and homicides, and you know, as that all grows, we're going to need to use the resources that we already have, which are the cops and the crime scene analysts that are already responding to every single crime scene. So I think we need to bear that in mind as we talk about this.

MS. HART: Sir?

CHIEF SANDERS: A couple of things. First, as a former detective that got down and crawled around in the crime scenes, I would say that a lot of us that have specialized and that has changed because of that letter of law criminalists and those kinds of things that operate now.

The other thing is that I would like to suggest to you that as I listened to all of you identify your agencies and things, don't forget that 85 percent of all police agencies in this United States is like less than ten police officers or less than twenty. So oftentimes they are going to be the ones there that you cannot underestimate the importance of educating police officers or training.

I mean, I take exception to you. I don't think we sit around in our nice suits because I was a detective in South Carolina, and we wouldn't afford nice suits.

(Laughter.)

CHIEF SANDERS: But the ideas is that the points are valid and there was something else that I wanted to say that had to do with getting police - getting police involved in the program so that they know what's available and how to do it and those kinds of things. The thing that you got to realize as well is that the same as when you build new jails, we're very proficient at filling them up.

If, in fact, you don't work together so that we know what issues or what items, let's say. You got to make sure that when you tell us what you want us to do that we know that we got to work with the crime labs because, if not, we'll fill you up with stuff. I mean, we have police officers that will go to a crime scene and they'll take the whole damn house and send it to you.

Now, that kind of thing you got to be mindful of that so that when we try to establish a protocol it's got to be in such a way that we know what it is that we're supposed to be collecting. But I do want you know that we used to crawl around on those crime scenes.

(Laughter.)

MR. MORGAN: George, did I see that you had a question or?

MR. CLARKE: Oh, yes. I was just going to underscore that point that Dean made about different types of DNA analysts. I think it's important to have a broad spectrum. There's going to be those dedicated to working on rape kits frankly. And they don't have to and necessarily need to have that training at crime scenes and so on.

Then on the opposite side of the coin, if there's a difficult crime scene, a homicide that may or may not involve sexual assault, then it's going to be extremely helpful to have someone who understands, for example, crime scene reconstruction listing pattern interpretation and so on.

And those individuals, for example, and the most recent kidnap and murder of a seven-year old that we just solved out in San Diego, that was a highly experienced criminalist who became a DNA analyst and who now is able to put together all of those worlds.

So it's not as simple as though there's one perfect type in DNA analysts in, my view in forensics. It really involves a combination of a lot of different people.

MR. MORGAN: Barry?

MR. SCHECK: It's me or? I have echo what these last few speakers have said. But I think when you look at what all you've talking about, there is one class of people that are growing in the labs and those are people that literally are extracting, although some of them are going to be robots soon, in interpreting the DNA and applying the computer software and looking at the peaks, and all that should be done efficiently. But this other level of expertise that George correctly identified a bottleneck, this evidence screening, and going to the crime scene.

You know, from our perspective, looking a second time through at either old cases that are unsolved that I was doing with the city, which I guess, Ed Norris now who is the police chief in

Baltimore, are old or post-conviction cases. I can't begin to tell you about the number of stains that are missed, all right, on Clothing.

The failure of people to take proper substrates to understand confounding results, picking out the right sample so you don't take the house and everything else, because preservation of evidence is going be an increasing power over time. What are you going to save? What are you not going to save? How much is it going to cost to do that? What is the legal requirements for that?

So there has to be a full-fledged effort and NIJ is the right agency to assist local people to create a class of people. I mean, frankly, they should be in part detectives. They can also be civilian-trained criminalists maybe through these, you know, college-base programs where you create a new class of people that understand what the technology is and how to collect and preserve the evidence correctly. It's a whole speciality that you're going to have to have to make this technology work correctly.

MR. MORGAN: Carl Selavka?

MR. SELAVKA: One comment and then a question. The comment would be that the new class of people is actually the old class of people. This DNA thing is a new class of people. So in the old days criminalists were broadly trained, were good at crime scene evidence, both at the scenes and in the laboratories. It's really about re-amplifying something that's been going on for forty years, and we just have to get back to that a little bit.

But I was intrigued by something that came up in George's talk about having two expert systems for convicted offender stuff. We heard about one. Is there another that would review data easily in the concordance of which would allow us to pre-screen 95 percent of those samples.

MR. HERRIN: I don't know. But the way we have TrueAllele setup is that it's designed for the computer to do most everything and to curate - think of an assembly line. So you go along in the factory. It does all the ladders. It does whatever it does. And then a person checks and making sure is this reasonable.

Then when you get to the end, a person reviews typically once it's been optimized, 15 percent of the data that's problematic. So it's really a person assembly line partnership. The computer isn't doing it all by itself. I don't believe in that. I think you need sanity checking.

If you wanted to, there are many modes in which you could run the system, including for almost no time having people look through the 85 percent where there are no problems. If you had to satisfy some rules, for example, that were all guidelines that were set. Because once you know the computer has run 25 checks on it, according to your SOPS, you're not going to find anything wrong with it. So if you need to look at it, that's okay.

You can also set it up so that there's a second review of what a person has done. The British are using it right now for most of their production work for the data banks. And they have - they run it through TrueAllele and then they have a double-human review of wherever the issues are.

So we really think of it as a configurable process, not as one piece of software, and you can set it up for almost anything you want it to me.

MR. MORGAN: On behalf of the panel, I'd like to thank everybody for their comments. And on behalf of the AGID-LAB group, I'd like to thank this distinguish panel for all of their work and presentations today.

(Applause.)

MS. HART: I'm afraid we're running a little behind schedule and I certainly contributed to that with all of my questions. So if we could possibly take a ten-minute break and try and move on to the next panel, if I can get you out of here on time.

(Recess.)

STATE AND LOCAL LABORATORY PERSPECTIVE

MR. SCHMITT: All right. If everybody can move back to their seats, we'll get back on track here.

We've very fortunate now to have a panel who will discuss backlogs, and they will frame some reduction issues for us that face laboratories. And we'll also have a breakdown of the federal government's investment in the DNA backlog reductions programs at NIJ.

We're very fortunate to have four, very well-informed folks with us today, all of whom you have met in some form during the course of the day.

And so I'll just let them decide who is going to go first and introduce themselves. And we'll get on with the presentation.

MS. CROUSE: My name is Cecelia Crouse and I'm from the Palm Beach County Sheriff's Laboratory.

And what I would like you to know is that you've saving me a lot of money in therapy in allowing me to do this.

(Laugher.)

MS. CROUSE: So some of the things may be reiterated, but hopefully it's not just personalized to our laboratory; that it is kind of symbolic of what's going on in many laboratories.

I want to concentrate on a ten-month period. The first ten months of last year, specifically. But let me introduce you to where we are. We're the largest county in Florida and maybe the largest county this side of the Mississippi. We have 34 local police agencies, individual agencies, plus the entire county. We have the medical examiners office, the local FBI agency that we do work for, the local DEA.

We have some out of county agencies and out of country agencies. We have the University Police at two universities, and we have about a million residents. And in June 2, 2001, the headlines were West Palm Beach, Florida ranked seventh in crime the United States. No applause.

(Laughter.)

MS. CROUSE: So this is the group we have. We've lost one person. In 1992, we had four people. And today, as I sit here, we have five. And this is the contribution to actual casework, because there's a lot of other things going on. You have to keep up with the QAQC. You have to keep up with the CODIS and you have to keep up with the administrative duty and the technical leader duties. We have the equivalent of about 3.75 people max.

But we've become very dependent on NIJ grants. And we participated in the DNA Identification Act grant, and we originally requested $411,000, but we ended up with $421,000. The work that I'm about to show you was done by me going out and - I was going to say soliciting, but I didn't solicit.

(Laughter.)

MS. CROUSE: I went out - I'm a working girl. I went out and tried to get someone to come into the laboratory for free for 12 months to 18 months, and I was able to procure in this time period three-visiting scientists that overlapped each other that could carry on the duties to get this grant moving so that we did not have to have our lab personnel taken aside to do validation work or whatever it is we were pursing. Plus we had five interns in this period of time.

So before we got the money we were doing dots. Some of you may remember those. And we thought we were in heaven until we started getting mixtures, of course. And we were also doing polymarker DQ OFA and silver staining the loci CTAT. And then we got our dollars and things began to book.

So in 1996-97 we ended up by February of 1998 validating the two PowerPlex system. We had all 13 CODIS cora loci going. And recently we shut down the laboratory for six weeks. We just flat out shut it down. We told the State Attorney's office that we wanted to do PowerPlex 16. It would save us an ordinate amount of some, and they let us do it. We shut down and we were trained and we validated this system and went online December 2 of 2001.

So what do we do in casework? This is just really briefly what we do. I mean, we meet with the detective and we say, What's going on in this case? And we don't meet with them unless they've called. We don't go to a file cabinet and put out the next case. We meet with the detective when they call. They go on a clipboard. We rank them into emergency, emergency and emergency.

(Laughter.)

MS. CROUSE: And we go to the evidence custodian and we get our evidence. And we find the stain. We request the standards which may or may not hold up the case. We now have four judges that will not allow standards unless we show there's a foreign DNA profile. And this has really been very difficult.

Whatever that disease is it's contagious, because it seems like every time we get a new judge, we're getting a court order to do the work first before they'll give us the standard. Then we conduct the analysis and then we do DNA. What is in this black circle is DNA? That's it. It's you extract the DNA. You quantify it. You amplify using PCR and you get a DNA profile.

Then you interpret the data. Then you go through data review. Then you get the report. The only thing about this flowchart that is predictable is what's in this little black circle, and that's it. If you give me 25blood stains, I can tell you how long it will take me to process those to DNA profile.

So what do we do? We'll, we're trying to increase our efficiency. In the extraction area, I'm now vaguely familiar with the ABI Prism 6100, which I'm desperate to try. This should help exactly what George was talking about with extraction.

We purchased the Hitachi CCD-Bio, and that's helped us with quantitation. Our system is a lot more efficient. We rerun, you know, less samples. It's just been wonderful for us.

With regards to the profile, like I said, we're not doing PowerPlex 16. So everything that was in that little black circle, I'm not sure what else we can do to make it more efficient. Because we had these dollars, we also now actively participate in CODIS. And that's been wonderful for us. Dave Coffman is not here. Is just - he's an incredible administrator. I know. I was kidding.

(Laughter.)

MS. CROUSE: And last year because of the grant that David got we made a concerted effort to do no-suspect cases and 20 percent of all cases that went out last year were non-suspect cases. Real honest to God we don't know who did this. And 80 percent were suspect.

So now let me tell you the numbers in these first ten months. Three hundred and ninety-six cases were submitted in the first ten months of last year. We got out 160 reports. Now, that's not cases, because I had one case that had four reports because of the trickling evidence syndrome.

So about 40 percent of the cases were done. That included 677 submissions. These are bags and boxes. When we open those bags and boxes for those reports, there are 1,432 items or nine items per case. There were 3,335 plus or minus one stain examined, which is about 21 stains per case. Of these, about 1500 plus went to DNA profiles. This doesn't include the ones that we had to go back and rerun because maybe we needed to load more sample and get more data.

But that's where we were in the first ten months. So when we adjust for cases with more than one report or those that will not be prosecuted, 60 percent of the cases that came into our laboratory in the first ten months of last year were never opened. It breaks your heart. They were you just never opened. And this is part of the problem.

We lost an analyst. And this analyst, it took me about 15 months to get her trained. And now she's gone. She left in June. And that was in the first five months of what I just showed you. So we were back down to 2.5 analysts.

There isn't this problem with people wanting to be become forensic scientists. The problem is you're trickling in and training one at a whack. And it's really very difficult. When you lose one, it has a tremendous affect on the system. Screening the evidence, we've already gone through that.

But in this particular case, terror was given a leopard skin king-size top sheet, a bottom sheet, eight pillow cases, a comforter, and a pillow that was on the side. So we got the omni light, and we all got trained on the omni light. But she found 37 semen stains. And we had to narrow that down because we're not going to do 37 semen stains. We did 17.

That's still too many. That's still too many. And with a condom, this was the inside and the outside. That was it. But we got like seven donors on the outside - well, what I think is the outside. There wasn't a tag on it so I'm not sure one was inside and one was outside.

(Laughter.)

MS. CROUSE: But regardless there's a lot more interpretation than it looks like there would be. And then we have exactly what was mentioned before. We have five people. Four of them are dead. And here's your scene. And they're trying to reconstruct.

I'm not sure what to do about evidence screening, and I'm not sure why I have such a tough time saying no all the time. And, you know, we've talked about this many times, and maybe this is the therapy part, but I really think this is a huge issue here for getting cases through the system. So it can take hours to days to screen the evidence. There's your bottleneck.

Now, here's the generation of the data that Mark Perlin talked about, okay. So I generate some DNA profiles and I interpret the DNA profiles. And then I give it to the second analysts who will review my data, interpret the DNA data and then generate the review documents.

And then we have a data consensus party where we figure out, you know, what was agreed upon and, of course, if you need a third person, you do. However, that second analyst isn't sitting at their desk saying, I wonder where Cecelia's profile is. They're busy. They're very, very busy.

And it usually takes days to receive the secondary review results, unless you need them immediately. But these - we're in the laboratories doing this - doing the other work on that flow chart. There's our bottleneck. We need to have the expert system.

So we need a better idea. And one of them is the NIJ casework backlog grant. We are extremely excited about this. When we heard about this in June, we got back to our lab and we immediately started looking at everything, and we narrowed it down to 40 old call case homicides before 1997 was our definition.

Two hundred and twenty-four sexual assault cases where the evidence is preserved in our minus 20 freezer, but we haven't had a chance to get to it. But there isn't any pre-screen for semen at this point.

Ninety-eight sexual assault cases are still with the evidence custodian that we have to go get, but we will do that. And we have greater than 100 non-suspect cases for burglary. So we're ready. We want to do this. But the cutoff was 1999. We just had to choose a date and go for it. Our backlog was just too huge.

The computer-assisted DNA interpretation, we want to be able to have more input. And something that doesn't take up an entire analyst time. And Mark Perlin has been very generous in allowing us to participate in his program. And I'm excited about that.

And finally with case analysis, we have to have fewer items to screen. I wish I had a dime for every time I've said that. Fewer stains with DNA that actual go. And we try to charge the agencies and that didn't go over well at all. That was a huge problem, because we have very poor agencies down there. I mean, Pahokee and Belle Glade and some of these places, they do not have the money, and they would be left out. And we just - we cant do that.

But to increase the number of DNA analysts, you give me six more analysts and our lab will be humming. And that's what we need. This is what we do it for.

So we go to court and we say DNA is good and this is why it's good. And it gets in and then you end up being able to actually accomplish what you're supposed to be accomplishing. We want to do this stuff. I'm not sure I know the answers, but I sure know the problems.

This is what it is.

(Laughter.)

MS. CROUSE: You know, we're that poor, little rodent in the middle of road and something has got to move the rodent out of the way.

I especially want to thank NIJ for inviting me today and hopefully we'll get some insight with some of other people of how to handle this.

MR. COFFMAN: So I guess I'll go next know. I know a lot of you are going to be shocked, but I actually do not have a Power Point. So I just thought I'd tell you to hang on, Lisa. That's right.

(Laughter.)

MR. COFFMAN: I just thought I'd tell you what we've gone through as far as our offender program in Florida. And I think it was Mark Nelson who said this that the bottleneck just keeps changing, and, you know, you solved one and you created it somewhere else and that's exactly what happened to us.

We've been collecting samples since 1990. And basically we were caught up in late '97 for the first time. And then within six months we had an immediate backlog because the technology switched to STR. We're currently at a three-month backlog right now. We hope to have that taken care of by - management says July, probably August, September, but we hope to totally be current. We're receiving about 3,500 new samples every month. And we haven't even completed going to all felons yet. Our laws are phase an approach.

But just to let you know where we started we were having to do our DNA on extraction by hand, and we were just falling behind. And what I started doing is I wasn't kidding. We've been living off of federal money in one shape or another for the last seven years.

And in one of our federal grants I put in there visits to other lab systems to see what they're doing. Because sometimes we don't communicate with each other unless you just happen to be at a meeting when someone happens to talk about these issues.

So I'm going to throw my little suggestions in as we go along. But one suggestion is if NIJ comes up with a funding for a laboratory system to implement some innovative process. I think we need to have that advertised and sent out to the community that says here's a modular or process that this person saw if you're interested. And here's a list of equipment and what it would take to put it in there and the specifications of it.

We've been automated totally as far as the DNA extraction since 1996. But as technology changed - and also one of our big problems in the state has been compliance with getting the samples collected. We were only getting at the most about 30 percent of the people who go on probation in our state. Those are the people we want. Those are the people out committing the crimes again.

So we waited until we could find someone who developed an automated procedure for oral swab collection. They seem to all kind of converge at the same time, but the one we chose was the - well, RCNP in Canada came up with an automated procedure for doing oral swabs. In fact, they used concepts of this procedure in analyzing the samples from the Swiss Air disaster.

So we went up and mimicked what they set up and brought it back to our lab. Not only did we mimic their process, but we also purchased the LIM system, the laboratory management system, for their database to be used in our lab.

Now, we had to modify it some because of our specific needs, but we now have that in place. As I've said, we've had - I probably shouldn't say, because this is on the record, but we're actually overstaffed right now for our scientific people. I'm doing special projects that we needed to do as far as the offender program, by the way, not casework. We're not overstaffed there.

But all the new procedures we put into place that keeps making us more efficient and now the people I've asked for over the years I'm giving them special projects to do, but they keep finding more efficient ways to do it and keeps feeding the problem, you know, keeps feeding the issue here.

But where we're not overstaffed, and this is where I think our bottleneck has become. It's not the science. It's not doing the DNA. Believe it or not, with our situation, it's not even the day to review. It's that front-end work when the samples come in the door where in Florida, the Florida Department of Law Enforcement, with our commissioner, the buck stops with us.

We don't ever say, That's not my job, or we don't send it back down to someone else to use. So if they send us a sample and they haven't put all of the information on the submission form, we have to research the prison database or the juvenile justice database or the criminal history and find all the information and fill all of that information in.

So it's the front-end work now that not even the science, the data entry that we're extremely bottleneck. How we're looking to approach that or to correct that problem, well our three-year plan, it's already underway, is we're reintegrating our AFIS system, our criminal history system, and our DNA database.

What that will do is when the samples come in we're always collected the fingerprint. The fingerprint will be run through AFIS. When a name comes back and it's verified that that individual matches the name on the form, then the criminal history is updated to say that we have a DNA sample collected. And then our LIMS system, or our management system, will be updated from the criminal history information, all the pertinent information so we don't have to do near the data entry. But we're a long way from that.

So right now what we've done is we put our DNA demographic information, you know, the name of the individual, where he was collected, if the sample has been analyzed, it's on our own version of the CJIS WAN. We have a SJ network in the State of Florida that's run that anyone can access in the criminal justice community.

So what that has done is it's kept our duplicate submissions down to less than 5 percent. We only get about 5 percent duplicate submissions coming in our door so we don't have to reanalyze these samples that are unnecessary to analyze and then you have to take out later when you match them with the same guy you collected five years earlier.

When we first started in '90 and '91, we were actually getting 50 percent re-submissions of convicted offenders. So we had to manually do searches. So we've kept our duplicates down to about 5 to 7 percent.

Another thing we're implementing is probation and parole is really online since we have gone with the oral swabs. Our sample collections have increased by 1500 samples a month just purely from changing the medium that we collect on. More people are being compliant. But one thing that probation and parole is doing to us is they want a hard copy in their file that says that that person has been collected.

So we were having to send out over 5,000 faxes a year. The three people I have doing data entry on top of everything else had to send out verification and the sample had been collected. Well, part of our LIM system is now when someone calls to ask if someone is in the database, we do a search.

If he's in the database, we can ask them if they want an electronic copy of that. We click a button and it would send a report to them electronically that they can then printout and put it in their file.

So that's helped us dramatically too. So like I said, everybody is at a different stage. But right now our biggest problem is the administrative end at the front. That's where we're having our issues rights now.

Now, as far as my kind of concept of this meeting was to just maybe suggest ways that NIJ could spend their money. And so I'm going to do that. Basically a lot of people have already said this. I think training is important. Any time you even get one person to train you basically take another person off the bench to train them. So that needs to - we need to have - the community needs a place to basically send someone to be trained and come back to where it's minimal. And I think what Paul is doing in Virginia may be a way for NIJ to fund the institute since the whole community benefits from it.

So training has to be looked. I don't have the answer as to how, but that need to be looked at. I think in a hybrid of something that was suggested earlier about contacting the local law enforcement about types of cases to send for the no-suspect case reduction efforts.

A lot of crime lab directors don't want to - they don't want to put their head out of the sand, but there is a bigger backlog than what came in their doors. I go around the state talking about our offender collection. And every county I go to tells me that they have a case that they would like to search but it hasn't been submitted to the lab and it's five-years old and whatever.

The law enforcement community is not necessarily sending the labs all the cases that are out there to be worked. I mean, one city in our state we had a press conference about a serial rapist that we connected to the database. We went there, and just in conversation with the sheriff, he said he had over 600 rape kits that he had never submitted to FDLE.

Now, we've actually put out letters requesting them to send - in a way we need a backlog to justify more positions, you know, but they're not - law enforcement is not stupid They're not going to send us all the cases that they don't need next week, because they're afraid it'll slow down the cases they need right away. So there's a larger backlog out there. And local law enforcement probably needs to be brought in rather than just dealing with the crime labs.

IT support is absolutely needed. Our LIM system has increased our efficiency dramatically. We're getting to the point now where I think we're going need to have a Tera Watt - I just learned what that was during the grant period because Cecelia asked for one. But I think we're getting to the point to get a Tera Watt for our state database.

We can't just keep storing - when the database fills up, archive it to a end tape or a disk. You know, we need to have all the data readily available in an IT system.

Artificial intelligence for the automatic data review I think is an important step, especially for offender laboratories, but, of course, we do have to get the FBI standards look - you know, we'd have to look at that to allow that sort of option.

Fund automation for casework. Somebody has already said it, but there is ways out there right now that we could easily automate every burglary in the country. And it's not necessarily - it's bringing law enforcement involved and may be creating a collection kit specifically designed for burglary where it comes to the laboratory ready to use in an automated system like maybe small sponges to collect the sample and transfer it to FTA paper and use the punching systems that are out there now that databases are using to batch a lot of burglaries.

There's not going to be one bullet that will solve every type of crime, but we got to start somewhere. And I guess that's about - that's kind of about all of my suggestions right. I'm sure I'll think of some more. But I want to thank NIJ for having us and we just couldn't be where we are without the federal funding.

We're trying to get our state to foot the bill totally for us soon, but with the hit Florida is taking with tourism and everything else, I don't know if it's going to happen, but thanks for inviting me and we appreciate it.

MR. FERRARA: Success breeds success. And continued success breeds backlogs. It's as simple as that. Many of us in this group were members of the commission on the future of DNA evidence, and I shared the working group at that time along with Cecilia and others that were in the group where we were trying to provide the Attorney General at that time how we could address this issue of backlogs.

For purposes of clarity, we broke the backlogs down into two areas. That of convicted offenders and that of casework. Some of the initial recommendation that we made with respect to the reduction of the convicted offender backlogs were taken to heart and the National Institute of Justice took the lead and then a few very short years since that panel made its recommendations we've seen - you've already seen the great success that we're making with respect to the reduction of the backlog of convicted offenders.

Of course, again, success breeds success. And then just about the time we think we're getting close to being current, even as states expand their statutes to include all felons, then we come along and start talking about arrestees. Several people have been very interested in the passage of this arrestee testing bill.

When the Attorney General Of Virginia asked me for my support in his initiative, my first remark to him was, you know, General Kilgore the fact of the matter is that I'm not going to be able to have federal money to do those samples. The same samples that I would be doing upon conviction we're not going to able to have federal money, presumably as long as the 1994 DNA Identification Act limits the use of a national database system to convicted offenders. So ironically while we could include theoretically misdemeanants, we cannot include arrestees for rape and murder.

With respect to crime scene evidence, it was our opinion in the commission of the future DNA evidence, and we've heard it continued today, this is the bigger and the very most difficult not to crack the backlogs of crime scene evidence.

You have heard it over and over again. I think we have only scratched the surface still of the amount of evidence and the number of examinations that are going to be required by the criminal justice system across the United States.

We have seen - I've borne witness to it over the last 13 years now that we've had a DNA data bank law in Virginia and a DNA program. I did 37 cases in 1989. Last year, we did almost 1,900 cases. We anticipate doing close to 3,000 this year.

We've talked about training. And I won't belabor the point except to say that the American Society of Crime Laboratory directors anticipates need of about 10,000 new forensic scientists over the next five to ten years. As the explosion of pieces of evidence and subitems of evidence within crime scenes is collected, as we better train our law enforcement agencies, our prosecutors, defense counsel, sexual assault nurse examiners, my God we're training high school science teachers today about forensic science in an effort to help them have more interested students to understand the practical applications of science.

We control a lot money. NIJ could throw a lot of money at Virginia. But as we've heard, the fact of the matter is there aren't people, qualified people, to hire. So training of forensic scientists through universities, but more importantly the on-the-job training in working forensic science laboratories, the whole key to the Virginia Institute of Forensic Science and Medicine, and I believe in most laboratories around the United States, I don't care whether you have a Ph.D. in molecular biology or genetics, I need you for a year in the laboratory before I'll let you near real evidence. And there's no place to do that.

I hope that the National Institute of Justice would be able to assist laboratories, institutions, and it's not just the Virginia Institute of Forensic Science and Medicine. Barry Fischer in Los Angeles is working in California developing such a program, a similar program in conjunction with the University of Chicago and in the Illinois State Police system.

We're training defense attorneys. By statue, in Virginia right now, I don't know how many states have a statute. For an attorney to be considered to be appointed as counsel for the defense in a capital murder case has to have formalized training and DNA technology before he or she can be appointed to that. And up to this point it's the Virginia Division of Forensic Science and Medicine that has been providing that training.

So clearly there's a tremendous amount of work to be done. Cecilia pointed it out. We've talked and we've heard excellent talks about presentation of automation of the analytical process, what really takes up the time, and we're not going to automate.

It ain't going to go away overnight as the tremendous amount of time it takes for a very highly qualified forensic scientist, not just a DNA examiner I might add, but all forensic scientists to go through hundreds of pieces of evidence looking for some probative piece of evidence, biological, or physical, or otherwise. That's not something that's got to be rushed through. It's not something that a robot can do. It's something that is unique to forensic science and is always going to take time. We have to accept that.

Having said that, the analytical methodologies that some of the new technologies that Dan and Mark talked about robotics and chip technology, TrueAllele, is all going to help tremendously, and to the except the NIJ has supported those efforts, our undying appreciation.

Now, I do have a - I believe that NIJ could well serve the forensic science community in the development of mitochondrial DNA capabilities. I may offend some folks, but the fact of the matter is I get nervous as hell every time my microscopic hair comparison reports go out the door without a mitochondrial backup.

I'm sorry. Ten years ago I tried to eliminate microscopic hair comparison. Steve Sigal and the director of my western laboratory may remember that. And the prosecutors came down on me like a ton of bricks. How dare you take away our microscopic hair comparison.

Well, at that time it was the best available technology. That's no longer the case. Arguably, we should not be - I mean, we have changed the language of the certificates of analysts on microscopic hair comparisons to properly reflect the weight with which those examinations should be taken. I don't know how universal that is. But I'll feel a heck of a lot better when mitochondrial DNA analysis is used routinely.

Now, hopefully, and George - I don't remember if it was George or Mark - is right that it's secondary. There's not that many cases. But those cases where I cannot find any nuclear DNA to support a microscopic hair comparison. My recommendation as to the prosecutors is you go out and you get mitochondrial DNA analysis done. And for those of you who in the business know that the means of prosecutors looking at about a $5,000 bill for one hair and one reference blood sample. And that needs to be done in the laboratory. The local criminal agencies can't handle that kind of money.

Forensic laboratories, like my own, we're in the process of establishing mitochondrial DNA capabilities. When the current fiscal impact in Virginia cut my funding, cut a million and a half dollars of your funding to my Institute of Forensic Science and Medicine and cut $500,000 out of the start of my mitochondrial DNA program.

Last Friday, that same Attorney General came through our laboratory and says, Paul, I promise you I absolutely will want you to start doing mitochondrial DNA testing. I can't do it and give you the money this year, but I'm going to give it to you next year. And I told him about this meeting and I said I would express to the National Institute of Justice the concerns there.

Tim made a very, very, very - Tim Schellberg made a very, very good point and others have to about the need for collection of data, facts, figures, numbers, criminal history, criminal justice information, and statistical analyses. That data that Tim showed you I sat down through our little - what little information we have. I spent about four hours trying to just fair it out among 600-plus hits. Some of the data with respect to the types of crimes solved and the types of previous convictions.

It's ludicrous I should be doing that, but I don't have resources, and I don't think in many of our laboratories have resources and the luxury of having people who can do a statistical evaluation, the chronology of the events. I know I could prove to NIJ how NIJ funding has saved lives.

It's simple as that. I know it anecdotally, but I can't prove it statistically. But there's tremendous savings, not only in victims who don't - would-be victims who don't become victims, but innocent persons who will become exonerated quickly.

Finally, I do have concerns. And something that hasn't been touched on, but I think it's worth consideration. And that is an impediment to the productivity of forensic laboratories at least in

Virginia has to do with what I call the redundancy of audits and reviews by various bodies of these public and private forensic science laboratories.

I believe every laboratory that's part of CODIS is an ASCLD-LAB accredited laboratory. ASCLD-LAB uses the DNA advisory board standards. Those standards include mandatory proficiency testing. Those proficiency tests are reviewed by a proficiency review committee of ASCLD-LAB. Sue Narveson was my first chair of a proficiency review committee for DNA.

Audits. Annual audits are required by those DNA standards and by ASCLD-LAB.

Now, most recently, as a result of the recommendations of the Office of the Inspector General, they are now charging the FBI with establishing yet another board, the National NDIS Review Board where all those audit documents that have already gone through the process get looked at again by yet another panel.

I have in my suitcase a stack of correspondence with OIG mostly through the bureau. A tremendous efforts and waste of energy in terms of the way the Office of the Inspector General interprets its responsibilities of oversight to CODIS, which was to the FBI's credit, has been doing fine.

Here we have non-scientist, non-people who are unfamiliar with - unfamiliar with forensic science making decisions as to which crime scene forensic profiles will or will not or can or cannot remain in NDIS. I removed some 400 forensic profiles buried from NDIS because the Office of the Inspector General indicates that since we had a telecon memo in one file where a person identified with DNA was not indicted that they interpret that as that person is no longer the putative perpetrator of the crime, and, therefore. That crime scene profile cannot stay at NDIS.

Well, the person wasn't indicted, but that person was in fact the perpetrator. The implication of that, at least in my mind, was that unless I know and follow each and every database hit and established that ultimately that person was or is the punitive perpetrator, I have to. I cannot keep those forensic profiles up at national level.

I don't know - I don't think the Office of the Inspector General audits all forensic labs that provide latent fingerprints to IAFIS. I don't know what can be done, but I think that's - I know among my counterparts that's a real - a lot of effort and expended unnecessarily.

Finally, the CODIS 6.0, I'm very interested in. I understand the need for perhaps something that's going to ultimately handle millions of profiles I suspect on a national level, if not tens of millions. One of my concerns quite frankly is every convincing that the Virginia General Assembly that we are to no longer maintain or be responsible for that data. Now, how that all can be worked out? But there's an awful lot of state legislators in Virginia who have told me, for example, with respect to retainage (sic) of evidence for post-conviction - Paul, I don't want the clerks of the court keeping the evidence. I don't want the law enforcement agencies keeping the evidence. We want you keeping the evidence. I'm going to get that same reaction with them with respect to the DNA data bank samples. So I suspect that might be somewhat problematic.

Barry asked me about - just before he left - about BNA beta test site. We've been a beta test site with the bureau right from the beginning. And I'd like to hear, but ultimately as you heard from the questions, I do have concerns with respect to how the states maintain their data and the responsibility for the integrity of the data and still have a CODIS 6.0 system. How that works and how NIJ can assist in that remains to be seen.

And with that, it's 2:15. I get us back on the schedule I hope. Thank you.

NIJ BACKLOG REDUCTION PROGRAMS

MR. SCHMITT: Let me just give a little update on the order of march here. John Paul has a presentation he's going to make and what we're going to do is combine your break and the Q & A of this panel in one even session. And so we'll get us back on track.

So I invite you to get a beverage and a cooking while you're listening to John Paul or during the questioning and then make a trip down the hall if you need to and then we'll just go right into the next kind of round table discussion where we will build on the comments that Paul and David and CC have given us here.

MR. JOHN PAUL JONES: All right. I kind of figured I would be running a little short on time here. So I'm going to zip through this.

First off, my name is John Paul Jones. And for those of you who haven't - I haven't had the pleasure to meet, I'll answer two questions for you real quickly. One, I'm not related to the famous Admiral in the Navy, John Paul Jones, nor the base player of Led Zeppelin.

(Laughter.)

MR. JOHN PAUL JONES: I'll take care of that right away.

Okay. What I'm here to talk to you about today is NIJ's DNA backlog reduction programs, which started - the real DNA backlog reduction programs really started in our fiscal year of 2000. Granted we had some DNA lab improvement programs that occurred before that. But we're going to stick with the backlog programs that started in 2000 and progressed forward.

So I'm going to provide a status update on our fiscal year 2000 and 2001 convicted offender DNA backlog reduction program. The status of our fiscal year 2001 no-suspect casework program, which several folks here have submitted applications for, I'm going to give you some projections for what we expect to happen in fiscal year 2002 and 2003 for our offender program and the future of the no-suspect casework program.

This first slide is a basic geographic representation of all the states participating in our fiscal year 2001 convicted offender DNA backlog reduction program. With this program, NIJ used, based on the advice of the DNA Commission, allocate a $50 per sample estimate for prices for paying for DNA analysis. And we had states apply directly to NIJ for assistance, and we took the number of samples that they requested assistance for and multiplied times $50 a sample and awarded funding.

And for this program, there were 21 states that applied for assistance. All 21 states were awarded what they had requested. The total funding for that was $14.4 dollars. As part of this program, we required a1 percent no-suspect casework state match, sort of to start building the other side of the database while we're providing funding to build the offender side. Because of that requirement that we had instituted, we also did receive a fair amount of no-suspect cases analyzed in response to this program.

To date, for this program, we have paid for the analysis of over 330,000 convicted offender samples for all 13 loci. And 7,900 no-suspect cases have been analyzed as a state match from the 21 states that have been participating.

From these analyses, we've managed to track the generation of 800 hits because of this program. And at this time all but four of the 21 states have completed the analysis of their offender samples for which we awarded funding and the no-suspect casework. It's only on four states that are currently progressing with this program.

I'd like to take a moment to just give you two examples of the successes of this program. Granted there are many. But two examples would be - from North Carolina, Mark illustrated earlier that they had 25 hits as a result of this program. One of the important facts related to those hits is that 50 percent of those hits were two rape cases. Thirty-one percent of those hits were to B&E, breaking and enterings. Eight percent of those hits were to homicides. And 11 percent were to other crimes.

So, again, that shows you that you're solving violent crimes with these analyses. I know I'm preaching to the choir, but I just want to make that point.

Another example would be Ohio. Ohio had 36 hits as a result of this program. Sixty-seven percent of their hits were related to rape cases. Seventeen percent were to homicide and the last 16 percent was B&E or other types of crimes.

So, again, the bottom line is that we are solving violent crimes with these - and property crimes with these hits.

Our 2001 program we structured a little bit differently. And as a result, we were managed to generate a cost savings and make our program dollars go further. With this program, we had set up cooperative agreements with six vendor laboratories and allowed states to request assistance from NIJ with those laboratories, with those vendor laboratories.

And, in essence, what this did is it put a lot of paperwork on NIJ and the vendors, but the states and those of you who applied know that you only had to fill out basically three- to four-page document and fill out one page. So that really reduced the amount of work that you are already required to do in your environment. So we thought that was a plus.

And our cost savings was about 30 percent from our previous years' programs. So we think that's pretty significant. And 24 states did request assistance, all of which 22 of those requested outsource assistance, and as you heard earlier, both George Herrin and Mark Nelson's laboratory requested funding for in-house analysis.

So, again, we awarded everyone that requested assistance for a total of $6 million. And we believe that the drop off in funding was due to the fact that a lot of folks were making efficient uses of our money in the 2000 and I didn't necessarily need the extra funding at that time at 2001. And, also, legislators weren't expanding their statutes for collection as quickly as we

thought they would. But, however, with what Tim Schellberg had presented, we think they're getting right back on track and we would anticipate a lot of legislative expansions this year.

With this program, we will have a total of 170,000 convicted offender samples analyzed. And as a state match, again, we had the 1 percent no-suspect case where it state matched. There will be 1,700 no-suspect cases that the states do combined to our 170,000 samples.

To date, with this program, 15,000 samples have been completed for all 13 loci and 2,000 no-suspect cases have already been completed. A large number of those no-suspect cases are because the active outsourcing that the State of New York or the City of New York has been doing, and they been contributing those cases, the state match cases for us.

Now, to discuss our no-suspect casework program of 2001, this program, really, it started out as a general program so we could allow states to tell us what helps you. Tell us what we can do to help you. And we put some guidelines in there to help spur some thought on how to prioritize if that's what you like to do or how to request money, things you could do and you might want to stay away from.

And as a result - well, I guess I should state that we had $15.3 million for this program when we launched it in August, this past August. It was originally supposed to close on September 28th. Due to the events of 911, it's actually postponed two more months and supposed to close on November 28, which it did. But during that time frame, we also received our fiscal year 2002 appropriation which dumped an additional $20 million in funding to this program. So, in essence, what started out as $15.3 million a program is actually a $35.3 program at this time.

We did receive 27 applications for assistance under this program. And our review panels have met and reviewed all of the proposals. During the next two weeks we will be receiving consensus back - consensus reviews back from the review panels. And at that time we may be available to contact states to discuss specific items with them.

Let's see. With this program, I want to note that we encouraged all aspects of law enforcement to participate. We offered overtime. Granted we can't fund direct personnel, but we can fund overtime. We offered overtime for prosecutors, for law enforcement agents, investigators, lab personnel, police agencies. You could hire consultants or contractors to come in and help do your DNA analysis. So we were trying to be as flexible as possible.

And one of the high points I think for some of the states is that there's no state match at this time associated with this program. Since we're building the offender side currently, we did not put a state match on this program.

And to address our convicted offender program for 2002, we currently have $26 million in appropriated funding - well, combined with the asset forfeiture funding. Then we plan on opening that solicitation this summer. We believe that it's going to be very similar to the 2001 program. There will be some minor internal changes which will basically be invisible to you guys. It'll involve us possibly using something called the "GSA Schedule."

We believe that this program is really innovated and it's involving as the community evolves and as we can figure out better ways to leverage our funding and to help make things easier for the states who ultimately are responsible for all this data.

So hopefully it'll be, you know, a one- to four-page document, again, this year for you to fill out, and basically taking the paperwork stress out of your life and letting NIJ and the vendors deal with that directly. For O3, there has been a request for $15 million in funding to continue this program.

And all 50 states and several territories are eligible to apply. This funding in this program is regulated by the DNA Elimination Act of 2000. So all the statutes that are within that act apply to the funding and how we administer this funding.

And finally to finish with the future of our no-suspect casework program, we currently have a request for $25 million in appropriations for 2003. And for those of you not familiar with the federal fiscal year, our Federal O3 will start October 1. All fifty states will be able to apply in several territories, and we anticipate this program to evolve and to change maybe like the offender program did.

So if we can stay in constant communication with the community, we can know how to evolve with the community and make this program efficient for everyone.

And that's about it.

MR. SCHMITT: And we'll address our numbers in the upcoming roundtable, but are there any burning questions that you want to put specifically to one of these four folks at this point?

Dean?

MR. GIALAMAS: I just have a quick question about federal funding. And this actually goes to anyone at NIJ. It's my understanding that as a local agency I would be ineligible for applying for federal funding unless our state actually participated in the program.

And the question is: Is there any thought from NIJ to extend that to other agencies? And I only raise that because our backlogs and our crime rate actually in LA are pretty similar, if not greater than some states our in the country, and it's just, I guess, rather unfortunate that, you know, we couldn't be able to address it simply because my state organization has said, No, I'm not interested in the paperwork process.

MR. SCHMITT: Lisa or Glen, would you like to -

MS. FORMAN: The way that the money is appropriate dictates how we can give it out. So the appropriation identifies that these funds shall be given to states. And NIJ recognized that a lot of work was done locally and that there is a lot of autonomy in a lot of local laboratories.

But there was nothing that we could do that would change that. We checked with the Office of General Counsel. We tried to put it up through the chain that you might be able to put it up through, and there was nothing that we could do.

So what we tried to do was make a solicitation that made sure that no one was disenfranchised. But ultimately it is the state's decision if they choose not to apply then there's nothing that can be done because they ultimately would be responsible for your data - well, for a local laboratory's data.

We don't know that we came up with the perfect solution. We don't know that any changes can be made to the way that these funds are given out. But if you have other ideas about ways that would be more able to synthesize the role of the local laboratories to that of the states, we'd be happy to get them.

MR. JOHN PAUL JONES: Other questions?

John?

MR. KREBSBACH: On that line what Dean was referring to, and Lisa you're fully aware and so is John Paul and a number of other people, in New Mexico our state has never put in a grant application. It has always been the City of Albuquerque puts in the grant applications as a consortium type of thing. We pull the state kicking and screaming into the 21st Century, and they've just kind of follow along our heels in a lot of ways. That's nothing against the personnel or the people at the laboratory. It's the administration that's going on in our state for the last fifty years or so.

(Laughter.)

MR. KREBSBACH: I appreciate the way that NIJ has been able to try to word some of these things so that we've been able to continue to successfully put in these grants, particularly the most recent one on the backlog casework where it was more the responsibility of the state CODIS administrator for the states to put together a package, if you will, a single application that involved any of the other laboratories or entities that might be interested in trying to do that. Of course, I don't know how California's structure is, but that allowed us, and I'm sure it may have allowed some other entities, to be involved in a process where in the past they may not have been able to or at least not as directly able to put in their requests for the needs that they have.

So I appreciate that from my perspective. Maybe I'm greedy. I don't know. But I just know that had we not had those opportunities and that mechanism, we'd still be doing enzymes and ABL.

MR. JOHN PAUL JONES: Tom?

MR. GEDE: Can I ask Lisa how is your language - when you make a request, is that what shows up in the authorization and you have no impact on the appropriations bill or what does the DOJ do -

MR. SCHMITT: Somebody who sat on the other side of the city, I guess, the first seven years and saw the sausages being made. It's a combination. I mean, there are times when the appropriators will ask the Department how they would like something structured. More often than not when something comes from whether authorizers or appropriators they just make it up on their own.

And that's often because somebody, one of you folks or consortium of folks or somebody else has gotten in their ear and said, Hey, this is what you ought to do. And so all of a sudden it just magically appears in the Approps (sic) Bill and then staff at Justice go, Oh, I guess we have to do this year.

I mean, it really sometimes - it often is that awkward a process. This coming year the money will be given out under the statutory authority of the DNA backlog and elimination act, which is something that we wrote from scratch with at the impetus of a lots of folks in this room after hearing - there was testimony, there was discussion on both sides, the bipartisan bill. It was the way legislation really ought to be crafted then often isn't.

But I will confess that it says, States may apply. That was a conscious decision made by the members of Congress at the time. It reflected kind of the political philosophical view of the people who were driving it, mostly Congressman McCollum on this point, that, you know, we live in a representative democracy and we should - and the federal government should defer to the state elected officials.

And if the state-elected officials don't think that the local unit of government's needs are that important, then they may be wrong, but we federal officials shouldn't be second-guessing them and that there needs to be some education happen by the local labs of the state officials so that they realize how important this issue is and they'll then go to bat for you.

I realized that that is a somewhat idealistic pie-in-the-sky notion. But we had to make a policy call. We decided to, you know, go and draft this statute based on what the philosophy was.

Now, clearly though, if after two or three years it's not working, then it's time to make a change. And it may be that after a year or two of this or maybe now. You know, John will want to go to the guys in New Mexico and say, You know, Help me. And if they won't, then he goes to his congressman and senator and says, Please help me by fixing the statute. Especially if there's money left over that we haven't given out, that's a really good evidence that the system isn't as sufficient as it should be and it ought to be changed.

Some of you may know that there's a proposal now to amend the Forensic Science Improvement Act to allow units of government to apply for those grants. It's the same sort of request by local units who got to a member who's interested in supporting that, and perhaps you can make that happen as well. But that's kind of the evolution.

One is an awkward process. One is a more well thought out. Neither of them fixes your problem, but at least it may give you some comfort to know that with respect to the statute coming out this

year, the policy options were weighed and considered and they selected an approach that wasn't maybe what you wanted to be.

Tom?

MR. GEDE: Well, it's time for a change or considering a change. Is there a way in which maybe, we, as a group ought to think about more concerted action? I'm thinking, as Susan mentioned, Phoenix has its own lobbyists -

MR. SCHMITT: Right.

MR. GEDE: - in Washington D.C., but Albuquerque might not but LA does. And so it's sort of helter-skelter ad hoc? When it hits The Hill, is there maybe something that we can do to help you-all when it comes time to coming up with a concerted plan that helps both the locals and the states?

MS. HART: Well, I think - obviously one of the things that the Attorney General has asked NIJ to do is to provide recommendations as to how we can best use the money that's out there. And the people are very interested in getting the best bang for the buck.

So if there's some impediment to getting the best bang for the buck, I think it's on us to raise that and suggest that there needs to be more flexibility if that's the consensus of the people here in this room. And having come from the City of Philadelphia where we forever were making that complaint that, you know, when you're the largest city with all of the crime and we weren't getting the money from the State, I'm certainly very sympathetic to that point of view.

One other thing I'd like to just respond or make a comment on something you said earlier, Paul, about the need for kind of statistical studies about the various benefits on this. We're thinking very much alike.

One of the things that I don't think that we have been particularly good at is making the case for legislatures about why they should invest in forensics and labs. And part of that means not just having anecdotal cases in saying, you know, we solved this case and we prevented this crime and we put this person away. It's specifically showing the kinds of hit rates you get and the public safety benefits or the cost benefits that you have from that.

So we've actually set aside money this year to try and undertake that kind of study. Because ultimately for my way of thinking, if we're talking about capacity-building, we have to give people out in the state and local governments the tools that they can then use to go to their legislatures and say, It really it worth you putting the money here in support of this.

MR. SCHMITT: And I'll make one other point in follow-up to the question. It was always easier for me as a staffer to hear from one group that represented a large spectrum of a particular audience rather than to hear from 15 guys coming in, or gals, at different times on a subject.

There's the consortium of forensic science organizations which I think would be a very good vehicle by which to speak as a group to Congress on this point.

Other burning questions for this panel?

Carl?

MR. SELAVKA: I just wanted to raise one point. Several times, and Paul brought it up also, the need for training for forensic scientists as opposed to foundational education is one that the NIJ is sponsoring through the technical working group on forensic science education and training separately from this group.

And I wouldn't dissuade us from talking about it. I would just say this group should support the efforts of TWGED. And more importantly, if we don't design outcome standards for what a DNA examiner or a criminalist looks like and hold the programs of training to them, we will end up with a mishmash. You can't have one training center putting out people with a certain kind and another training center just doing it differently.

MR. SCHMITT: Right.

MR. SELAVKA: We've got to have outcome standards. So we'll be pushing for that in TWGED and I hope this group will sponsor that as well.

PLANNING SESSION

MR. SCHMITT: We're going to move now to the planning session portion of your outline. And, again, I remind you that there are soft drinks and cookies and hot coffee waiting for you if you want to get that.

But let's thank this panel for their comments before we let them go here.

(Applause.)

MR. SCHMITT: We have touched on a number of issues during the day. And now we want to make sure that everybody has a rule in crafting the debate on these issues.

The director from the Attorney General to the National Institute of Justice was to convene a lot of smart people, ask a lot of important questions, and then for NIJ to provide recommendations to him on what we need to do to reduce the delay in DNA analysis in the states.

As a jumping-off point, what I'm having passed out to you now is a series of questions that we've developed here on the staff level that we, as we have discussed it over the last few weeks and months, are ones that we find that continue to come up. And what we really want is for each of you to chime in here in a very loose roundtable sort of discussion, not so loose that the transcriber can't keep up with us.

(Laughter.)

MR. SCHMITT: But a discussion so that we hear from you. And some of you, you know, have been more vocal today. Some have been less vocal. Here is your opportunity to effect federal policy in this area. Here is your opportunity to speak up and tell us what you think we ought to do.

So I want to go down this list in order, if I can get a list for myself.

My role as moderator is mostly going to be traffic cop and recognize folks and, you know, keep people from coming across the table at others and that sort of thing.

Well, we'll start with the first question. We decided that we ought to talk about short-term and long-term both. And especially Sarah and I in our discussions have talked about prioritization, where the prioritization is the solution for the short-term. And there are a lot of subparts to this. But let's start with this and give us your view.

Is the short-term solution to the backlog simply a matter of prioritizing what it is we put in, whether it be offender samples or casework samples, or is that just the wrong way to think about it? Is it the case,especially with casework, that to prioritize costs more money and takes more time than to just test everything?

I don't know the answer. And I don't know about Director Hart, but -

MS. HART: I don't either.

MR. SCHMITT: - she doesn't know the answer either. So please tell us. And one thing that we continue to back with: Are there offenders who quote/unquote owe samples who are being let-go out of the custody of the government without giving us samples? And what we mean by "owe" is that the state statute requires them to give a sample, and they're not getting it. I see lots of people nodding their heads.

Is there anybody who thinks that they aren't?

Paul?

MR. FERRARA: No, I agree there are an awful lot of both samples out there. In Virginia, that hasn't been as problematic as getting multiple samples from the same individuals and trying to fair at them out. But, yes, there are an awful lot of old samples. We take the samples when the persons go into the system. So if it's owed, it's taken.

MR. SCHMITT: So when they are first incarcerated, that's when you test them, not when they get out, but when they go in.

MR. FERRARA: In fact, even -

MR. SCHMITT: Now, let me ask you. In Virginia, are there people who get out of prison who owe a sample and have not been tested?

MR. FERRARA: There's got to be a few, yes.

MR. SCHMITT: But it's not - but it's just a drib and a drab. Somebody slips through?

MR. FERRARA: Right. But that's not necessarily represented of the country.

MR. SCHMITT: I understand. You guys are kind of an exception in some respects.

John?

MR. KREBSBACH: We've had a very similar experience as to what Paul's had, except we have a number of people that instead of going to prison - we're an All Felon state like Virginia is - we have a tremendous number of people that never make it to prison. They immediately go out on probation.

I think what a lot of systems have is the problem is an unwillingness because they just don't want to be doing it. The collection is on the part of either the Department of Corrections or whoever else is tasked with that.

We've been very fortunate in New Mexico that the Secretary of our Department of Corrections is a former prosecutor from Florida, very experienced with Dave's system down there. And he just

immediately said flat out, We will do these collections as part of the Department of Corrections and it is our part to doing these collections.

Now, we do mouth swabs. Always have; always will. So it was much easier and much less expensive to get those collected. Not only do we have prison officials doing the collections, but every probation and parole officer in the state has been trained to do the collections right across the desk as the person who comes in on probation.

MR. SCHMITT: Now, do you ever lose people? They leave the courtroom and then they don't show up for their probation or parolee?

MR. KREBSBACH: Absolutely. There's only -

MR. SCHMITT: And you miss those.

MR. KREBSBACH: As Paul said, there's always a few that are going to slip through the cracks but we -

MR. SCHMITT: One of the issues is if you had - if you were - is it a matter of technology or just the way you structure your system that you couldn't get them in court. The judge convicts you. You're sentenced to, you know, six months probation. Thanks for coming. See you. Before you leave, we'd like to swab your mouth. That could happen with your swabs, but you just don't it that way?

MR. KREBSBACH: Right. It's a function of the structure of our system. The vast majority of the people that are sentenced to nothing more than probation will actually show up the first or second time. They may never show up after that, but we get the collections done on that first exposure.

MS. HART: Is this something where - Just to follow- up - that if there was, say, let's a technology that people even thought was easier? I don't know. You know, as you walk out of the courtroom, you got to push your hand down on something that gives - I don't know. I'm not the scientist. You-all are. I it something that if there was an easier kind of technology that could be available in the courtroom, do you think that would increase collections? Is that something worth looking at?

MR. KREBSBACH: Our situation it's not - the people that are tasked with doing the collections generally now, because they've been doing it for a number of years, have no problem doing those collections. It's the - the problem is having that collector physically in the courtroom. The court's want nothing to do with this.

They don't want to do any fee collections. They don't want to have to track anyone or provide any information for that matter. So for us it's a matter of physically getting someone who can do the collection, even though there is a number of them, into the courtroom where they're bogged down.

MR. SCHMITT: We'll come back to Tom.

CC?

MS. CROUSE: There's no doubt in my mind that part of the issue is just flat out communication, because in the beginning when the State of Florida did have an many statutes for collection of certain century felonies, the Palm Beach County Sheriff's Office was hitting maybe 90 to 100 percent and then slowly they started adding these other felonies and the word never quite trickled down or the word trickled down and they didn't get it. And what was happening is they just became overwhelmed and through up their hands.

And now that Dave has gone to the buckle swab, he's sending people to the lab. They sent people to our system and talked with the corrections, but it took a while for them to get it. Communication was a huge problem.

MR. SCHMITT: Dave had a hand up and then we'll come to Tom.

MR. COFFMAN: Well, I just wanted to say when we went to the oral swab we created a video and an interactive CD-Rom that not only shows them how to properly collect the samples, but it also gives them a lab tour and kind of success stories to get the behind the program.

Just last week, as a matter of fact, one of our toughest areas in the states, Miami, getting compliance for people who don't go to state prison. Well, it's just been ordered by the chief judges in the Dade area that the bailiffs will now collect samples in the courtroom.

So I think it's one of those things if you get one person to do it, you can - what we're going to do is work with them and set up a pilot document to then submit to all the other courts in the city and say, They did it. Here's how you could do it.

MR. SCHMITT: Well, you made the comment that the video gives them the knowledge. Who was the "them" you're referring to, bailiffs?

MR. COFFMAN: "Them" can be anybody from probation and parolee to juvenile justice facilities to anybody who request the training, but we've sent out over 5,000 CDs and probably about 2500 video cassettes.

MR. SCHMITT: Do you use oral swabs?

MR. COFFMAN: Yes.

MR. SCHMITT: Tom?

MR. GEDE: I was just going to say that the vast majority of judges that I'm familiar with and they don't see it as a judicial function. They don't want anything to do with it. And so the education and communication has got to be with parolee, probation, and, you know, through increased communications.

But you might get a judge here or a judge there, but by in large, they're not going to touch it.

MR. SCHMITT: Let me reask the question from the beginning, though. In your state or states that you know of, are there people who get out of prison who owe a sample but haven't given it at the time they're released?

MS. CROUSE: Do you mean - I'm sorry.

MR. SCHMITT: Someone is in -

MS. CROUSE: We follow ours at jail versus the prison system?

MR. SCHMITT: Or some sort of state incarceration where they're there for awhile where you could get -

MS. CROUSE: Absolutely. What are we doing now? Like 33 percent instead of -

MR. COFFMAN: Well, there is a difference like Cecelia says. The county incarceration, that's very similar to just probation or parolee in a way. So, yes, they do miss. As far as if they go into the state prison system in any way, shape, or form we're getting all of these.

MR. SCHMITT: Okay.

MR. COFFMAN: But not at the county jail level.

MR. SCHMITT: Marie?

MS. SAMPLES: I would just say that in New York State the samples are taken as they go in the prison so they're covered. But when the law went back to make it retroactive to parolees and probationers, then there were people I'm sure that had fallen through the cracks.

MR. SCHMITT: Well, Marie, in New York, do you miss anybody if they go - do misdemeanants, like I said, that's not a good example. Do people serve felony time in jails in New York State?

MS. SAMPLES: I'm not from the offender lab, so I'm not sure, but I would assume so.

MS. CASEY: Yes, they do. But they catch them - for the most part, they'll catch them if they're getting a probation sentence or, you know, time in a local jail. The local sheriffs, and the probation departments, even though they're county operated, have all been trained to do the collections.

And the state agency that's responsible for that oversight works very closely with those agencies. Probably the only ones - I really can't think of any that you would miss in that regard then with the current statute.

MR. SCHECK: Well, we would train them. That was a specific issue that our Forensic Science Commission mandated that they take the probation and parleys samples. There was enormous resistance because it was easier to collect them from people going into the jails. They didn't want to do it. And we required it. Now I hope we're really doing it. I only know that we issued the rules.

MR. SCHMITT: But even there, just - and if I'm tracking slow, I apologize. Even there when the probation and parole people do it, it's after the person has been released from the jail at his first or second parolee meeting, or the people who don't go to the jail.

But, I mean, the people who - we have them locked up for awhile, but they're not in the state prison. We missed them by testing them in the jail, but we get them at parolee and probation is what we're saying. And then we know that there are some we just miss at that stage.

I think we're trying to grasp whether if we were to have a more concentrated program to make sure that they're tested even in jails, we would gain an appreciable larger number or whether it's really onesy and twosy.

MR. GEDE: The window you're talking about might be right out of the courtroom -

MR. SCHMITT: Right.

MR. GEDE: - after conviction. Because as a - if they're just a detainee, it's not an issue. It's an issue after conviction. And if it's through probation, then they're out the door.

MR. SCHMITT: Well, I understand that.

MR. GEDE: And so unless like in New Mexico where a standard administrative procedure has been adopted or corrections has worked with all of the counties to ensure that the county probation officers are going to follow through with a program as they walk out the courtroom out the courthouse, if the judge doesn't say anything about it, somebody has to or else they're gone.

MR. SCHECK: Glen, the idea was you had to train the probation officers to do it because if you're thinking - I mean, think about it. If you're going to all felons, as you're planning here, the only people that are getting probation for felonies, right, are ones that were probably bailed out soon after their arrest. And, you know, they may do some kind of split sentence, you know, of four or five months or something like that. But in all likelihood, there are people that may never have been in prison, except right after their initial arrest. So unless the probation is doing it, no one is going to do it.

MR. SCHMITT: Okay.

Kim?

MS. HERD: Just real quickly. Along those same lines, you may want to train judges also to require it or to order it as part of a sentence, because prosecutors may not be asking for it or they may not be aware of it. It needs to be on their radar screens more.

MR. SCHMITT: That's a good point. And we're going to talk about training several questions down.

I want to talk about - I'm sorry, Sue?

MS. NARVESON: Yes, just one quick comment. In Arizona when the statute was passed back in '93 what they required was that they task the probation county jail and the state Department of Corrections with collecting the samples upon conviction or prior to release.

So there's a mechanism there for ensuring that you can do all the appropriate checking before they're actually back on the street. And they coupled that with an evaluation of the proclivity for violent re-offense.

So we actually have a prioritization if we have to use it, based on how serious of an offender is being released to the public. And that's helped in prioritizing the limited resources scenarios.

MR. SCHMITT: One of the other questions that we kicked about was whether we are losing a significant number of folks because the state laws are not retroactive.

And I know we touched on it a little earlier today, but I'm curious to get a sense from folks here as to whether there are a large number of people out there who would have to give a sample if they were convicted today, but don't because their state testing statute was not retroactive.

MR. GEDE: You know, Tim, though I don't see him here, or Lisa, they seem to me that the handout that they had indicated some of that type of information as to which state laws were or are retroactive. And we're kind of a small representative sample. I think you're going to find that that answer is all over the board.

MR. SCHMITT: Okay.

MR. SCHECK: How could that be all over the board.

MR. SCHMITT: I'm sorry?

MR. SCHECK: I mean, Tim's data on Washington State make it's very clear. Common sense tells you that if you make a statute retrospective, you're going to double or triple the number of eligible people.

There are also people on the street. So, once again, for the umpteenth time, somebody ought to be telling these people that they should be focusing on collecting those samples and making the statutes retrospective - retroactive rather than typing the people that are doing twenty or thirty years in jail. They are in the street.

MR. SCHMITT: Dave?

MR. COFFMAN: Just real quickly. In our state, probably close to 50 percent of the samples that we have in our database are there because we went retroactive. There's always a huge influx and then it goes back to what the normal convictions coming in. So I would say 50 percent in our state.

MS. HART: I just wanted to follow-up one thing that Barry said. Is there generally a consensus here that it is very important to be trying to get convicted offenders, serious offenders, who are going out on the street before you get somebody who is going to be sitting in a prison for about twenty years? You don't agree or you do agree?

MR. COFFMAN: No.

MS. HART: No.

MR. COFFMAN: We just need to work them. I mean because we're solving as many crimes, if not more, that are historical from people who are going into prison for awhile. Yes, you'll solve the ones that occur right after they get out of prison maybe, but there's a whole list of crimes that are needing to be solved that are sitting on the books and taking up investigator time and that type of thing. So I really don't think I can say that.

MS. SAMPLES: We already have victims out there that deserve, you know, that kind of closure to their event. I often presented as the fact that these individuals are being re-victimized on a daily basis, going to the grocery store, picking up kids up from school, wondering where that person is that assaulted them.

MR. SCHMITT: Let's go down here to the end.

MS. KREEGER: Yeah, I'm not Steve Dillingham. I'm Lisa Kreeger. I was just going to say, too, that the information that we have about sexual assaults is that by the time someone gets sentenced to the state prison on a sexual assault crime, they've committed as many as eight sexual assaults before that.

So having the information done and to tell us how many cases in the recent past ties to the person that's now going in for twenty years rise. This is important.

MR. SCHMITT: Paul, you're going to get that next question so -

MR. FERRARA: Okay.

MR. SCHMITT: - you might want to just wait.

MR. SCHECK: Could I just answer -

MR. SCHMITT: Okay, Barry.

MR. SCHECK: The solace to the victims only is going to occur when you type the unsolved sexual assaults. So don't tell me that it's putting - if you add 50 percent of your samples in there from people that are on the street or through retroactive, it's not necessarily typing the people that are in prison. It's typing the old, unsolved samples -

MR. SCHMITT: Now, we're going to get -

MR. SCHECK: - which nobody is doing.

MR. SCHMITT: We're going to get to casework in just a minute.

Paul, here's the question for you, and that is because your state is going to all arrestees.

MR. FERRARA: Right.

MR. SCHMITT: Does all of this change when you talk about arrestees? Are you going to be so overwhelmed that you now will have to prioritize the types of arrestees you test, or will it, because of oral swabs you'll still be able to process them all?

MR. FERRARA: No. On the contrary, with the arrestee statute, for example, one of the provisions is that after a determination by a magistrate the probable cause exist for the arrest, a sample shall be taken prior to the person's release from custody.

So in many respects that statute covers the issue of possible people getting out.

MR. SCHMITT: If you have the resources to do that?

MR. FERRARA: But the same - roughly the same - this testing on arrest doesn't dramatically increase the total number of samples in the data bank, because 90 percent or plus get convicted anyway. We just get the samples that much earlier.

MR. SCHMITT: I see.

MR. FERRARA: And if you're current, like we are right now, in effect, for all intents and purposes on convicted felon samples, then we can avoid the concerns that Barry has with respect to prioritization.

In other words, get them all and then you don't have to worry about distinguishing who is getting out and keeping track of who's getting out and when they're coming.

MR. SCHMITT: Maureen?

MS. CASEY: It just seems to me, and I'm not the scientist, but if you go by CC's little diagram about the things where we know we've already focused our efforts, which is speeding up the analysis time in the lab.

It seems like from what I've learned with respect to the convicted offender samples everything that could be done in the laboratory pretty much has been done to speed it up with the exception of the data interpretation and review.

But the real issue with respect to convicted offender samples is on the collection end. And that's at the front end, which is really beyond what the laboratories can do. And that may be something that we need to look at as one area of developing ideas and recommendations about what other pieces of the system can do in that collection effort.

But in terms of the laboratory itself, it seems like NIJ, together with everybody else, has done a great job in terms of speeding up that analysis process and everything that can be done in a lab.

MR. SCHMITT: I'm going to take Barry's point for the next part of this, which is clearly the system doesn't work unless you have both offenders and casework in it. And it's found to have a million offenders, but if there are no cases, you can't match them very much.

Do we need to be prioritizing certain types of casework such as sexual assaults and other crimes that we know that are characteristic - have offenders who characteristically repeat several times before and after their caught? Or is it that it's simply too much hassle or too expensive to do it that way?

Paul?

MR. FERRARA: Yes to both - yes, to both parts.

MR. SCHMITT: No, you can't have yes to all my - this was a disjunctive question.

(Laughter.)

MR. FERRARA: The running - the analysis of the samples of casework, you try to prioritize cases. I mean, our first priority, our cases are going to trial. That's pretty clear, because if a case is going to trial, the DNA evidence is needed. After that I don't think there's any good predictors of the outcome of a case just on the basis of the type of offense.

We can do, as you can soften the charts, we can do burglary cases and breaking and enterings, which are fairly straightforward and easier-type cases. And then in the process solve an awful lot of violent crimes by doing so.

On the other hand, I mean, certainly serial - whenever we run across a serial rapist or a serial murder case, like I've got six unsolved rapes all committed by the same individual in Fairfax County, as we speak. But no - I don't know who the offender is. But those cases are ready and it's just simply a matter of getting that offender and hopefully he'll be arrested sometime soon in Virginia.

MR. SCHMITT: Does everyone agree, and I'm not saying it's an effectual matter, because I have a feeling there hasn't been a lot of analysis on this. But does everyone agree that there's no way

to know whether a certain type of case will get you a match more likely than another? That the burglary case is just as likely, or more so, to get a match with an offender than a sexual assault case, because it's somewhat counter-intuitive that that would be the case. It seems to me.

Marie?

MS. SAMPLES: In one sense, that's true. I mean, a lot of laboratories would say that if it's a statutory rape or a spousal rape that that sort of case is unlikely to match up with anything else. You have a suspect who's clearly identified and everyone agrees who that person is.

But by not processing those cases to generated DNA profile you are missing - you will miss potential case-to-case linkages, because someone who may be violent with his or her spouse - well, his spouse may also be a rapist. And like I said we just had a case like that last week.

MR. SCHMITT: Well, I believe that you can have the linkages. But my question is: Is it the case that certain crimes are more likely to have those linkages than others? I grant that all of them could have it to some extent. But should we say, Well, sex crimes are more likely to have linkages? Or burglary cases are the most likely to have linkages and so we should focus there?

Barry and then Dave.

MR. SCHECK: The British data is very persuasive on this. And when you see Dave's presentations and, I guess, others who have continued, you can see enormous increases in police forces, a, that are trained to collect more evidence from scenes, get more clearances with their DNA testing.

And burglaries, I mean, the British indicated to us from the very beginning that we were going to get all these hits from burglaries. And I don't know why that's so surprising. Everybody calls it not a crime of violence. I don't think that's necessarily true.

And you see the connection to sexual assaults and burglaries, because how many recidivists have we seen of people that are the ones that are going through the first-floor windows breaking in, and so that's the kind of adventitious thing that happens in burglaries.

There are rapes from people that wake up. Women that wake up. So I don't think that's a surprising thing. What is surprising to me is, again, the lack of typing on these unsolved crimes. And also I don't understand why statistics are not being kept on proving that this is a huge multiplier.

Now, maybe the reason that you can't keep those statistics is that, a, nobody collects data about what happens to these cases after they leave the crime lab, which is astonishing. I mean, none of these people in this room with the possible exception of Paul, because he went to get the statistics, can tell you once they finish with the case whether it's an exclusion or an inclusion. What happens to the disposition of the case?

And this kind of data collection should be peculiarly the property of the federal government frankly, because in this kind of integrated database system you really need that and there must be mandates upon the state to tie this data together so that you know what happens after you leave a lab, then we can have their better answers to the questions, but the British data, I think, is the most persuasive step I've seen.

MR. SCHMITT: Dave and then John Morgan.

MR. COFFMAN: Well, basically we do keep that type of information in our state ever since the NIJ grant. And we have some laboratories who are very good with providing me with the data. And burglary cases, in those laboratories, they're solving about 50 percent of the burglary cases they attempt.

Now, sexual assaults, they're solving approximately 30 percent. So I would say burglary has a greater chance of making a match to the database.

And in addition to that, just recently there was a pretty violent sexual assault and homicide of a small child. Having had any clues in, and because they worked the burglary case, they don't know who it is, but not a burglary case has been linked to that homicide.

So I would say burglary cases lend more matches to your original question than other cases right now.

MR. MORGAN: I had a follow-up question to this and that is to step back from the crime laboratory perspective. Is there a way to prioritize or is it useful to try to prioritize based on the likelihood of getting usable DNA from particular kinds of cases or from cases that originate from particular parts of your agencies or something of that nature? Is that a useful way to try to prioritize?

MR. SCHMITT: Maureen?

MS. CASEY: I just had a question that sort of goes to this whole discussion on prioritization. Do we actually know what the scope of the backlog on casework on all those unworked cases that we're talking about here?

MR. KREBSBACH: I think part of that is how we do define backlog? Is the backlog the case that's been submitted to the laboratory that's sitting on an evidence shelf? Or is the backlog the case that's sitting out in every one of these little four- and five-man law enforcement agencies that are not submitting cases, though they'd love to do so, because the state laboratory or whatever their servicing lab is has told them, Don't submit them unless you got a suspect.

So I don't think there's any way anyone knows what the backlog is because no one has defined what's meant by "backlog."

MS. CASEY: Should we try to be doing that? I mean, is that part of what - I don't know.

MR. SCHMITT: It's a good question. And it probably would be helpful to define the question before we try to answer it for the Attorney General. Let's continue and see how this develops.

MR. FERRARA: Glenn?

MR. SCHMITT: Paul?

MR. FERRARA: Just as a follow up to that. I mean, the question - it raises the question. Our laboratories are still restricting the types of cases that they will accept. We are not. But is that a prevalent practice?

MR. SCHMITT: That's a very interesting question.

How about folks that are here? Marie?

MS. SAMPLES: Our laboratory accepts evidence from homicides and sexual assaults. And up until September 11th we also accepted selected assault cases, burglary cases, robbery cases, and attempted homicides. But after September 11th we cut out those other categories. So unless it's a rape or a homicide, it's not coming in our doors.

MR. SCHMITT: I will contribute that when we worked on the DNA Backlog Elimination Act, and keep in mind that's what we named it, the Backlog Elimination Act. So we thought we were addressing the backlog.

We primarily thought in terms of sexual cases and homicides but mostly sex cases. Because we heard all the time from congressmen from the Great State of New York and other people that there are 16,000 rape kits sitting on the shelves of New York City alone. I can't tell you how many times I heard that. I have no idea if it's correct.

MS. SPEAKER: It was. Trust me.

MR. SCHMITT: But that is what is in the mind-set of most policymakers in Washington, as the backlog that needs to be fixed. But I got to say that sounds like a good place to start.

Why are there 16,000 rape kits sitting on the shelves in New York City?

MS. SPEAKER 1: Do you want to answer that Maureen?

MS. CASEY: Yes. Prior to - and now I can say that fortunately there's probably less than 10,000, but as they worked through the backlog. But prior to January 1 of 1999 a lot of it had to do with the capacity issue and a policy issue. The capacity of the medical examiner's officer to analyze ever single rape kit that was collected.

And the policy prior to January 1 of 1999 was that only known suspect cases would be analyzed. So all of the no-suspect cases, which we know are very important, weren't being analyzed.

So in January of 1999 that policy was changed. The Medical Examiner's Office got some additional staff to handle every single rape kit that was collected. And then the backlog project was instituted where we would analyze the backlog, but a lot of it had to do with capacity and the policy of the Medical Examiner's Office and the police department at the time.

MR. SCHMITT: Paul, I'm going to pressure you on this because you made the point that your prioritization is because certain cases have to go to trial, and I understand that.

Let's assume we were able to find a lot more qualified people for you and give you a lot more money so that you didn't have to worry about that. All your cases are going to trial you could take care of.

Would you then say, Okay, next I want to do all my sex cases? Or would you say, I'll do a combination of sex cases and burglary cases because Dave makes a persuasive case on burglary? Or would you say, No, I'll just take anything anybody wants to send in first-come, first-serve? That's the most equitable way to do it.

MR. FERRARA: Let me briefly give you a anecdote that - a short anecdote that involves a case where, again, we make a determination. A woman is raped. The investigators indicate that she had had - she admitted to having prior consensual sexual intercourse 45 minutes before her attack, and her perpetrator or an alleged perpetrator did not ejaculate.

The evidence is presented to the laboratory. And they say this guy we're holding on shoplifting charges. Can you prioritize this case? In other words, raise it to the head of the line over a thousand other cases that we're sitting there. We did our best. We didn't get to that case.

Eleven days later he kicks on the shoplifting - he gets kicked on the little shoplifting charge and 11 days later rapes and murders a woman. We go back to the original rape kit of the rape that occurred. There was only one foreign profile. It matches Christopher Banks, the guy that murdered the woman. There was no evidence of a previously consensual sex partner. Obviously he had ejaculated. And unless you have the clarity of a 20/20 clarity with a crystal ball, you cannot predict what priority should be given.

(Whereupon, Attorney General Ashcroft entered the proceedings.)

ATTORNEY GENERAL ASHCROFT: I just want to thank these folks for being here today.

MS. HART: Well, I don't think I need to give much of an introduction here, but I think all of you know the Attorney General John Ashcroft. And I am delighted that he has taken the time to come down here today, and I think he also has some important news that he can give you.

With no further ado.

ATTORNEY GENERAL ASHCROFT: I bet people can hear me even if I talk like this. And those that can't are lucky.

(Laughter.)

ATTORNEY GENERAL ASHCROFT: I want to take a moment to thank you for your work in this important area. And I just announced at a news conference that over the course of the next year or so about $100 million is going to be devoted toward the further utilization refinement of our capacity to use DNA as a means of elevating the integrity of our decision-making and enhancing our ability to bring to justice with certainty individuals who are responsible for the commission of serious crimes.

And our commitment in this respect is in some significant measure a result of our confidence in the fact that you-all can help us make good decisions about deploying this technology effectively. It's a substantial amount of resource. But the innocence or guilt of individuals is a very, very problem to address with the greatest of seriousness and the greatest demand for integrity and certainty.

So with that in mind, I just wanted to come thank you. And if you don't mind, I'll just shake hands with you before I leave the room. But I want you to know that we are committed to putting the resources to work to make the work that you do, work that means a better outcome in terms of the ability of our system to operate effectively to convict the guilty and only the guilty of committing crimes that are serious and threaten our security and safety and those of our families.

Thank you.

(Applause.)

MR. SCHMITT: Take your seats, please. Well, the Attorney General mentioned resources. So let's go ahead and move to the second question on the list.

Now, what's the best way to clear the backlog in the short-term? Which I have a feeling you're going to tell me is resources.

CC?

MS. CROUSE: I'm really tempted to break out in a Barbara Streisand song called "People."

MR. SCHMITT: Which one?

MS. CROUSE: People.

(Laughter.)

MR. SCHMITT: People who need analysts for their DNA laboratories.

MS. CROUSE: When we go into the laboratory kingdoms that we have, with this incredibly loyal people that we have, I mean, I work with an unbelievable group that I thank God for every day.

I don't care if it's Arbor Day, I buy them something, you know, and just bring it in. But when I look around and I see what we're able to do in that laboratory, if you add some hands, it would unbelievable what we could do for our county. People is the biggie.

Although we're still looking at the extraction and the ABI-6100. We want to do that. I mean, there are some things that we can do without the people right now, but that's just a sad state.

MR. SCHMITT: Lisa Forman asked me to you how much automation would help you. If you didn't get people, how about robots? I know that's the imprecise term.

MS. CROUSE: I didn't think that it could at first. I really didn't. But I saw a very impressive talk at Promega, the international meeting by Susan Greensbude (phonetic) from the Virginia lab. And now I'm very convinced that this is something that I'm going to walk forward through. And as a matter of fact, I have the literature. I have the people coming out to the laboratory. I think it's very doable.

MR. SCHMITT: Let me get you to focus on short-term, because we'll get into long-term in just a minute. But short-term on both offenders and casework.

Marie?

MS. SAMPLES: I think as much as many of us in the laboratories hate to admit it, the short-term solution is often contracting out. The rape kits that the NYPD had in its storage that was from 1998 backed to only 1994, I think, that they have them.

There was certainly no way that my laboratory when we went online to start doing the current rapes we could not have handled that backlog that it had accumulated over the years. And the only way to deal with it was to send it out.

That said, the cases are getting a level of analysis less than they would get if they had come through our laboratory. For example, items such as underwear not being examined. And any additional items such as clothing or bedding are not being examined. Whereas, if they had come into our laboratory now as a normal case, they would get examined if the kit was negative.

MR. SCHMITT: Tom?

MR. GEDE: For those of you who know Lan Skima (phonetic) in California, he sends his regards to you-all. I just met with him before I came out to this meeting. And his answer is - you've already heard people and resources. His answer is: Robotics, robotics, robotics.

He's done statistical analysis and is finding not only on offenders but also in the casework that the ability to run simultaneous and more rapid robotic work makes a difference. He can show that. He can show the numbers.

And so that's the message I was going to deliver.

MR. SCHMITT: Is that kind of technology available for the short-term? I mean, if we gave you a quarter of a million dollars, you'd go out and buy all sorts of stuff?

MR. GEDE: I think so. Although right now they're doing blood, and I think they're going to be moving to swabs. And so the technology has got adjusted in the process.

MR. SCHMITT: If we gave you a million dollars, would you buy automation or would you buy outsourced work at private labs?

MR. SELAVKA: Both. You have to open boxes first.

MR. SCHMITT: I beg your pardon?

MR. SELAVKA: You still have to open boxes.

MR. COFFMAN: And examine the evidence, yes, I agree.

MR. SCHMITT: Go ahead, Kim.

MS. HERD: I'm going to switch back to the low-tech people again and advocate on behalf of more funding for prosecutors, because we need to have some type of statistics on how all this new legislation has impacted the prosecutors offices. We need better trained prosecutors.

Over and over again I talk to lab analysts and they say, you know, I submitted this - the evidence was submitted to me. I returned it to the prosecutor. I never heard back. You know, that the case was pled before I analyzed all this evidence. And there's all this wasted time, effort, and money, you know, that that could go toward solving other cases obviously.

And think that a lot of times when NIJ or OJP sponsors grant programs for prosecutors, the amount of funding set aside to hire a prosecutor is very minimal. And it's only for a year period. And prosecutors can't really do that. So they don't really have - what they really need is more manpower and womanpower in there doing this.

And I think we should really try to push hard for that and to try to give them a sustained period of time to get somebody in there and trained and available to actually handle the cases, to interact more with the labs, and that will really streamline the process more, and I don't think we should ignore that.

MR. FERRARA: And I would just add in terms of training the prosecutors. I'm trying to emphasize upon them consideration of trying to keep their laboratory, people in the laboratory and not sitting in - not wasting a lot of time in the courtroom, too. I mean, there's a lot of that wasted that goes on.

(Laughter.)

MS. HERD: And part of the reason is because prosecutors are so overwhelmed with their caseloads. You know, once they close it out, then they go onto the next case, or they're in trial the next morning and they don't know which trial is going to go. So they're up to 10:00 o'clock at night preparing, and it's really because they're overworked. And they need education; that they need to be more considerate. But the fundamental problem is that there's just not enough resources for state and local prosecutors.

MS. HART: One of the issues that comes up periodically here having been a prosecutor and doing that 10:00 o'clock at night prep and always feeling that we needed - I needed more colleagues. But looking at it on this end, one of the - somebody brought up earlier today the fact that federal funding does not go on forever. And as much as we would like to think, well, we're hoping. We're hoping that it goes on forever but one can't guarantee that you're going to have a sustained level of funding like this.

And so if you look at this from the point of view of capacity building. How can you use federal funds to get you where you need to be? And so that you can sustain it. How would you use that? I mean, I don't want to be in a situation, for example, where you pay for prosecutors. And all of a sudden the funding runs out and they're gone and you have no ability to do anything.

MS. KREEGER: Sarah, I wouldn't hire more prosecutors necessarily, but I would train the ones that you have.

Going back to something that was said earlier several times. We have existing resources. They're just not being tapped or they're not being used to their potential.

In a number of other criminal justice areas we are now well aware and we seem to be implementing better a multi-discipline approach to crime prevention and crime solving. And it seems to me that the forensic sciences is just a little bit behind. We have the ability to train and to build teams and to build units that include law enforcement laboratories and prosecutors. We're just not spending our money or trying to create those teams.

We seem to be addressing factualized (sic) areas. How can we improve the labs? How can we improve the law enforcement training? Two things about that. One, the nexus systemically prosecutors.We are by design the people that have ultimate responsibility for all for the prosecution. We interact with both on a regular basis.

And secondly the other thing is that the communication is out there. It's just happening by stance. And so I think that it's not so much matter of allocating federal funds to higher prosecutors. It's allocating funding and changing the commitment to building teams and building communications.

MR. SCHMITT: Paul? Go ahead.

MR. SCHECK: I would strongly support that last statement. You need some kind of criminal justice coordinator. I mean, I hate to say this again, but why is that the prosecutor doesn't know

that you're still working on a case in the lab that's been pled out? Because nobody in the lab knows what's happening to the case when it follows through.

And I don't think you're necessarily going to solve that problem by hiring a person that's, per se, a prosecutor, especially in various jurisdictions where the prosecutors offices are in various different counties. The lab may be regional or statewide. I think you might be better off in demanding that state and local entities come up with information systems so they can tell you what happens to the cases.

And if you make a proposed grant like that, then depending on how the jurisdiction works, you'll get people coming forward and saying here's a team that we propose that's going to tell you what happens to the data that you should be very, very clear on what data everybody should be getting.

MR. SCHMITT: We're going to get to a little bit of that question in No. 4 here in a minute.

Paul?

MR. FERRARA: Just one other quick short-term suggestion as how NIJ funding could help. In the past when we have been able to afford to pay our limited number of examiners overtime that has had a very beneficial short-term effect of knocking down a backlog.

Now, in my case and cases, money for overtime in the states may not be available. But if that's something that can be done, that gives you immediate reduction.

MR. SCHMITT: Let's move to long-term and see if the answers vary any. I assume that they will.

What is the solution in the long-term? Is it the capacity? Is it additional speed? Is it something else? Is it all those things?

And one of the things that I'm particularly interested in is should we assume that there will always be some capacity in private local - private labs available to you on a going-forward basis so that you will do some in your own and you'll farm out some, and not just offender samples but casework samples, too.

Tom?

MR. GEDE: Again, I think Lance's point has been automation increases the speed with which cases can be - and information and data can be made available and increase the number of cases per scientist per month. And he's been available to show that as he's taken every step in automation forward.

MR. SCHMITT: Carl?

MR. SELAVKA: It seems like - you asked the question going forward. We will continue to generate higher capacity demands as we increase our capacity allowances. We will train prosecutors and juries to expect that they'll always have the DNA.

In every case we, through TV, have trained the public that DNA is required in every case. And their expectation will have to be met and it will go up. Any large case that requires many more samples to be tested than usual will be the kind of case that we might farm out, because to take all the bullets and fire it at one target takes away from the firing of all the other targets. The cases will always have to be prioritized that we do.

So having outside laboratories to assist is going to be important later as it is today.

MR. SCHMITT: And the capacity issue? Well, let's go ahead.

CC?

MS. CROUSE: I just have a question. I'm not exactly sure how the Burn grants work, but I know they've been around for a very long time. And I think - going back to what Kim said, if you had a grant system - let me erase that a minute.

We had an auto theft division that had a tremendous amount of success confiscating these cars, but the prosecutors couldn't get to them. They wrote a grant that provided the State Attorney's Office with one person that is responsible for making sure that all of the cases are somehow addressed, or at least farmed out, you know, to one of the other prosecutors.

They still have that to this day. They just keep writing the grant, and getting some money. And they do it every day. I don't know why there can't be a long-term system where you get a prosecutor in there that's dedicated, especially with this case reduction grant that's out there. If it was married to a prosecutor, and a detective, and a corrections officer, and who knows what else, I don't know why that can't be long-term.

MR. SCHMITT: I think it's permissible use of Burn funds. It's just the state has to decide that's what it wants to spend its money on.

Bill?

MR. TILSTONE: Now, you asked the question about the capacity of the private sector to help with this. I don't think the question so much the capacity is the capability.

Our phone rings every week with a biotechnology company asking how can we get up to speed to be able to compete for the dollars that have to do for forensic casework. And these people, they can't spell forensic, far less be able to meet the very stringent requirements that we have all - well, that you-all have to meet to actually do cases but they are there.

If you had some sort of program that targeted them and targeted their capability, rather than a capacity, I think there is a potential to make a large dent in whatever backlog you have.

For example, there are 45 guaranteed testing laboratories accredited by AABB, and there's only about ten of those that do forensic work. But what are they doing? They're looking at biological samples and they're using DNA to characterize them. So it shouldn't take too much effort to convert that into a resource that could be used if you wanted.

MR. SCHMITT: Keep in mind that one of the aspects of the long-term solution is to prevent backlogs from reoccurring. Let's assume you take care of the ones that exist as more states go to all felonies. And you go to - and have more capability and cops realize oh, I can get a sample now from a cigarette butt or from a trigger guard. And they begin to take more and more samples for you, you're going to have more and more things to do.

So in order to have the backlogs not reoccur, I think you have to have greater capacity. And so that's part of the longer term solution as well how to prevent that.

We talked a little about automation. I assume from what I've also heard today that it is a question of lab space and machinery and qualified people, as well as some private sector capacity either for the easy stuff offender samples or the really hard casework that will bog down your state labs that you'll want to toss out and have them focus on it.

Yes. Anybody disagree with that inarticulate summary?

MR. FERRARA: I would not only agree with that. I'd only simply add, and I think it's already quite well established that those private laboratories must meet the same standards that the public laboratories require.

MR. SCHMITT: Unquestionably.

Barry?

MR. SCHECK: Now, if I were the czar, long-term I would look at trying to get robotics and private laboratories to handle all the data banks from buckle swabs and take it away from these labs; that you should concentrate on building up the capacity to do caseworks on the state and local level, because that's what they ought to be trying to do best.

And a more difficult thing, as Marie pointed out, was outsourcing the 16,000 rape kits, which incidentally is the tip of the iceberg. I mean, when you looked at the numbers, that's where most of the numbers came from. And your program that came out of the New York City Crime Lab and the Medical Examiner's Office, but there were problems. And they were - you know, one thing that these people are - meaning, the web directors here, would be better at is you can almost train these private people.

I mean, I know that it's pretty easy to proficiency test with these old, unsolved rape kits. Give them some that, you know, you know the answers to and see if they get the right results.

And that was a pretty easy and effective kind of proficiency test, and I know that we got some pretty good reads on who was good and who was bad and they were missing underwear and other things like that.

The other thing that you haven't discussed is mitochondrial testing. Paul raised it before and you better watch out because this is going to be huge. We're already looking at, what is it $750,000 that the State of Oklahoma has to pay to look at Joyce Gilchrist cases. And you think Joyce Gilchrist is an exception to the rule?

Well, she was a bad apple. No, no, no. She's bad because she was - the allegations are that she misstated trace evidence and everything else. But when you get from the FBI itself the statistics, the 10 percent of their inclusions on hair examinations of all cases, and these are cases where Doug was looking at them after he has said, okay.

I agree with the analysis of the state laboratory. And about 10 percent of the time they're getting a different result than the hair sample. You know, very soon people are going to be looking at that, and there is no excess to do a hair comparison instead of a mitochondrial test now and any case that's meaningful.

So I don't see where the state and local laboratories now have near the capacity to do that. I don't know whether you should build big regional labs or something else, but that is a huge capacity problem in the long term.

MR. SCHMITT: I have to ask the follow-up to that last point before we get to Sue.

The FBI has proposed - Joe, you can't listen to this. The FBI has proposed, you know, regional mitochondrial labs, four big ones, that the federal government would help pay for and then you could all kind of tap into that. And Joe you'll probably want to correct my not-so-glib analysis of that.

Is that something that the federal government should be pursuing? Will states instead prefer to have their own capacity developed within their own labs?

Paul? Or is mitochondrial not going to be the answer that we all think may be? It's going to be such that we don't need that much capacity now?

Marie?

MS. SAMPLES: Fifty percent of rape cases in the backlog, the NYPD backlog project, don't have semen on them. So it's unknown how many of them might have hair evidence associated with them. And the kit if there is more additional clothing items that might be in existence. But certainly those are the sorts of cases where mitochondrial DNA analysis of hairs might be very useful. And there's a lot of those sort of cases out there. Every rape case without ejaculation.

MR. SCHMITT: Joe?

MR. DIZINNO: Just one comment about mitochondrial DNA exams and hairs. We've been doing it since 1996 in our laboratory. And since that time every hair match has been followed by a mitochondria DNA.

And I just want to emphasize the importance of maintaining the hair microscopy expertise is essential to maintain that if you're going to perform mitochondrial DNA exams, because you can't begin to start performing mitochondrial DNA exams on every hair in the case.

So if you're considering maintaining or starting mitochondrial DNA expertise, you also need to maintain the hair microscopy expertise. They go hand in hand.

MR. SCHMITT: Sue?

MS. NARVESON: I think for some regions in the country, too, especially in the Southwest, where, you know, remains, human remains, can be found after even a relatively short period of time where there is no nuclear DNA available.

Mitochondrial DNA is another tool that we can use. Just preliminary evaluations, and I would encourage laboratories to do this on their own. Working with your medical examiner and your investigators to find out what might be out there is very surprising.

I think the potential for many more cases in addition to the hair exams might fall into mitochondria scenario. Also, any kind of, you know, arson-related incidents where you may have burned bodies, where you just have nothing for DNA, a nuclear DNA.

We were surprised by the numbers that we saw. So whether it's regional or whether it's some capacity for being able to do some preliminary screening and directing to regional, I think we do need to look at that seriously.

MS. HART: Does anybody have any kind of numbers or information about what the demand would be for mitochondrial DNA?

Cecelia?

MS. CROUSE: We did do a study when the case backlog grant was proposed last year, and we went back and saw how many cases that we had. We had ten. And we are not going to do DNA in our - I'm sorry. We're not going to do mitochondrial DNA in our laboratory. I just personally don't think it's necessary for that number.

But I really think we need access to some place that our poor, little jurisdictions just don't have this kind of money. And even our medical examiner, when they get bones, they just sink because they know they've got to come up with this extra money.

I would love to have a central lab. I don't know what the waiting time would be, though. Maybe that's a consideration. However, I guess, if you need it, you'll wait for it.

MR. SCHMITT: Joe, you're a central lab, aren't you?

MR. DIZINNO: Yes, we're the only public lab right now doing it. Let me also make one point that - it goes back to training, I think, in the collection of DNA that might be amenable to mitochondrial DNA testing. We don't even know what that is right now. And it goes back to collecting and preserving that evidence at the crime scene. Many times right now, even in hairs, they're just not even collected or dealt with.

So it's more than just a mitochondrial DNA hair issue. It goes back to collection, preservation, and training of the people collecting that evidence.

MR. SCHECK: We have some interesting numbers on that, though. When you begin to look at the post-conviction exclusions now, increasingly they're mitochondrial. I mean, part of the reason is what Marie was talking about. But also homicides, old homicides. That's the only testable evidence that you get in crimes of violence are shedding hairs.

And so I would put in - I mean, long-term you have to look at this as a capacity that has to be built because we're going to start demanding it in casework. And you shouldn't be caught up short. I think that we've learned something from the World Trade Center identifications.

I know that Cecelia was working on some interesting assays. I know that Tim's company and others have been looking at other mio-assays. He may able to bring down the unit costs. But I think you definitely have to do that capacity.

And one final point that we haven't talked about is another backlog. Because I asked him about, but it was a hidden ball. You are going to get - there are 22 states now with post-conviction DNA statutes. And maybe we'll even pass the Innocence Protection Act. I just asked the Attorney General, if he would support it.

MR. SCHMITT: What did he say?

MR. SCHECK: What?

MR. SCHMITT: Did he answer?

MR. SCHECK: He nodded and he thanked me for being here.

(Laughter.)

MR. SCHECK: But there are 218 sponsors in the House of Representatives and it does have a lot of sponsors. And you're going to get more of these statutes.

Now, already we're seeing in places like Texas which passed a pretty good bill a year and a half ago that you go to Dallas County and they go, Well, I can't do casework. I'm months behind. God knows what's going on with my database and now you're hitting me with these cases which under the statute we all have to do.

And, you know, so that is another backlog you have to define. And I would say that what Dave said about the old unsolves is an extremely important point that I hear from labs all across the country and I travel in a lot of these circles.

You are not getting submissions from state and local authorities on cases that could be typed. You know, much less they're throwing away these rape kits, because they're afraid that I ask for something that might be an interesting case to type when I'm educated about it.

As a law enforcement officer, you won't do the one that I think is the high priority that I have to do now, because the lack of capacity to do casework is so terrible, you know, on a state-by-state, lab-by-lab system. And these post-conviction cases are going to cause more of a - something more of a backlog unless they're specifically funded by you-guys.

And also the mitochondrial was going to be a very important part of that, because so many of these old cases are only going to be solved by hairs.

MR. SCHMITT: The clock is an evil task masker. So we're going to move on to the next question, unless there's any burning, burning desire to comment more on Number 3.

Hearing none. Number four. Here's your chance. Oh, by the way, the answer to Number 4 is not yes to all of those questions.

(Laughter.)

MR. SCHMITT: At least I hope that it's more than yes. But what should the federal government be investing its research dollars in? And this really is, you know, what should NIJ put our research money in, in this area? Is it expert systems? Is it management systems.

And Barry touched on this earlier. Should we have case-tracking systems?

Now, when we thought about this, we were thinking for situations like Paul has where he has arrestee data that what happens if the guy is acquitted. Or if the federal statute passed, you know, two years ago where we required federal and military offenders to have their data in the database. We have a provision in there that if they are - if their conviction is overturned later on, the data has to be kicked out of the system.

Well, we went round and round with Justice as to how that notice would be given to the point of, you know, can the offender just mail a letter to the director of the FBI and say, Hey, guess what? I'm no longer in jail. Take me out of your system.

Do we need to have a case-tracking system of some sort to allow the lab to know what's coming along?

And, Barry, you mentioned it for yet another reason tracking to find out what good this DNA analysis is used for later on down the line in the cases.

And what is a part of this is what are the areas where the private sector won't develop it for you?

Carl?

MR. SELAVKA: It would seem that the case tracking systems, if I learned anything from my time with federal and two states and a private laboratory, they're so different trying to invest federal dollars and then will lead to models which have poor applicability elsewhere.

It should be - I think the owner should be on the states if they take federal money to develop these systems using IT infrastructure and resources available to them elsewhere. If you want to give us a little money for that for buying a computer that will do something, it's different than having you support research on that. On the other hand, expert systems will work in every laboratory that follows specific technologies. And there's only a couple of technologies we use.

So if you have an expert system for each or two to meet the requirements of comparison that George said, that might be a better use of the resources that are limited. Management system, I'm not sure what that means. So I'm not sure if we need money for it.

MS. HART: LIMS?

MR. SELAVKA: LIMS. We get LIMS money from other sources, I think -

MR. SCHMITT: John?

MR. SELAVKA: - other than DNA.

MR. SCHMITT: John?

MR. KREBSBACH: Kind of following up on the management systems. There are a number of companies, prior companies, already out there that provide some better, some worse than others. They're very good management information systems, and these companies are perfectly willing, at a cost, of course, to customize any system that is out there to suit the individual jurisdiction's needs.

Again, they can be very expensive but they're out there. So there is no sense in my mind to reinvent the wheel and throw more money at researching something that already exist.

MR. SCHMITT: You need somebody to buy it?

MR. KREBSBACH: You need money to obtain it, yes. That is probably the bigger issue.

As far as that case tracking goes, you can have the most perfect system in the world, specifically tailored to do what you need it to do between your officers, your laboratory, your courts, your prosecutors, whoever. You still got to have somebody to put the data in. And if you don't have the people willing to put the data then, which is also probably the biggest downfall of any

management system, is people don't want to do more work than they're already overburdened with to generate statistics for somebody out there.

So, again, it becomes a first on issue. And then maybe that we pay for the statistics to be gathered. You know, I think we want the statistics.

MR. SCHMITT: Other points on Number 4?

I'll come right back to you, Mary Ann.

Go ahead, Bill.

MR. TILSTONE: I think in terms of the question you're asking about investment in technology you already have the answer to a large part of it from the discussions you've had today.

If you want to look at it at step by step by step, then there are solutions that have reasonably matured for applications of technology to each part of from the scene to the answer in the database.

But I have not heard anyone really address a stimulus to technology to completely replace everything. A star trek phaser, if you like, so that you can go to the crime scene and get an answer on the spot for everything quickly.

And, you know, I think people may say that's too big a task. But if you go back 45 years to when lives were being buried under the demands for blood alcohol testing, the answer to that wasn't to build a better system of analyzing blood alcohols in the lab. It was to go to breath testing, which was a different technology applied to the source of the problem, and it worked.

MR. SCHMITT: Over here and then we'll go to John.

Mary Ann?

CHIEF MARY ANN VIVERETTE: One of the speakers, I believe, it was from George earlier mentioned the value of traveling to other jurisdictions and learning from one another. And I haven't heard anything about best practices.

And in law enforcement, and particularly in accreditation, we tend to learn from each other through model policies or best practices in various cities.

So it seems to me that we could learn from each other by sharing information. We hear it around this table, but is it getting out to the other labs and to the other people that have not experienced this information so it can be shared with others.

MR. SCHMITT: That will be our Number 5 after we get John's comment.

MR. MORGAN: Well, I just wanted to put it to the group. There are one or two people during the technology panel that raised the issue of needs for greater sample extraction protocols and capabilities. Is that a consensus of a need that does exist?

MR. COFFMAN: Yes. That's what I wanted - that's what's missing from this list. And I think it needs to be near the top is technology for casework to automate certain procedures.

We had a private sector laboratory come through our lab last week on tour, and we went out to lunch and we were just discussing. And they've automated the human quantitation for casework type of samples. But because they decided not to pursue casework, it's just sitting on someone's shelf. So the technology is out there. We just need to fund someone who is willing to come up with the solution and then put a price tag on it and then the states can apply to buy this from NIJ and put it in labs.

MR. SCHMITT: But this is not something that exist that you want to buy. It's something that needs be developed?

MR. COFFMAN: There's a lot out there developed. But, I mean, you probably would need some more development and then the ability to purchase it.

MR. SCHMITT: There was a question coming up. Okay, Tom.

MR. GEDE: A question, Glenn. What does it mean when you phrased the question: What technology should the federal government be trying to develop? What is within that suggestion that NIJ should spend time, energy, resources, working on the development of technology, or should it be more of the exchange of information about what's out there and what the developmental needs are, or that kind of thing?

MR. SCHMITT: The question, when I wrote it, was the former, which is not to say that we don't do the latter. But a lot of what is done by the Office of Science and Technology at NIJ, headed up by Dr. David Boyd, is we come up - we develop where we think there is a gap in law enforcement related technology.

And someone will say, Well, you know, there's some bits and pieces that we think could be developed into something that would be great for cops or prosecutors or whomever. And then we give out research money to people who then develop that at the direction of our project managers and David and folks like Lisa, and that sort of thing.

So we do - that's part of what NIJ does is to give out the money to make that happen. So that's what I had in mind.

More on Number 4? Okay. Moving right along to Number 5. Besides - I mean, this is I guess somewhat similar to maybe Number 3. But we talked a little about training and education. And maybe it's sharing of information, as well, not just training and education.

Let's talk about what we can do. That it's not just buying new technology or developing new systems. What else can the federal government being doing to help states become self-sustaining?

MR. TILSTONE: Can I just address the kind of training and trying to deal with some of the issues that came up in the presentations. And also go back 18 months to when NIJ organized the CLIP Summit. I think this was the first time recently, as in the last five years, that a group got together and really said, Here are the main priorities that laboratories need and identified if it was training was first. Training was second and training was third.

But in doing that, there was some issues that came out quite strongly. And the one that left the biggest impression in me was the presentation that Mark and Dale made. And succinctly what Mark said was, If you want to be a cop, you get a job with the state or the city and you get to the police academy. And 12 or 16 or 20 weeks later, you come out and you wear a badge and you go in the street and arrest people.

But with that same jurisdiction, employees are used to being forensic scientists. They're just employed and put in the lab and there is nothing to orientate you.

That was being followed up by people who said essentially the sort of things that CC said and that Dave said. What happens is it's up to the individual lab. And nine times out of ten, what they do it is mentoring. And mentoring is extremely inefficient. It will take 12 or 15 or 24 months in most places. I know there are exceptions to produce somebody who is usable. And 15 months later, CC disappears.

If you look at somebody like DEA who have actually tried to quantitate it, they say it cost about $300,000 in real terms to take someone from the university to the stage where they can do supervised casework. And that's a huge investment and that's a real challenge. It is it worth it?

But I hope I've got some good news. As a result of the CLIP Summit, with the agreement of the Office of Science and Technology, we were able to take Mark Dale's concept of the forensic academy and build three pilot academies into an NIJ-funded program for this year.

The first of them is halfway through just now and it's on controlled substances. What we've done is produce a 16-week program. It's got 11 people on it. These are people who have just been hired by labs as control substances analysts.

At the end of the 16 weeks, they will have a mixture of training, which includes law and it includes courtroom procedures, and it includes ethics. It includes communication and report writing. But most importantly, it includes all the essential elements that they require as an analytical chemist professional to go into the lab and start doing supervise casework.

They will go eight credit hours. Some from the University of Florida and some from Florida International University. Later in the summer, we'll be doing the equivalent for firearms. And to get to the point, in the fall, late fall, or early winter, we will be doing the same thing for DNA analysts. And the model will be the same.

We've got four and half thousand square feet of training facility with a DNA lab in it and the teaching accommodation. We've already begun to talk to people about cooperating with us to develop the curriculum. And I think the point was made by someone.

We don't want to be Number 257 and 257 totally unrelated uncoordinated activities. We want to do this working with all the key people in the community and get something that is a consensus of what should be in a DNA training program.

So that at the end of it, when we take all of three programs together, we'll be able to tell you does the 16-week academy concept work? Is it producing people ready for supervising casework more quickly, more cost effectively? Maybe even down right more effectively than mentoring.

Can going into the labs and do things they couldn't do just straight out of the university. If the answer to those questions is yes, then we have a curriculum, which NIJ will make sure it's passed on to anyone. And if the country wants to use it in their own jurisdiction for training.

MR. SCHMITT: www.nftc.org, Right?

MS. KREEGER: I was going to make my plug that I made earlier. But if self-sustaining means income generating and/or the ability to fund itself without the - dependence upon federal moneys, I think again you have to increase the role that the prosecutor is playing in this field.

I think that the prosecutor translates the results to the community and the prosecutor translates the results to the legislators. And I think that under what capability that our jurisdictions has that they can translate results that their jurisdiction is created, they're not going to get it funded and prior involvement as much as there ever was.

MR. SCHMITT: You're saying that part of this is a greater awareness by prosecutors because they can help drive the funding decisions, whether it's a Burn grant or other funding?

MS. KREEGER: Absolutely.

MR. SCHMITT: They champion this as something they need to make their cases than you're more likely to get the funding to keep it to go on.

MS. KREEGER: And just like there is a mentoring process within the forensic science community, unfortunately, and this may come as a shock to all of you, the prosecutor turnover, because it is not the highest paying public service job.

There's frequently only mentoring going on within a prosecutors office as well. It's one prosecutor who teaches the other. This is how you introduce this DNA evidence, or this is how you read this lab report, and this is when you call the analyst and say, Wait. I need this instead.

So you have that same sort of problem going on and that's why you need to have prosecutors be trained to help internally as well as to then speak externally.

MR. SCHMITT: Kim?

MS. HERD: I would echo that obviously. But I would also emphasize that sometimes grant programs really do jump-start a community and they force cooperation at the state AG level with the local DA's which is obviously needed.

A lot of times local AGs or local prosecutors and state AGs have a very important impact on what legislative initiatives are pushed by their AG. And clearly with, you know, regard to DNA evidence that is something that comes up over and over again.

So I think the beauty of a grant program or some type of a recognition that we need to pull prosecutors in more than we are now will really pay off with big results.

MR. SCHMITT: If we were to fund either overtime through a grant program or internships by college students who were pursuing a degree in forensic science to come work for your labs, which would you prefer to have?

MR. KREBSBACH: Interns can't touch evidence.

MR. SCHMITT: And we can't do overtime. We're on salary.

MR. KREBSBACH: But full-time temporary staff maybe.

MR. SCHMITT: CC or Marie? Either one.

MS. CROUSE: I asked Bill Tilstone if his program also includes serology? And he said it could, if he wanted it to. And the person that left in June we think the replacement is going to be May the 1st, so that gives us May, June, July August, how long before September, so that's five months. So I could probably fit in the serology.

But I think this is a very important program and it needs to be tested and to see how it works. I think we just absolutely have to do it that way.

MR. SCHMITT: Other comments, Maureen?

MS. CASEY: No. I was just going to say when we're talking about the training and education, we just can't forget the front end of the system, and we've talked about it. The collection and preservation of evidence, the training of law enforcement, it's going to be really important to do that package in the team concept that Barry has talked about and some people have kicked around here.

MR. SCHMITT: Which kind of brings us to Number 6. Which on that one maybe everyone says the answer is: Yes, to all.

Does anybody think that the answer is no to any of those?

Yes, I have two, Number 6s.

The first Number is 6.

MR. SCHECK: Well, in terms of education, what I've always thought would be very useful, and I guess it's a term that has currency and transparency in government. Right?

I mean, why can't you train the judges at the same time you're training the prosecutors and the defense lawyers? Frankly, when it comes to something like DNA testing, how it's collected, what the principles are, what the uses of the technology can be for investigative purposes.

If any prosecutors attended the talks that we give to death penalty lawyers in Monterey, you know, you'd see that half the time we're talking about the things that everybody in the lab should know. How you extract DNA - how you would identify stains. How in certain kind of cases you have to make Christmas tree slides to identify the sperm so you really - you know, you're really extracting sperm as opposed to something else.

How you don't confound yourself with mixtures, how you have the evidence collected, how you make a proper chain of custody.

I teach, you know, police officers, prosecutors, and defense lawyers. And I am telling you I don't say anything different to any of them. And there's no reason why it shouldn't be that way. Especially to promote in the sense of professionalism and scientific progress in this community of people. I mean,that's what you really want to do.

Forensic science should be an independent third force within the system. So when we train the other actors in the criminal justice system, the judges, the prosecutors, and the defense, I don't think we should be giving them any mixed messages. You might add defense lawyers to that Number 6. You left us out.

MR. SCHMITT: Fair point. Fair point.

Tom?

MR. GEDE: I'm intrigued by your term "procedures guides." Is this - what was your thinking when the protocol manual or something that takes standards that are fairly uniformly involved here? What was your thinking?

MR. SCHMITT: That was the thought, and I hoped it would prompt some discussion. You know, there's a dangerous ground when you have a procedures manual who want to put out best practices because we want people to know kind of what you're supposed to be doing. But we don't want it to be that if you do not follow these five steps in this order, it creates, you know, an issue for the defense, when it doesn't - when those five steps don't necessarily have to be in that order, or that you can't do four prime rather than four in your list.

So I don't know what the answer to that is, but that's the point. And this leads me to a question that I want to pose as well. With respect to all of these training materials that we're talking about, who should be preparing them? Should they be DOJ materials? Should they be National Forensic Science Technology Center materials? Should they be ASCLD training materials? I mean, who should be on these materials? Which also drives who puts them together.

MR. TILSTONE: Well, in terms of what I was talking about, there's no question of it. We are doing this funded by NIJ and the intellectual property ownership. What to do with that after that is NIJ's. It's not ours.

MR. SCHMITT: For some strategic reasons, if I were a prosecutor, I'd say that it is yours rather than mine. If I were defense counsel, I'd say it's mine rather than yours.

Sue?

MS. NARVESON: Well, I think what you're talking about is something that has been successful in the past and that is by the community bringing an issue to NIJ and seeking support. The TWGED is one good example where ASCLD is partnering with forensic educators to address establishing some guidelines for forensic education, forensic science education, and training.

And I think along those same lines there probably are many other community based and supported needs that could be brought to you along essentially with what we're doing right here, establishing some guidelines.

MR. SCHMITT: Mary Ann?

CHIEF MARY ANN VIVERETTE: Sometimes beyond having the training materials available to you have to have some impetus for the states to use them so it may be getting the post-commissions involved, whether it be a requirement to have a number of hours for entry level and in-service training, or beyond that, if that was an acceptable then legislation to require it.

MR. SCHMITT: Joe, is there a portion of the National Academy that trains state and local lab folks? Do you know?

MR. DIZINNO: No. The National Academy is devoted to law enforcement agencies. The Bureau puts on training for state and local and international forensic laboratory personnel in a number of different disciplines.

MR. SCHMITT: Tom?

MR. GEDE: We'll chalk it up to a prosecutor's paranoia. But I have no problem with training materials. But the minute you start moving to the manual, the procedures guide, I would get worried particularly because the technology is changing constantly.

Good criminalistic practices are something that are always going to be before the courts. But the technology is always changing. And I'd be very nervous about seeing NIJ engage itself in something that becomes the recorded policy or procedures that folks should look at.

MS. HART: Let me just tell you that I'm very aware of those kinds of issues. And from my point of view we want to make sure that we get as much helpful information out there and that there kind of be a consensus in the community that this is what is helpful, as opposed to publishing something that we might think is great and the best thing out there, but, heck, we can be wrong and I am very concerned about having something look like it is a national standard that binds all of you.

So it's that delicate line about making sure you get the best information you can that we can get you and also so you can learn from yourselves without looking like we're trying to control what you do.

MR. SELAVKA: I would also just amplify. I'm always intrigued by anybody that says they can train judges.

(Laughter.)

MR. SELAVKA: Having judges show up at all for something that you try to offer them has been - I cannot do it. I tried it in New York and we tried in Massachusetts. It doesn't happen. They go play golf.

So whatever the notion that we could force them to do it would be amazing.

MR. SCHMITT: Well, one of the things -

MR. SELAVKA: They didn't show up.

MR. SCHMITT: - that you offer training and golf together.

(Laugher.)

MR. SCHMITT: One of the conferences that the National Institute of Justice puts on is the conference on science and the law where judges come as well as prosecutor and other folks, and we have it at a real nice place.

And it may be those sort of events where you have some training available. And I have a feeling that a lot of judges would be interested in DNA. Maybe at the ABA convention you have some training breakout session on the use of DNA.

I think that so many of them are aware of how cutting edge this is and how far behind they are that they would walk in the room if it were at the place they're otherwise going to be.

So we might want to - I mean, somewhat have to take the training to the people who need it rather than a horse.

MS. HART: And also keep in mind that oftentimes when you train one judge, the materials go back and get shared with other judges. Yes, granted there will be some judges who will not be interested, but I would not write them off. I think most judges generally want to learn, although they do have serious commitments as to their time.

MR. SCHECK: One thing you would definitely want to do is if you would look for the - if you wanted to really accomplish something, a take even on backlogs, he would look for the administrative judges in your states, because the administrative judges are the ones that probably have the most power over probation offices to mandate that they collect the samples in certain ways.

Believe me, some of the these people would be very interested in, you know, automating it, looking at the privacy concerns, et cetera. In the long-term, you know, when you start taking samples from people who are not in custody, right. You're really going to need that kind of cooperation.

MR. SCHMITT: Kim?

MS. HERD: I say it when a multi-disciplinary approach because judges are traditionally squeamished when it's just one entity teaching them like prosecutors or defense counsel. You'd want some type of an integrated approach. I think that would work fast. And they'd be most receptive to that.

MR. SCHMITT: More on the first Number 6 before we move to the second Number 6.

And the staff came up with these questions. Maybe we haven't asked all the right questions. So what have we not discussed today that you think really need to?

Oh, here we go.

MR. CLINE: As it was discussed earlier, one thing causes other things to happen. It has a domino effect. In Illinois, when we first put into practice taking DNA samples from - it started out as just sexual offenders and then went on to other things. The IDOC would say, Okay. We'll test them before they get out of the penitentiary, but at that time our statute of limitations for sex crimes was three years.

So we were yelling because they were giving us samples on people on cases that we couldn't prosecute. So our statute of limitations was pushed back to ten years ago. But we're rampantly approaching that time frame when people - because their idea was if somebody is in jail for ten years, we'll take a sample from them nine years and six months down the road and not worry about it.

The other big issue, and I think this is perfect for it, is we can't charge cases just based on DNA alone. I mean, we have to have witnesses. We have to bring forth whatever evidence is available. As we get over cases, it's harder to bring those cases to bear. The prosecutors want to talk to witnesses who have moved. Sometimes we have a problem finding victims.

So, I mean, there is in our current caseload doesn't stop. So that drives overtime for our sex investigators. And that's something that as we get better, success breeds success.

That's one of the things that comes up is that we get better in identifying offenders on older cases. It drives our overtime on our current investigators while they keep up with the current caseload trying to put together those old cases. Because you ring Ms. Jones's bell, she moved two years ago. And we have to find her because she was an eyewitness and the prosecutor won't approve charges until we bring Mrs. Jones in and have a lineup and along with the DNA evidence.

So there's a lot of other issues here that Number 6 talks, the second Number 6 talks, very well about is on the law enforcement end and the detective end is resources that we need.

MR. SCHMITT: Cindy?

MS. GUIDO: This isn't something that wasn't totally discussed, but I still have - I'm wondering about it in my head. And that is whether or not anybody has done any studies or tried to follow whether or not having a DNA evidence makes it more likely that the individual is going to plead guilty.

And the reason I ask this is because, you know, earlier it was mentioned that some people are concerned. The prosecutors are concerned that they're going, you know, they're overworked. They're going to have this big caseload. Well, that's come up recently with us in Pennsylvania as we've been trying to come up with the post-conviction DNA bill that prosecutors, defense attorneys, everyone can live with.

And originally that they were going to have, you know - the Commonwealth was going to pay for all this testing. And then the state police said, Well, if that's going to happen, then we want it done in our lab.

But then the more it came up talking about it then they said, Hey, wait. We don't want it done in our lab, because then they'd have to be gone for days at a testifying.

So I think it's of concern to both the prosecutor who is going to have to try those cases, but also to the labs, unless this is just not been a problem. You know, that the more - the more you delve into that backlog of cases, the more likely you may have cases; that you're a scientist. If you've only got five, and three of them are off testifying court, that's less than you can do.

MR. KREBSBACH: Maybe we're just lucky. But if you've got DNA evidence with the rare exception or maybe a death penalty case, homicide, something like that, it ain't going to court. It will disappear for one reason or another. But maybe I'm just lucky I don't know.

MS. HART: Well, I think we intuitively think that. But I think this was the point that Tim was making really earlier today, which is when you want to convince policymakers to go with a particular, one way or another, people want to know what it's going to cost. And we really do not have those kind of assessments.

Intuitively I think that my sense is like yours and I think Cindy said most of the cases will result in pleas, but we really don't have, at least I don't, and maybe somebody else does, we're hoping if you're raising your hand, maybe you have that answer for us.

MS. KREEGER: The National District Attorneys Association is in the process of gathering information and attempting to refine the questionnaire that we're distributing in order to increase the accuracy of the information that we're getting about when you have DNA what does it mean? Does it mean that you always go forward with charging decisions? Does it mean that you do not offer pleas? Does it mean that you do plea your cases? Or does it mean that you're in trial?

I mean, that's generally what we're asking now. But I think, John, you are incredibly lucky. It's been my experience that, you know, I never want to underestimate the defense part. And as soon as the evidence becomes more frequently used, more frequently expected, and more frequently gathered, all that will happen will be that the criticisms for the challenges or the rejections of it will be sharpened. You know, we have had fingerprints for how many years? We now have fingerprints in cases and there's just always an excuse and always a reason for why those prints are there.

MR. SCHECK: I have a number - I told you before I have a number of old grant applications NIJ rejected that would have given you this data ten years ago.

(Laughter.)

MR. SCHECK: Because, I mean, you just want to show that it's cost-effective.

MR. SCHMITT: Of course, Sarah and I got here so.

MR. SCHECK: Well, I understand. I'm just pointing out their old grants. Paul took one of them and you still haven't had the data collection go on, but you got funded somehow. You were on my original grant.

MR. SELAVKA: I was?

MR. SCHECK: Yeah. Don't you remember the one that we were going to look at what happened to the cases and - well, in any event, you should keep track of that.

MR. SELAVKA: As a collaborator, but we never got any funding.

MR. SCHECK: No, we never got money. Right.

MR. SELAVKA: No.

MR. SCHECK: We do now. He's my witness. We never got money.

(Laughter.)

MR. SCHECK: And there were a lot people at that point.

You didn't discuss anything concerning ethics today or privacy, all right. For the continuing problem people will raise about destroying the samples at a certain point in time to prevent people from complaining that you're going to go into that data bank and use it for other kinds of DNA tests.

We've had that debate before, but it's still a very important debate. You didn't discuss what arose at the end of our commission, which Cecelia and others who are on the list of - producing very disturbing data. And that is the existence now of state and local territories having their own capacity to create their own data banks. They are off-line from CODIS. And what is in there?

We heard that some people were putting the DNA samples of victims into in data bank - into this, you know, I'll call it, for a lack of a better time, the usual suspect data bank, because they thought that might be interesting to see if the victim would hit something if they thought the victim was involved narcotics or maybe people weren't even thinking.

You have the whole issue of collection of samples from potential third-parties who you want to use to exclude, right. Exactly how that's done, how the consent is obtained, and what the size of these data banks are is, you know, a problem that I think is within the purview of the Department of Justice to be thinking about it.

Recently, I noticed that some groups in Great Britain have become increasingly concerned about the very interesting issue that exists under our law, too, and that is what happens to the DNA that is on this glass that I just drank from? And then we all leave the room somebody decides to take it.

The British are saying, Well, I'm not too sure that the state ought to have access to that not for identification purposes. We all agree that's abandoned for identification purposes. But what about testing to see whether or not, you know - I'm crazy. You-all already know that. Perhaps a susceptibility to some mental illness or some other kind of disease, et cetera.

They're very concerned about that issue and that is going to be increasingly I think an issue that, you know, you might want to look at. So unfortunately when we had our last commission all these very interesting issues arose the last week, right.

So maybe you-guys could start thinking about them at the beginning, particularly those usual suspect data banks.

MS. HART: I will say, Barry, I mean, you raise a lot of very interesting questions and ones that I think people can really debate a lot of that, the pros and cons. My real sense of this right now is

candidly that if we get bogged down in trying to resolve all of those issues now, we're not going to be able to go forward on ones where there is a clear consensus of the view.

And so part of it is to try and identify those things that we certainly can move forward now and making recommendations as soon as possible and to make recommendations to continue to get funding out there while people are still interested in providing funding out there.

MR. SCHECK: But I would only suggest - I mean, unfortunately that's always the case on all issues concerning privacy, ethics, things like that. Well, it's not easily quantifiable and let's not discuss it. It gets the short shrift in the end.

But one thing you really have to get data on are the size of these state and local data banks, because they're a lot bigger than you think. And there are people around this table, who I won't ask to speak, right, who are seriously concerned about it. And they're people in law enforcement and they see things going on they don't like. And, you know, now that the capacity exist on the state and local level, you don't need NDIS or CODIS or LDIS or - how low does it go SDIS? I forgot SDIS.

MS. HART: The FBI is going to be upset to hear this.

MR. SCHECK: Well, the FBI know this. I mean, you don't need those computers. You have an STR machine and you have a computer and you have software and you can make your own data bank and I don't think - and lab people don't really - I mean, lab people have suspicions and are concerned about it.

Because when the privacy violation hits, they're going to be - all of a sudden they're going to start coming to these people and say, Why did you put that in there? And they're going to say I had no idea what this was. A cop came to me and gave me the sample and said it came from a suspect. All right.

And I actually think those things - many of them are unlawful. They're unethical and they're illegal. And in the long-term, they're not in the self-interest of this community.

So NIJ can help by trying to identify the size of these banks and issuing regulations on or suggestions or guidelines on the proper collection of samples and what would be improper to avoid it.

I mean, we all had agreement incidentally that you shouldn't be taking the DNA from victims. You shouldn't be taking the DNA from third-parties that didn't consent to it and putting it into these state and local data banks. I actually that is illegal.

MR. SCHMITT: We just asked this question. I'll bite a little bit on what Barry is asking.

Do any states have any kind of random checks of the samples to make sure that they are what you think they are? What they are in an offender sample to what they are in a case scene sample tied to an offender? Or do you perceive the need to do that?

MR. FERRARA: Random check with respect to the appropriateness of samples in a database?

MR. SCHMITT: Yes.

MR. FERRARA: Before we report any hit, we check the Virginia Criminal Information Network and confirm that, indeed, that sample, it did come from a convicted felony.

But Barry is talking about something beyond that. It's something the commission on the future of DNA evidence left in and undecided was the constitutionality and the ethicality and legality of maintaining suspect databases, which I might add, if they do exist, and they can exist in some states, do so because it actually increases capacity of the laboratories because you're not running the same suspects over and over again.

MR. SCHMITT: And in all those cases where they exist, they exist pursuant to some state authorizing legislation?

MR. FERRARA: That's right. If they do exist. I don't have one in Virginia because my statute does not clearly give me the authority to, although there is a bill pending, as I speak, that would give me that authority to maintain suspects database.

MS. HART: I don't presume that there's anybody here at this table who is recommending that states should be going out and collecting samples where there is no authorizing legislation, are they?

MR. COFFMAN: Barry, you correct me if I'm wrong. But I think what Barry is asking is there are local labs that are outside the state - you know, the state typically follows what the national standards are for the NDIS.

I think what you're saying are you making sure that someone is not slipping victim samples up to the state being called a forensic unknown or something like that so it can go on up to national or?

MR. SCHECK: There is no - in most places - I think Florida is the one exception, or that I know of. There is no authorizing legislation to database samples. But the position of law enforcement is, is if I collect this from my coffee cup after I leave the room, and I go to one of these people here and I say, I want you to upload it into your suspect data bank, right.

Unfortunately most state and local authorities feel that they can just put that in. It doesn't go into NDIS. It can't go into the system because it's not a forensic sample. It's not a convicted offender. It's not a lost person. But they still will keep that DNA pattern as a suspect's sample.

And there are collections of these data banks growing on a state and local level and I think it would useful. You're spending all the money to create these. Don't you want to know to what extent they exist? What we only - the reason I said that is that we had a very spirited discussion about how those samples were getting in. There were a number of people that took the position, police, that they can ask the state and local authorities to take these samples.

If I'm investigating Case Number 1 and I ask you, Sarah, for your DNA, because you were in this room when the crime was committed and we think you might have adventitiously left the DNA there, am I allowed to keep that sample forever to look at other investigations in the Washington D.C. area?

We know you can't put it into CODIS. You gave consent just for this investigation. Are you telling me that people are taking out of those data banks. If you're Rock Harman, Rock Harman says I can get as many samples like that as I can into the California data banks and I want them there.

MS. HART: Is this something, though, that you think is appropriate for a federal mandate, or do you think this is something that should be reserved for the states to set the standards about what goes in their databases?

MR. SCHECK: Well, I actually think it would be - federal money is creating - these computers and machines and analysts are being paid for with federal tax dollars, all right. And so it seems to me that you're at least under an obligation to find out how much of this is going on.

MS. HART: Do you have evidence that this is going on or to what level? Do you have - other than -

MR. SCHECK: Yeah, we had two meetings of it, and everybody was talking about how it was going on. I mean, I'm not even saying that these people - it's not like a crazy thing.

Did I take your DNA sample promising you that it's going to be just for this case and then it goes into the local state suspect data bank and it doesn't come out? I can produce a lot of people that would tell you that they don't think that's unlawful, all right. And a lot of people think it is.

This was the last issue that arose at our future of DNA commission and it was - I think we had a consensus on certain samples, but it still caused controversy. And it would seem to me that this is certainly your mandate. It's your money. It's our money.

And you've created that capacity, and it's a - and my argument has always been to this community. It's in your enlightened self-interest to prevent silly, privacy violations that are going to upset people, because then a lot of the money that we want for all these other things, the state and local authorities won't grant and you'll have other kinds of political fallout.

MR. SCHMITT: Well, that certainly is an excellent point. I'll tell you that I will pursue this individually with folks as I learn more about this, because I have to confess that I don't know much about suspect databases. And I will ask questions after the meeting in the next couple of weeks and talk to folks and maybe even talk with you some more, Barry, and pursue that.

CC?

MS. CROUSE: I just want to make one comment about this discussion. With regards to why we're here today, the case backlog. We will be sending victim samples. And in a sexual assault

case, we will be sending them, because sometimes you're going to get a mixture and you're going to want to try to get the nominal alleles that come out.

And I think we do need to be aware that when you get this stuff back and you start to interpret the data, if it does go into CODIS, I think you should be very circumspect about what happens with that. I think something should be said very strongly about what happens to that victim sample. That it does go into the local database or whatever.

The problem is, and Dave knows this, he can't come down and say, you know ex-county. You can't put this in there. We certainly can't send it up to him. But I think we should address that. With regards to the case backlog cases that we're sending out, if we have victim samples that they just can't be stuck in a database.

MR. SCHMITT: More questions on - more comments on what we're missing before we get to Number 7?

Keeping us on track then, we'll turn to Number 7. This is really your chance to tell all of us what your interested in doing with us going forward. The charge is to NIJ to report to the Attorney General. We brought all of you here as smart people to tell us things, and we don't profess that we now know everything at the end of the day.

What is your recommendation to us as to how we should go forward to develop some of these ideas into a more concrete set of recommendations to the Attorney General? Should we have another meeting? Should we try to come up with a report and ask folks to contribute data from their states? Should we have staff drafts that we then present for you for written comments to us? And then perhaps another meeting to go through the draft? Or what's your ideas?

Paul?

MR. FERRARA: Off the top of my head, based on the input that you've all heard, much of it repeated and see some things where there's a clear consensus. My preference would be to see the staff develop based on that information a draft set of recommendations that could be passed around and we could comment on and actually have a work product come out of this meeting.

I think it's important that we come out with some document, at least reflecting the clear and consent - the clear consensus with respect to training these robotics new technologies people et cetera. That's one eye view.

MR. SCHMITT: Other views? Additional comments?

Maureen?

MS. CASEY: I think, too, that there was a lot of unanswered questions about like definitions of backlog and what the full scope of the problem is both left with respect to convicted offender and unsolved casework and things like that Carl mentioned, you know.

If we talk about training and education and making sure that what's recommended out of here is not inconsistent with other things that are going on to get some more information, like, TWGED and what direction they're going in so that things are consistent.

So I think that at least from my perspective there may be a need for some more information from us before some of the recommendations can be done.

MS. HART: Certainly one of the things that we were specifically asked to discuss was an assessment of the backlog. And I think what has come from this is we know some things and then there are a lot of things we frankly don't know.

And coming from here, I'm not even sure that we could even figure it out in a timely way. I mean, a lot of what I'm hearing here is that, you know, yes, there are backlog of samples. But there are a lot of police forces out there that are holding samples, not even sending them. And I don't know of a realistic way to get a handle on that at this time.

And so it may well be that what we have to say is we can tell you x and we can also tell you what is unknown, what we expect, that there is much more out there.

But if people have ideas about ways to do that kind of assessment I would appreciate those suggestions.

Susan?

MS. NARVESON: There is one solicitation that's out right now, and that's to conduct a 2002 census of public crime laboratories. And part of that is to identify what the needs are.

ASCLD is partnering with a couple of organizations that have sent in the solicitations to be able to assist in formulating some of the survey questions. If that could be a vehicle, I know there's a very short time frame on that turnaround, and I don't know who is going to be awarded that particular grant. But that might be a vehicle for being able to incorporate some of the needs of this committee for data acquisition and making some of those assessments.

MS. HART: With BJS solicitations?

MS. NARVESON: Yes.

MR. SCHMITT: Tom?

MR. GEDE: I just want to make sure that you don't miss a lot of what George Herring and Mark Nelson had. They had good succinct cogent recommendations for where the problem areas are and recommendations are.

But I think if your staff could work on putting together a draft of some sort that includes these six, or seven, or whatever numbered items here, including long-range, short-range and use your mental energies to sort of take what George and others and all of us have had in

recommendations. And then intellectually separate it into the categories you need to separate it in and then shoot it back out to us for comment and then maybe another meeting. That would be very helpful.

MS. HART: That sounds good to me.

Carl?

MR. SELAVKA: I would apply that. There seems to be policy opportunities that are well identified, and some that we don't know. There is statistical opportunities that need to be defined and some that we know. Technology both pre-analytical, analytical, and post-analytical.

And I think if your staff breaks that down into things we don't know and things we do know and where a consensus has already been derived this will have been - I would amplify what Paul said, too. This would have been very fruitful and brought a lot of people together, all that smart people in one room was funny to hear about us, but it would have been a very productive meeting, and it would give you a launching pad.

MR. SCHMITT: Other views?

MR. KREBSBACH: I think in a sense this is an outstanding idea and I think ASCLD is a perfect place to start with the laboratories. For the same time just - and I'm sure you're thinking of this too, but just to make sure that you guys understand. There's a lot of law enforcement agencies out there that are not being represented in any way, shape, or form to speak of by a laboratory.

So you almost need to attack every single law enforcement agency in the entire country in some fashion.

Transcripts of the Attorney General's Initiative on DNA Laboratory Backlogs (AGID-LAB) Working Group

March 4, 2002, Meeting

CLOSING REMARKS

MR. SCHMITT: Very good. Well, I'll speak personally since this will be my last chance at the mike. It's been very - it's been a lot of fun for me to see a lot of faces that I have known before and to get to know new folks for today. And I look forward to working with all of you as we go forward.

I'll turn it back over to Sarah for her concluding comments.

MS. HART: Well, I especially want to thank all of you being here today. This was very enlightening for me personally. There are some things that, you know, I felt fairly comfortable with before I came to this meeting and then this is once, again, a reminder to me that there's a lot of things that I don't know.

And I've always said to myself sometimes the greatest wisdom is knowing that you know nothing and accepting of the fact that there a lot of other people you can learn from.

So I really do appreciate the fact that you have all taken the time to enlighten us here today, and I'm sure we're going to continue to call on you to ask you more questions.

I also wanted to let you know that the Attorney General, before he came down here, did have a press conference today to announce, as he said, some of his commitments to the DNA initiatives here.

And I'm just going to pass out for you some of the handouts that were there. Some prepared by the FBI and some prepared by us, which may be helpful to you. He also had remarks, which I don't have a copy of his remarks, but I'm sure they're going to be available on the website if anybody is interested in them. Much of that information is in what you see here. It's a summary of some cases and some stats and some informational things that you also may find helpful to you.

What I wanted to let you know he's also done - what he didn't mention here today is that he's been - he made some directives to various components here at the Department of Justice in what I consider to be a very strong statement about our obligations to try and help you in figuring out how to get the biggest bang for the buck here and how to start helping you to prioritize cases and helping you developing technologies that can help you.

So this is something that there is a very, very strong commitment by the Attorney General on this. And I got to tell you that I'm personally really delighted by that. This is an issue of great

importance to NIJ. It's a great - an issue of great personal importance to me. And I'm really delighted that he is also showing this kind of commitment.

And I think that it really is a recognition here by the Attorney General and his staff on just what a potential there is with this kind of evidence. He understands that and really does appreciate that. And so this is something that I'm really looking forward to and giving him some recommendations because this is something I think is really going to go places.

So I think this was - I appreciate the time that you have spent here. I know you've all got very busy jobs and a lot to do back home, but I do think this is something that was well worth your while in the long run to make the investment here to enlighten all of us.

And so I am actually not going to hold you up. I am going to actually let you out early here. I wasn't so sure we were going to make that. And at the same time, you know, we wish you-all a safe trip home. And I look forward to meeting you again next time we get together.

Thank you.

(Whereupon, at 4:37 p.m., the meeting was adjourned.)

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