Report prepared by the American Academy of Forensic Sciences

The United States Department of Justice, National Institute of Justice, at the direction of the U. S. Senate Appropriations Committee, requested four forensic science organizations: the American Academy of Forensic Sciences, the American Society of Crime Laboratory Directors, the International Association for Identification and the National Association of Medical Examiners to each nominate three persons to assist in developing *a plan which will address the needs of the crime lab and medical examiner community beyond the ‘‘DNA Initiative’’ and report back to the Committees on Appropriations no later than 180 days from the date of enactment of this Act. The report should address the following: (1) manpower and equipment needs, (2) continuing education policies, (3) professionalism and accreditation standards, and (4) the level of collaboration needed between Federal forensic science labs and State/local forensic science Labs for the administration of justice.*

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Founded in 1948, the American Academy of Forensic Sciences is a learned society with a membership of over 5500 forensic sciences professionals located principally in the United States and with members in 56 other countries worldwide. The Academy is made up of ten sections:

- Anthropology
- Criminalistics
- Engineering
- General
- Jurisprudence
- Question Documents
- Pathology/Biology
- Psychiatry and Behavioral Sciences
- Odontology
- Toxicology

The Academy publishes a refereed journal, *the Journal of Forensic Sciences* six times a year.

Congress named four forensic organizations to report on the various forensic disciplines. The AAFS was asked to report on the following:

- Firearms and Toolmarks
- Forensic Toxicology
- Question Document Examination

Each association used a different procedure to study the community. The AAFS chose a survey which was emailed to persons considered leaders within these subject areas. We also asked that the survey be passed on to a wider group. The question document examiners were highly organized and the responses in this group where the largest.

Because of the short time frame and the fact that we are not professional pollsters or statisticians, we chose to ask questions which would quantify the issues. The reason is that it is not possible to achieve a statistically valid survey in the short time allotted. Any conclusions drawn from this portion of the study should be considered suggestive and require further study. Rather than quantitative data, we tried to capture a sense of the issues in our subject areas.

Summary

Due to the short time period of study, it was only possible to send out email questions to key members for the respective forensic science communities. Question documents and firearms practitioners had a reasonably good response.

Toxicology, for some unexplained reason, had only one response. We were unable to secure any metric information; the response was informed opinions of practitioners in the disciplines surveyed.

The responses were similar in many areas. Training of new examiners was a constant theme as was the need for more research to blunt Daubert challenges. Funding of state and local labs was a recurrent issue. Many expressed the need to address forensic science related terrorism evidence, which is not a responsibility of the Department of Justice.

The following are reports concerning the three areas studied in this report. The numbers, #3-7 correspond to questions asked in the survey document found at the end of this report:

180 Day Study Questionnaire Responses

These represent abstracted responses from material received by email.

Firearms

#3

- ASCLD and ASCLD/LAB related requirements that add nothing to the quality of firearm examination needlessly bog down and obfuscate the process. Requirements centered on testing equipment beyond reasonable expectations or performance goals tend to imply a need for such that does not actually exist and can give a false impression to the court detrimental to acceptance under Daubert. Bullet weights are never probative beyond a general range, microscopes are not highly variable instruments requiring constant verification, and serial number restoration reagents are not employed in a way that requires strict adherence to expiration dates and precise preparation. Requiring such is deceptive to the court and adds needless demands on scientist time. There are more examples than what I've listed above.

    1.) Training is a perpetual limitation due to the nature of the diversity of firearm and ammunition products, manufacturers, and related forensic disciplines (toolmarks, crime scene reconstruction, etc.). The standard approach for most forensic science practitioners is to be involved in 1 or 2 formal training events each year. It's my opinion that, due to the diversity of the field, firearm examiners need as much as 6 or smaller and possibly less formal training events each year to keep current with the industry and the developments in the discipline. One example that illustrates this diversity is the FBI's ammunition reference collection (this information is dated by a couple years). They spend ~$50,000

annually just to purchase ammunition products that are new that year and they still only obtain about half of what's available on the market.

2.) Typical firearm examiners are proficient with the examination of evidence consisting of firearms and ammunition. Other related duties that include toolmark examination, serial number restoration, shooting reconstruction, crime scene response, evidence collection (from firearms and crime scenes), and related fields such as shoe print analysis can be done by some of the same scientists but the coverage for their respective service agencies/areas is inconsistent. Recently, I was consulted regarding gunshot residue analysis from a neighboring state that has firearm examiners but for whatever reason, they do not or are not qualified to conduct that type of analysis. I suspect addressing the training needs (see item 2 above) would do much to address this issue, however, regional laboratory funding and organization varies to the point of requiring additional solutions.

- Lack of uniformity of training for examiners. Currently, there are no minimum training requirements for examiners in firearms/toolmarks and document examination. There are document examiners in law enforcement agencies that have only attended the U.S. Secret Service two-week seminar on Document Examination. They have no other training even though they are told at the seminar that a minimum of two years of training is required to be a document examiner. At the other end of the spectrum, some agencies require a two year or greater training period.

  Lack of funding for continuing education training. There are some very good continuing education seminars and meetings available to firearms/toolmark and document examiners. The problem is getting enough money to attend. Most state labs are severely short on training funds (other than for DNA). Attendance at continuing education classes is mandatory for examiners to stay current and informed so that their analyses are the best they can be. As an example, the Midwestern Association of Forensic Scientists has offered a spring workshop in Minneapolis for the past two years. The one offered this spring was bringing in two well-known and knowledgeable examiners to lead a seminar on advancing technology to handle the examination of cases with many exhibits and information on the newest types of forged documents. There was to be hands-on casework with current VSC, ESDA and microscopes available. This workshop had to be cancelled because only a small number of examiners had been allowed to attend. Their agencies just didn't have the funds to send them. The cost of the seminar was $200 plus hotel, meals and transportation.

  Lack of funding for new examiners, equipment and supplies. In some labs, the backlog of cases is great and turnaround time is very excessive. This deters law enforcement agencies from using and pursuing forensic evidence

in those areas. Examiners need quality current equipment and supplies such as ammunition for a reference collection so that they can do the best job.

- Personnel – due to budget problems we have a lack of fully trained personnel in firearms and toolmark examinations. Aside from budgeted personnel slots, this is also due to the inability to train new examiners based on the length of training time, inability to pull trainers from current caseload, lack of funds to purchase equipment for additional staff, and inability to start cross training current staff (would shorten overall training time) based on current caseload. Consequently, if a firearms examiner retires or resigns, a large time gap results before a fully trained examiner can replace them, further increasing the case backlog. This has resulted in a large backlog of IBIS / NIBIN confirmations that now take almost two years to complete, thus negating the potential "investigative lead". It has also had the effect of moving toolmark examinations to such a low priority that very few if any are submitted due to the length of time needed to begin and complete the examination. As these are predominantly property crimes, citizens and businesses are not receiving the resolution to their incidents that they deserve.

  Technology – this is in relation to the actual equipment and techniques used, as well as the quality standards associated with them. Comparison microscopes with up-to-date optics, multiple sources of lighting (fiber optic, fluorescent), better ergonomic design, and picture taking ability, are the main tools used in firearm and toolmark examinations. Our discipline must stay current in these areas to allow the examiner to see all of the information present on a bullet, cartridge case, and toolmark so that they can render an accurate opinion and conclusion.

  They also need to work in a safe environment free of lead and chemical contamination, without the dangers associated with fired ammunition, and using equipment to protect their hearing, eyesight, and general health relating to ergonomic issues. This can be accomplished with modern shooting range facilities, hearing protection, and microscope and furniture that are adjustable for different examiners.

  Modern equipment such as digital cameras attached to the comparison microscopes will also allow an increased level of documentation. This increased documentation will raise the quality of the examinations because there would now be a viewable record of the examination. It would also provide a pictorial representation of the microscopic examination, which can be used for courtroom testimony, meetings with attorneys, and for peer review.

  Technology also refers to the techniques used to perform an examination. Research must be performed through experiments and casework which, develop, refine, and perfect examination techniques. This research can then

be published and disseminated to the field, where it can be reviewed and established as a valid practice, further increasing the quality of the discipline.

As a discipline, minimum expectation standards should be established in terms of equipment, techniques, training, and documentation, of which the use of up-to-date technology can play a part.

Daubert Issues – As a discipline, we need to be able to explain during the judicial process how and why firearms and toolmark examination is a science as it relates to Daubert / Frye hearings. This ability must be realized down to the individual examiner. Addressing the above issues will increase quality and documentation, further the science through research, and allow the discipline to gain acceptance as a science within the judicial community.

The above challenges are currently being discussed and addressed through associations such as AFTE, ASCLD, and AAFS, which need to continue, to advance the discipline to a high level.

- Currently manpower is our biggest concern. In recent years our caseload has increased (especially with the introduction of NIBIN), and we have less and less employees. For example, in November of 2004 I will be the only full-time F/T Examiner. NIBIN entry and correlation have also significantly slowed down casework productivity, for very little reward. Officer Involved shootings have also significantly increased in our service area, which are very time-consuming.

- Most pressing need is for 1. Trained practitioners to replace those who are retiring or moving to another laboratory, 2. Funding for continuing education, seminar attendance, and 3. Staffing and funding to support Quality Assurance Program for Accreditation.

- A - **Staffing of fully trained and experienced examiners**. This process takes 4-5 years before people are fully competent to testify on hypothetical questions involving major trials with a broad range of experience. This is sometimes very hard for upper level management to understand or appreciate.

  B. - Daubert **related issues**. A major part of these issues relate to properly documented casework with images for courtroom presentation. A L.I.M. with a good documentation (imaging) system would help resolve many of these problems. Mandate the CMS (consecutive matching striae) as part of the identification process. Help design a similar concept for impressed marks with image documentation. Funding for more research in this area would be beneficial.

C. **Mandated certification and lab accreditation**. This concept sets the bar for professionalism in the discipline. It will find weak points in any lab procedure so those areas can be addressed. QA/QC has to be mandated to maintain work quality. Continuing education has to be mandated and funded, not just suggested.

- Research money to support and improve the scientific foundations of questioned documents and firearms/toolmarks examinations. The science is sound but for historical reasons has never been made explicit. Additional research would also improve these important disciplines.

  Training, training, training in all areas. Some federal agencies do not fund training courses per se. Forensic laboratories' and medical examiners' travel and training budgets have been cut to the minimum. Training funds are necessary to keep scientists current in their fields—this lack of training was one of the problems with the Houston PD lab, according to the press.

  Monies should be available for forensic laboratories to seek accreditation, especially by those entities that are recognized for their procedures (for example, ISO). National standards exist (ASTM, International, for example) but they are not integrated into forensic laboratories in a systematic way. The labs need funding to achieve accreditation to national standards.

  Staffing is a major issue for all forensic laboratories. Many laboratories have tremendous backlogs simply because they do not have the staff to process the cases; most are "treading water," completing as many cases as they take in. The States haven't the budget for extra staffing and many are *cutting* staff. This will only lead to larger backlogs and additional problems.

- Legal challenges to Identifications, and insufficient quantity of trained firearms examiners (because of the lengthy training period)

- The first concern relates to manpower and equipment needs. Most labs have a 100+ backlog. There are not enough forensic scientists to handle the caseload and for many of us, the salary does not justify the level of education and responsibility necessary for such a position. Poor paying laboratories become training facilities for forensic scientists. These laboratories are always in a state of drowning with the no end in sight. Many labs are also conducting exams with less than adequate equipment. For the vast majority of labs, quality work is still being produced but not in the timely manner it could be.

  My second concern relates to accreditation issues. Labs are becoming counter-productive because of the always-changing policies being instituted. I am not against change except when a legitimate reason cannot be given or

the changes are completely subjective. Consistency and clear guidelines are needed for accreditation to really mean something.

The third biggest issue facing firearms examiners is continuing education. There are wonderful courses available but not many departments will provide funding to attend these courses. I would like to see even more of a variety of courses designed to keep examiners current. However, if examiners are not able to attend the existing courses what is the motivation to design new courses.

- Daubert related concerns as first and foremost and the lack of quality continuing education as well as manpower and equipment needs, although our laboratory has addressed our manpower and equipment needs for the most part.

- The lack of qualified examiners in the field of Firearms and Tool Marks. FDLE is constantly in a training mode. When an examiner leaves it has been difficult to find trained examiners therefore we have resorted to training rather than wasting time looking for someone with experience. Training requires that a qualified examiner be taken off the bench to train the trainee thus causing the case backlog increase. The training program typically takes about 2 years, the backlog continues to rise. This is a long term issue because not only do you have the rising backlog during the training phase, a reduction (reduced to a manageable level) in the backlog is not realized for up to a year or more in some laboratories.

  Lack of funding and opportunities for continuing education training in the field of Firearms/Tool Marks. Opportunities for courses to include low cost tuition, convenient locations and interesting topics are not currently available. AFTE is the primary training opportunity for Firearm Examiners and typically agencies can only send one or two members, if any, each year. Funding for additional members or for other training opportunities could be used.

  Lack of funding available federally or locally for forensic based research on topics that specifically impact forensics such as studies on Consecutively Matching Striae, subclass characteristics in Ruger barrels and I'm sure there are others.

- Standardized identification criteria that can be utilized nationwide.

  More comprehensive scientific studies on the significance and accuracy of our data, and how it should be used in our conclusions.

  Federal assistance to help fund positions for data entry into the nation-wide Integrated Ballistics Information System, and for follow-up work to confirm positive identifications.

- The challenges to this discipline are not that different from any of the forensic science specialties or forensic science as a whole.

  Adequate staffing - This shortage can be seen in the number of job openings (and this is while budgets are tight and hiring is at a minimum.

  Training (initial and continuing education) Look at ATF NFEA and other programs trying to get more examiners trained. Look at AFTE Seminar. Budget and cost prevent many from attending, even though this is the only training opportunity dedicated to the discipline.

  Adequate facilities (space and equipment) This can be seen by comparing space of current labs vs. ASCLD LAB guidelines. Look at AFTE website on discussions on equipment and you can see the diversity and ingenuity due to lack of equipment monies.

  Research to further the practice (improved techniques and equipment) and to further the understanding of the underlying science to the practice (Daubert/Frye).

  Professionalism and Accreditation. ASCLD/LAB accreditation is becoming prevalent in the community, finally. However, Specialty Certification has not become widely popular, in large part due to cost and lack of a perceived importance or priority.

  Collaboration between agencies. The AFTE website has proven to be the common ground where examiners may communicate about a number of topics and issues. AFTE membership needs to be promoted to the discipline to encourage professionalism and increase communication.

- Ballistic Imaging Systems are deployed by the Federal Government (DOJ, ATF NIBIN) to state and local firearm laboratories. Equipment is working well to provide crime gun links and investigative leads. Problems and delays include: shortage of qualified and trained operators for computer imaging equipment; lack of timely submissions of evidence and test fires to the equipment for imaging; lack of qualified Firearm Examiners to view correlation results returned to the machines; need for certification of qualified users – certified training and testing of operators; lack of established national protocols for mandatory submissions of firearms evidence and test fires for imaging at equipment sites..

- Preparatory training – currently no universally applied training standards exist for the firearms identification discipline. Continuing education is currently nonexistent on any regular basis. Current facility and workload conditions at local forensic laboratories preclude much needed research in the firearms

discipline. This is especially important in this era of increased challenges to the very foundation of the identification disciplines such as firearms identification and fingerprints.

#4

- Taking a leadership role in reigning in overactive ASCLD and ASCLD/LAB regulation and inspection by resisting it at the Federal level through the courts and Federal law enforcement agencies engaged in laboratory work would be the most effective non-financial contribution. Clearly, however, the solutions to the problems above, and others, have a funding component. Reprioritizing the core critical issues over the peripheral QA/QC factors mentioned above might free up financial resources to aid in funding those solutions.

- Funding is probably the biggest factor facing forensic science now. However, the Federal Government could set minimum training and continuing education standards for forensic experts that testify in Federal courts. Of course, this requires funding for those mandates. The Federal Government in the late 1970s helped set up several certification bodies (the American Board of Forensic Document Examination was one). However, they did not make it mandatory that expert witnesses be certified. They need to make it mandatory.

- The Federal Government should strive to ensure that their agencies, BATFE, FBI, DEA, set the standard in terms of technology, training, and quality. As their budgets often exceed smaller agencies they have the ability to set and maintain a high standard of performance which the rest of the forensic community can look to emulate. This can be accomplished through their own casework, assistance with state and local agencies, training provided, research conducted, and the participation in associations which further forensics as a science.

- Currently our top bench-level Criminalists are extremely underpaid, when examining a recent salary survey. These highly trained and skilled employees are extremely difficult to replace. Low salaries also make it difficult to hire additional help.

- Grants for equipment: comparison microscopes, capturing devices and grants for continuing education or training academies.

- Well – you can't have it both ways. If you mandate a procedure, standard or method with documentation then you must help fund the process. Provide funding for equipment (L.I.M. systems that includes image management). I was on a needs assessment for Maryland State. We went through the same procedure. Excellent ideas were put forth but we also realized that setting a

standard for education, communication, procedure, etc. takes money since much of the process involves equipment, education and an acquired attitude. I believe this can be done but it will take planning, time and a willingness to accomplish a goal.

- Fund *scientific* research initiatives through *scientific* agencies (like NSF, NAS, NIH) and *operational* initiatives through *operational* agencies (like NIJ and DHS).

- There is an east coast ATF training academy. Funding for a central or west coast academy would be helpful. It would not have to be an ATF program. California CCI is set up to do training as well.

  Quit throwing money at the marginally useful program of NIBIN. And the Federal government *is* funding this as an operational program.

- Funding is the primary root of all the problems. So to ask what the Federal Government can do that doesn't pertain to money is extremely limiting. One suggestion is possibly offering free training courses with paid housing and travel. A good example of such courses is the FBI forensic science courses. This I don't believe is dealing with the operational aspects of a laboratory. I don't know whether this is applicable but the Federal Government could also provide more grant money to disciplines other than DNA. Another suggestion is for Federal guidelines to set minimum requirements for forensic science laboratories. This could prevent cities, states and counties from setting up laboratories and then deciding not to provide any further support to that institution.

- The Federal Government could make grant money available for continuing education travel and training, for procurement of equipment (microscopes, computers, digital cameras for documentation, chronographs, sound meters, etc.) for supplies (ammunition, lab supplies, chemicals, etc.) and research.

- Federal funding to enable state and local agencies to send their practitioners to training conferences, and expansion of courses presented by the FBI, ATF & DEA.

- Training costs - provide funding for recognized (by AFTE?) for the training of examiners similar to ATF NFEA. Must avoid "fly by night" programs that do not meet the professional needs of an examiner.

  provide funding for AFTE Seminar for 25 to 50% of examiners (AFTE members) in qualifying laboratories (ASCLD/LAB accredited w/ FA/TM specialty).

provide for funding of programs that were successful in the past but no longer adequately funded such as the FBI Academy training in areas of FA/TM such as Specialized Topics, Gun Shot Residues, etc.

provide some funding to AFTE to increase use of the website as a central source of communication in the industry to share methods, techniques, useful hints, reference libraries and collections (firearms and ammunition, etc).

Facilities - this would be difficult because the costs are huge and linked to overall facilities not necessarily only FA/TM Specialty.

Equipment (big ticket items only) - Comparison microscopes Photomicrography/Digital imaging, Bullet recovery systems (water traps, other types of recovery systems, firing range equipment.

Accreditation/Certification - Funding to help defray costs and to promote the processes.

Research - Funding for both forensic laboratories for research, but also to academic institutions to do basic research in areas (guided by a forensic laboratory so that the research is relevant).

- Fund and establish training and enforcement of protocols for users of federally purchased imaging equipment. Establish Professional Organization (AFTE sub-committee) to oversee training, continued quality control, assure full and meaningful usage and results. Continue funding support for upgrade of the computer system and improvements of the databases and software.

- Establish a regional forensic science training and research system, possibly modeled after the FBI Academy concept but more accessible to regional areas with increased capacity to accept students. Technology-based educational delivery methods should be strongly considered.

#5

- I believe the similarities are largely coincidental. Law enforcement and legal forensics are generally not an appropriate instrument for combating WMD or terrorism issues. Certainly the techniques could be employed in aid of those activities but the vast majority of the two endeavors do not overlap.

- I can see where immigration people need to be better trained to spot counterfeit travel documents.

- Firearms and toolmark examinations can relate to the marks left on the components used to assemble WMD, or improvised explosive devices, linking a tool and thus an individual, to a crime. However, at a local level, we are not prepared or trained to handle evidence that has been extensively contaminated with nuclear or biological agents.

- Since we do not typically respond to explosives cases, and wear protective equipment when responding to crime scenes, I do not currently know if those issues apply.

- The issue will be for first responders. Protective equipment and training in dealing with contaminated items and making them safe for lab personnel to handle/examine. Examiners that process crime scenes will be in this group. Again, if you mandate a procedure or method then you must fund the process.

- *Every* crime scene is potentially "contaminated" either biologically or chemically (clandestine drugs labs, for example). DHS has an abiding interest in these scenes because going in, you don't know if it is a terrorist cell or a drug lab (that could be funding a terrorist cell). Potentially every crime scene is a matter of Homeland Security. Best practices are particularly needed for crime scenes and are particularly difficult for individual agencies to handle because of the scope of the potential problem.

- Not unless we see politically motivated shootings on a massive scale in the US.

- As a firearms examiner, the evidence I examine is typically covered in lead. I also on a fairly routine basis examine evidence containing blood and body matter. The laboratories typically do not provide much protection against this hazard. Laboratories adhere to OSHA requirements but these are not easily adapted to an examiner's practical needs while actually working a case.

- There is definitely a relationship that exists among the two. Handling potentially contaminated evidence by using the proper, most safe. up-to-date methods are important as well as protecting the scientists and other lab personnel at crime scenes. Being able to identify potentially dangerous evidence as well as dangerous items should be addressed through trainings / seminars held for all agencies mentioned above.

- Some limited education in this area would be beneficial to members of the firearms section, however, at the state level the crime lab does not and can not at this time handle this type of evidence.

- Credible threats to homeland security require funding, and this funding is often supported by criminal activity. A recent ATM burglary ring in this area

was linked to domestic terrorists, and tool mark identification linked the suspects to the burglary. Crime lab personnel will inevitably be involved in any criminal investigation in our service area.

- The relationship between automated ballistic imaging and Homeland Security can be measured by the relationship of terrorists and firearms possession and use. Currently the "choice" weapons are perceived to be biological and explosives but the link to firearms is a very real threat and can easily be perceived. The linking of the used or recovered firearms to other crimes can easily be made by the national crime gun database IF the recovered evidence is entered in the database in a timely manner by properly trained and staffed ballistic imaging laboratories.

- Yes. It is conceivable that, after initial emergency response, forensic scientists will be called upon to provide forensic analysis for prosecution purposes. To date no training in the safe handling of evidence contaminated with potential biological and chemical WMDs has been received. It is important to note that such materials are not within the realm of routine forensic operations and training.

#6

- The leadership role is the most appropriate relationship between those study related components listed above and the relationship between Federal and non-Federal law enforcement engaged in solving the same problems. ATF training division is an excellent example of providing leadership without overstepping the authority and attempting to micromanage the affairs of state and local agencies.

  Similarly, the court systems often compound difficulties when they do not make the most use of the forensic assets at their disposal. Analysts should not be kept needlessly from their lab duties waiting or traveling to court for last minute plea arrangements or evidentiary related motions. Likewise, prosecutors should get the full benefit of their witness's time and expertise by access to their opinions and work product. It's my impression that the Federal court system does an excellent job of limiting needless court appearances and does much to involved the prosecutors and their witnesses in the necessary pre-trial communications. Anything that can be done to cause these qualities to thrive in state and local courts would be a benefit.

- I have referred earlier to a need to require certification for all forensic examiners. Some labs do not have any certified examiners but the lab is accredited. Some labs are small and it is impractical for them to seek ASCLD/LAB accreditation. For expert forensic witnesses, I think they should

be required to be certified or from accredited labs. In either case, the examiners are required to attend continuing education classes and display a minimum amount of training.

- Federal forensic laboratories and agencies fill a much-needed gap in terms of continuing education and training for state and local laboratories. They provide the training, instructors, facilities, and funding to keep individuals current on techniques and procedures needed to perform forensic examinations. Without them, many agencies would not be able to provide competent service to the criminal justice system. This practice needs to continue and be enhanced if possible.

  In terms of collaboration of State and Federal laboratories for individual cases, this is an area that could be improved. For the most part, there isn't any collaboration here, with only one agency usually performing the needed examination in its entirety. The federal agencies here typically want the local labs to perform the work as their federal labs are too slow in processing evidence. Our State lab system also will not work a case once a federal laboratory has started the examination.

- Our agency currently does not financially support various continuous education. I am certified with the American Board of Criminalistics and with AFTE, and require continuous education. I have paid my expenses to seven of the nine AFTE Training Seminars I have attended and four of the five Shot Shows I have attended.

- AFTE has good training conferences for continuing education. The accreditation standards are set by ASCLD and have a good platform. The levels of collaboration between federal, state and local agencies are good. The main question would be should everyone follow the same procedures? My answer is yes. We need a good minimum standard. But, that concept may need funding to local police departments with lower budget structures.

- Training and continual professional development needs to be multi-agency, educationally accredited (for pedagogical and for cumulative educational credit reasons), and broad-based. Education, certification, qualification, and proficiency are the key areas of need in forensic science.

- Just to reiterate the need for an increased training effort. Since AFTE already has a training program outline, a collaboration with AFTE would make sense.

- As a firearms examiner in a county laboratory, I couldn't be more pleased with the relationship I have with the examiners in the Federal laboratories. I have a good working relationship with the examiners in the FBI laboratories and the various ATF laboratories. I don't know whether this is specific to the firearm and tool mark discipline since in all actuality there aren't many of us out there.

There is only one organization that represents our discipline as a whole, AFTE. Therefore, firearms examiners from state, county, city, federal, police department and international laboratories regularly attend the same meetings.

- Collaboration is needed; HOWEVER, each agency should be operating their agency in the best way deemed necessary by those in the field.

- Proving continuing education would be a great benefit. With decreasing budgets, training is the first area cut. With few opportunities available to the members lack of funding greatly limits any opportunity we may have to attend a discipline appropriate training course or seminar.

- Trained users for the ballistic imaging equipment are available. The turnover rate is great so that on-going training and national certification and continued testing of levels of competency needs to be established. The usefulness and success of the ballistic imaging system and database is directly as a result of the volume of evidence from crime guns entered in the system. This use is adversely affected by the shortage of trained manpower and the hours available for the users to work with the system.

#7

- Each forensic discipline is unique and has its own list of problems and solutions. Attempting a top down one size only approach to all forensic disciplines is a mistake and that should be kept in mind above all else. Chemists may have solutions to their own issues that could be instructive to Firearm examiners, however, it is for the Firearm examiners to say, not authorities that lack the technical expertise within the specific discipline.

- If the Federal Government can't provide direct funding for basic training and continuing education, they should provide that training on a large scale and even make it available to private examiners who are examining cases for law enforcement agencies.

- Forensic science disciplines other than DNA need to become an accepted and recognized practice within the criminal justice system. DNA results are considered almost absolutely conclusive of guilt or innocence based on the perception of the criminal justice system, the public, and the media. The remaining disciplines need to advance their quality and performance to achieve this, or demonstrate why they should already have it. Conversely, they must be able to show why their results are not best described by probability statistics, yet still convey the same conclusive result.

- I am aware of several standards for fingerprint identification. There is a proposed criterion for firearm/toolmarks (Consecutive Matching Striae). We have to get the lead out, no pun intended. Stop the wringing of hands and set the standards. Demand proper documentation of casework. It is only going to help the science prove it is a science. It will make examinations easier for us. Set the standards for education with a basis of a college degree to start. Yes, there are some smart people without college degrees but they have to get with the program and get their degree. A master's degree is even better!

- Managerial competency of forensic science laboratory managers.

- In years past the FBI has made available *excellent* training in various areas of forensic science. Their training efforts seem to have diminished in recent years. That could be re-established with an increased budget for such training.

- It has been my observation that there has been a neglect of forensic science in the national scientific scene. The recent decision by the National Academy of Science Committee on the Assessing the Feasibility, Accuracy and Technical Capability of a National Ballistics Database not to include any AFTE member on this committee is an unfortunate example of this neglect.

180 Day Study Questionnaire Responses

These represent abstracted responses from material received by email.

Question Documents

#3

- I believe that there are three significant challenges which apply to document examination. The first challenge is to foster standardized testing and validation to establish error rates as per Daubert. This research is currently underway, and should receive continued and increased support. That support could come from funding for studies and from participation in these studies among practitioners in the field. The second challenge is the need for trained practitioners, and this is best met by funding support for training internships and education programs. Though some regional associations provide limited support in these areas, Federal funding would make a significant difference in the ability of laboratories and individuals to participate in training and continuing education. The third challenge is accreditation of qualified document examiners. This is an issue for the courts, and not directly related to Congressional oversight. It involves the recognition of true expertise in *voir dire* proceedings. The field of questioned documents is plagued by unqualified practitioners, many of whom are not trained at all or trained in graphology, and who manage to qualify as experts in courts of law. Strict accreditation of document examiners based upon their education and training would alleviate a significant challenge to the credibility of the field.

- The biggest challenges for forensic document examination (and other comparative sciences):

    1. Satisfy the Daubert criteria to the satisfaction of the sitting judges;
    2. Research funding conducted by forensic document examiners;
    3. Lack of qualified personnel

    Regarding #1, the forensic document discipline has had the unpleasant privilege of enduring numerous Daubert Hearings and critic challenges for the last 10 years. To address the Daubert criteria and respond to the legitimate criticisms of the critics, the profession has undergone extensive testing by Kam to establish the validity of forensic document examination and that qualified experts outperform lay people. Kam tests also established an error rate for the participants in the profession. Kam's testing would not have been possible without funding. Further testing is always needed and should be conducted by other unbiased scientists such as Kam. However, cooperation from the members of a profession is not enough. It takes funding to prepare, distribute and evaluate the results of these tests.

Certification and accreditation are included in the challenge of satisfying the Daubert criteria. ABFDE is an independent certification body and has been involved with FSAB and a member of the FSAB Board shortly after FSAB's inception. This Board oversees approximately 170 certified Diplomates. The process of meeting accreditation standards is costly and eats up the majority of an operating budget for a small board such as ABFDE. ABFDE strongly believes in the accreditation of all certification bodies. I strongly believe NIJ funding should be available to all legitimate certification boards of forensic science disciplines. Accreditation will give some assurance that minimum standards are established and enforced in the areas of training, continuing education, certification, and ethical conduct.

Regarding #2, one of the Daubert criteria requires the scientist to use accepted methodology in the examination process. One method of establishing a method as acceptable is through research by the members of the specific discipline. Forensic document examiners have historically researched specific topics within the document discipline. One of our struggles in the courtroom was to convince the sitting judge that our research is valid and peer reviewed. Part of the problem centers on the fact there are few research projects that involve a large population in one project. Most often, the comprehensive research will involve several research projects involving smaller populations, but each project is independent of the other, total of all projects usually span a period of 15-20 years, and geographical diversity. Two (2) examples of this type of research:

1. Juvenile hand printing characteristics...3 individual research projects with differing geographical locations and spanning 10 years from the first project to the date of the last.

2. Occurrence of the various number formations -- again 4 smaller research projects (the smallest one was 50 participants, the largest was 200 participants), geographically diverse and year span from first project to last project was 20 years.

In each project set, the researchers reached the same observations. In both projects, all were presented at professional meetings and a few of these were published in peer-reviewed journals (Journal of the AAFS).

There are numerous aspects of forensic document examination that need a large, extensive research project. Again, this takes funding and the amount of money that would be required is out of reach for a working forensic document examiner. Having the funds to initiate and complete such projects would further establish the validity of the forensic document

discipline and address the concerns raised in Daubert Hearings and critic challenges.

The importance of research to establish accepted methodology was often overlooked in the past. With the exception of the forensic document discipline, other forensic science disciplines have used methods and procedures that were accepted without question resulting in the examiner providing testimony in court. An example of this is the recent debate regarding the FBI's use of chemically matching bullets. Research by two metallurgists revealed this method, which the FBI has used for 15 years, is not reliable and that the theory to support such a method was never researched.

The forensic document field has been criticized for its' conservatism regarding examination practices involving a task at hand that has not had the extensive research to support a methodology. A prime example of a forensic document examiner's hesitation occurs when faxed documents are submitted for examination. Some research has been conducted and published regarding faxed machines and their output. However, research focusing on the faxed document and the affects of the surrounding influences that change from one moment to the next (such as transmission) have not been conducted. Therefore, it is generally accepted in our discipline that when a forensic document examiner does not have research to refer to regarding any methodology on the examination of faxed documents, a complete positive conclusion would not be acceptable. However, state statutes abound across our country that allow faxed documents to be entered as "best evidence" should the original not be found. A properly trained forensic document examiner quickly recognizes the problems encountered when there are no limitations set for faxed documents.

Regarding 3 (above), the lack of trained, qualified forensic document examiners. All of the comparative sciences have suffered due to the mindset that DNA is the magic pill that will always bring forth justice. DNA is great, but the other comparative sciences have their place in the laboratories and the courts. Currently, positions once held by forensic document examiners (prior to their retirement) are now transferred to the DNA sections. This practice is directing the destiny of a much-needed forensic science toward extinction. Just as DNA is not in every case, some cases (mostly White Collar) do not have latent prints. All that is left is the handwriting. A forensic document examiner is able to take the hand writing evidence and based upon a detailed examination, can provide, at the most, a conclusion regarding authorship, and at the least, investigative direction regarding authorship. An example of how invaluable a forensic document examiner can be is in the case of the anthrax letters.

A forensic document examiner undergoes a minimum of a 2-year training program. This is an expensive process and with today's limited funding, the state and local agencies don't offer training positions. Most of the forensic document training positions can be found in federal agencies. Local agencies need the expertise of forensic document examiners. Funding is greatly needed to ensure the forensic document examiner population does not dwindle to zero as a result of a lack of replacements for those who are retiring. In the next 5 years, attrition will be the biggest cause for agencies across the US losing their document examiner. These positions should not be lost to DNA because funding is not available to train a forensic document examiner or to hire a trained document examiner at a decent salary (low salary offered by a State of Washington agency resulted in the loss of that position since a qualified examiner could not be hired at such a low wage).

- The declining number of qualified experts available, especially in labs that have criminalists or detectives examining documents as a sideline.

  No mandatory oversight for document examiners.

  The adversarial system of forensic science in general. Forensic scientists should not be advocates, they should be impartial.

- Not enough trained practitioners. Standardized training programs are needed to produce more examiners meeting a standard that includes testing to confirm minimum competency.

  Centralized federal funding to supplement basic two year training of practitioners and continuous education to permit examiners to maintain up-to-date knowledge and abilities, to include centralized testing and certification by ABFDE. This would include standards that would help insure equitable, competent practitioners are available to serve law enforcement entities for the good of all U. S. citizens. Many federal investigative organizations (i.e., Health and Human Services), states (Mississippi, Louisiana, Florida) and cities go without the benefit of forensic document services, or are limited to what they can beg or fund on special cases only. Victims of white collar crimes are many times left in endless limbo because of the absence of sufficient forensic document resources to provide services to investigators of the crimes. Worse, some investigative agencies give work to alleged "experts" without proper training and credentials, who provide inconsistent results and effectively produce more victims of white collar crime.

  NIJ or some federal source should provide in-depth assistance to all courts suffering the baseless, recurrent challenges against the forensic document field in Daubert hearings. This legal manipulation and abuse of Daubert and Kumho rulings have drained unrecoverable resources from many federal and

state forensic document laboratories. The defense attorneys abusing the legal system in this manner should be jailed.

- One of the greatest needs in the Questioned Document field is library service. Much of the information we need to access has never been published. QDRAC is helpful, but includes only abstracts of papers. It would be very useful to able to access technical papers and articles online. We also need much more help in proving the scientific basis of handwriting identification.

- Daubert motions of reliability and acceptance are currently the foremost challenges to our profession. Funding for research and for validation testing would be beneficial in substantiating the basic premises of the profession and for validation of opinion terminology.

  Education and training on Daubert issues as they pertain to QD are sporadic. Currently, there are forensic seminars at the National Advocacy Center in Columbia, SC, but are held, at most, twice a year. A permanent course in forensics for US attorneys should be held several times a year to include instruction in Questioned Document examination usage in criminal trials and the applicability and impact of Daubert.

  Education and training of document examiners in the Federal system is sporadic as well and this needs to be addressed. Funding simply is not made available, especially for state lab systems. A stand-alone facility devoted to the training of examiners in disciplines of a skilled and technical nature could provide a forum to rectify the need for training in these areas. These disciplines are not currently afforded sole graduate or post-graduate curriculums and, therefore, training is not easily attainable. Permanent staff and visiting proctors could be housed in a NAC type of facility and students could be sponsored by their employing agencies. FBI and Secret Service provide two-week courses of instruction and these could be incorporated into this curriculum.

- There is a shortage of Questioned Document Examiners at the state laboratory level. Here in Iowa, there is one examiner. In Nebraska, there is one examiner. In North Dakota and South Dakota there are no QD examiners. The State of Missouri no longer has any state lab QD examiners. It isn't that these states never had examiners; it is that the laboratory administrations, short on money, have repeatedly decided to put new positions into DNA sections. When the QD examiners left, very few replacements were made.

  There is quality continuing education, but very little money to send someone to the meetings and workshops.

A third area of concern would be in convincing administrators that you can't put all of your concentration on one area of forensic science. The detectives count on each area of the laboratory for assistance in solving crimes.

- Daubert challenges – ongoing federal and state challenges require preparation and education for the expert and the attorney, but resources are limited (time, personnel) and may result in unsatisfactory legal decisions (e.g. US v. McVeigh, US v. Hines)

  Certification – unlike most other forensic disciplines, forensic handwriting experts frequently deal with graphologists (personality traits from handwriting) who claim undocumented expertise in forensic handwriting comparison. In legal proceedings, testimony by dubious opposing experts may result in exclusion of handwriting evidence. The ABFDE is the only certifying body recognized by AAFS, but funding and personnel are very limited. Federal grant money has been unsuccessfully sought for validation of the ABFDE formal testing process. Judges and attorneys need to be informed regarding the necessary qualifications for expert witnesses.

  Federal grant money has also been unsuccessfully sought to improve and validate a Proficiency Testing program which crime laboratories must participate in for accreditation purposes. The only existing private vendor, Collaborative Testing Services, Inc., offers testing services that are replete with problems and flaws.

  Accreditation -- ABFDE is also preparing for the new FSAB accreditation, and has experienced strong resistance by dubious handwriting experts/organizations in proposing standards to FSAB for candidate organizations. Without the funding and personnel to study and establish standards for each discipline, the same potential issues of misleading testimony and evidence exclusion may continue to occur.

- I feel the three most important challenges facing the Questioned Document discipline are lack of trained personnel, certification, and the need for funding for continuing education. In addressing the first, the Michigan State Police works document cases for every Federal, State, County, and local agency in the State of Michigan. Currently there are only 3 examiners and a minimum of 5 is needed just to stay up with the current caseload demand.

  The final aspect is the lack of financial funding for continuing education. The criminals are ever increasing their need and desire to out do the law enforcement community. Therefore, the law enforcement community finds themselves in a position of trying to stay up with the criminals and their activity. Technology plays an important role in this issue, especially with forensic document examination. Passports, visa's, licenses, and the fraudulent reproduction of identification documents in this day and age is an

extremely vital aspect of law enforcement. Therefore, it is paramount that resources be provided not only for additional training, but also research.

#4

- Funding for validation studies performed by Universities, and tuition funding to encourage enrollment in University forensic science degree programs.

- I agree it is not the Federal Government's role to fund operational aspects. However, the issues and requirements surrounding Daubert justify the need for the Federal Government to become involved to provide funding for research by forensic document examiners, and to provide funding for the research and validation of each forensic discipline (similar to the validation testing the document field has submitted to in the Kam testing). The majority of Daubert challenges have occurred at the Federal level, and what occurs in the Federal courtroom extends to the state level as defense attorneys will use the Federal cite to limit or exclude an expert from testifying. Since these cases involve Federal examiners, it would behoove the Federal government to demonstrate their examiners are active participants in the forensic science community. When well-funded research projects are limited to certain Federal agencies, this eliminates or limits significant peer review as well as prevents a determination of the reliability of the methodology used in the research.

  The Federal Government may believe it should only fund research conducted by its own agencies. This is a limiting factor because it will not achieve the validation of methodology, standards, professionalism, or ethics the courts are looking for. Support for this lies with the Federal Judge overseeing the Plaza case. In reversing his original decision of excluding the fingerprint testimony, Judge Pollock cited that the FBI fingerprint examiner was only certified through the FBI (his employer) and not an independent body such as the IAI. The courts are looking for validation and reliability that are independent or repetitive. In addition to those with federal agencies, having forensic document examiners at state and local levels conducting well-funded research projects provide the proof of propriety as well as reliability to the courts that research is not being skewed or improperly reported. Our discipline has the talent to support well-funded research throughout the various levels of local, state, and federal agencies.

  Final comment: the requirements of Homeland Security -- the types of document cases require up-to-date equipment and current technology. This work, for the most part, can involve a Federal law violation. The Federal Government should provide funding or grant money for forensic document examination and other comparative sciences so we can handle the types of cases that tend to be unique to Homeland Security issues.

- Fund oversight and research and training opportunities.

- Set legal standards for training, testing and certification for all forensic document examiners. The incidence of local and federal courts allowing unqualified defense "experts" to testify (often to avoid giving the defense a basis for appeal, should their experts not be allowed to testify) should end.

- Fund research into the validity of handwriting identification
  Facilitate the creation of Standard Guides
  Library/information service
  Training document Examiners in examining writing in foreign scripts.

- More easily accessible grants for validation of forensic sciences is critical for the substantiation and reliability of forensic disciplines.

- My personal view is that the operational funding is indeed the key area of need. There is a shortage of well trained individuals to do the work. Funding could be earmarked for specific areas of the laboratories, to provide positions. Funding could also be earmarked for training. There will always be a responsibility of the individual state governments to recognize the need for forensic science, and to provide buildings and equipment for forensic work. I don't see the role of the Federal government to baby sit the legislatures, but rather to provide assistance to those that have put effort and funding into proper facilities and equipment.

- Provide more funding for grants for:

  validation studies of aspects of forensic science that would be challenged in Daubert, Frye, etc. hearings, particularly whether basic principles have been tested, error rates, and standards of procedure.

  validation studies of certification and accreditation processes.

- *The Federal Government should provide funding for excessive caseload reduction, which is outside the normal operational aspects of the laboratory. In addition, funding of research, continuing education, and equipment benefit the forensic science laboratory greatly.*

  More easily accessible grants for validation of forensic sciences are critical for the substantiation and reliability of forensic disciplines.

  I feel that the federal government's most vital role with respect to forensic science is in providing financial resources and funding for equipment, research, and personnel. DNA has seen a tremendous amount of financial backing from the government to and including money to higher personnel

The Federal Government should continue to fund training in forensic document examination and make an effort to establish a national training academy for forensic document examiners. The level of ability of each individual examiner varies because of an absence of a national training program. State, County and Municipal law enforcement agencies would assist in staffing an academy and be a source for students.

Education and training on Daubert issues as they pertain to QD are sporadic. Currently, there are forensic seminars at the National Advocacy Center in Columbia, SC, but are held, at most, twice a year. A permanent course in forensics for US attorneys should be held several times a year to include instruction in Questioned Document examination usage in criminal trials and the applicability and impact of Daubert.

There needs to be additional funding of some of the studies being conducted on HW examination now, mainly the ones by Dr. Moshe Kam of Drexel University. This would satisfy the remaining Daubert concerns.

#5

- The organizations that threaten homeland security are relatively well-funded, and much of that funding originates from within the United States. Such funding usually involves records, paper trails, and perhaps even identity theft. Many of the investigations surrounding these transactions logically include forensic document examination.

- Yes, there is a close relationship to the tasks at hand regarding Homeland Security and the forensic document discipline. The budgets of local and state law enforcement agencies have felt the impact of the costs of meeting the Homeland Security mandates. Since the budgets have not increased to accommodate the mandates, the forensic lab is one area that has suffered. The money is not available for equipment needs, maintaining equipment or obtaining equipment using the latest technology, and training. The lack of a properly equipped forensic laboratory is a hindrance to all of us who are placed in a position to assist with Homeland Security issues. A properly trained forensic document examiner with state of the art equipment benefits all US citizens by expediting the examination and review process.

- Yes, best practices are needed.

- Yes. The anthrax contaminated letters, the Unabomber case, and others point to the need for standardization in the forensic document field on critical case issues.

- Yes, we need resources to deal with contaminated papers. The Anthrax letters proved this point.

- Yes. There needs to be training for the handling of volatile substances, such as Anthrax, for all evidence handlers. Development of protocols for these substances should be a priority as well as collaboration between Federal and State agencies for the dissemination of same. A SWG group could be the answer for development of these protocols.

- Yes. The FBI, Secret Service, Postal Inspection Service, and Department of Homeland Security laboratories all have well trained QDEs, and have relied on them heavily before and after September 11, 2001. There is no paperless society, and won't be in the foreseeable future. There is no reason to neglect Questioned Document work at the state level either. The hype and press accorded to DNA work is well deserved, but doesn't mean that the states should put all of their eggs in one basket and neglect the other areas of forensic science.

  I don't see the lesser populated states, like Iowa, as ever having the personnel to handle a Homeland Security or WMD event alone. The federal government would have to assist. However, I do see a role of the state laboratory being able to provide assistance and training to the local people who would respond to such events, along with the appropriate federal personnel.

- YES to both questions.

  For example, suspected anthrax letters, packages and envelopes. Funding is necessary for research to study the handwriting of foreign-born/taught writings, specifically Arabic, Russian and Chinese.

  Such examinations are directly associated with foreign and domestic terrorist threats. TSWG agreed and provided funding for the research. Some of this research has been published and successfully used in Daubert challenges. However, much more additional funding is necessary for many other aspects of document examination like photocopies/photocopiers, facsimile (fax) machines, writers from other countries, etc.

  The need for Best practices for handling evidence at crime scenes should not even be in question.

- The relationship is clear between Homeland Security and Questioned Documents. So soon we forget. For many years we have had our own homegrown terrorists. FALN, BLA, Omega 7, Weathermen. With all of these terrorist groups Questioned Documents has played a significant part in bring the case to a successful conclusion.

Yes, Many investigative leads are developed through the use and skills of the forensic document examiner. Cases are solved as well. Thousands of documents in Iraq and other foreign countries were seized for forensic document examination.

Definitely, aspects of WMD and Homeland Security are related to Questioned Documents. The Federal Government should continue to provide services in cases where suspected live WMD cases are handled, requiring the disposal of expensive equipment post-examination (due to potential contamination).

There is absolutely a relationship between our casework and Homeland Security/WMD issues. The best example is the Anthrax letters. We may not be processing these at the scene, but it is common for a letter that contains "suspected" Anthrax to be sent to the local crime lab for analysis, with no proper training or preparedness for the lab employees. I once overheard a lab director (not my employer) tell a lab employee to open a "suspected" Anthrax letter in the chemical hood, that was precaution enough.

With respect to WMD cases, in our particular laboratory and after the substance is screened by CDHC, questioned documents is the first stop in the laboratory setting. The vast majority of Anthrax/Anthrax hoax cases involve some type of note and thus creates a need for document analysis which in essence could provide some very important forensic value in determining a suspect.

In January 2002, I made a presentation to the Technical Support Group for Combating Terrorism (TSWG) for research funding to study the proficiency of forensic handwriting experts in examining hand printing (Anthrax letters/envelopes) and foreign-born/taught writings, specifically Arabic, Russian and Chinese.

Such examinations are directly associated with foreign and domestic terrorist threats. TSWG agreed and provided funding for the research. Some of this research has been published and successfully used in Daubert challenges. However, much more additional funding is necessary for many other aspects of document examination (photocopies/photocopiers, facsimile machines, writers from other countries, etc., etc., etc.)

The need for Best practices for handling evidence at crime scenes should not even be in question.

Absolutely. The QDU has seen an increase in WMD cases over the last several years (both hoax and authentic). Under FBI's currently policy, no WMD case threatening possible biological/chemical contamination enters the Laboratory without first being tested in an outside laboratory designed for this

type of testing. Once negative, and the testing laboratory is one on the approved list maintained by the Hazardous Materials Response Unit, it can come into the Laboratory for examination. If positive, the examiners travel to outside laboratories to conduct the examinations possible on the evidence while following the safety guidelines of the host laboratory. Additionally, the specialized training is being provided to forensic examiners for working with positive WMD evidence.

As long as any written or printed matter might find its way into a questioned document laboratory there need to be best practices in place for handling contaminated evidence. Documentary evidence comes in many forms and may be exposed to hazardous materials like any other type of evidence, i.e.: white powder in anonymous threat letters.

#6

- There must be collaboration between forensic science laboratories at the federal, state, and local levels. The isolationism that has occurred in the past has to cease. No matter the employer, we are all working toward the same goal, to provide objective examination that will yield a reliable conclusion to assist the law enforcement community in identifying the right suspect and to ensure that justice is achieved in order to keep our society safe. I feel funding has always been a source of conflict between federal examiners and those at the local and state level. To achieve the goal of serving justice, an open exchange must to occur. It is of the utmost importance that all forensic document examiners are in agreement with regards to independent certification, accreditation, and examination methodology. A group of examiners from one agency or one geographical area cannot be allowed to mandate how an entire discipline operates. This can be eliminated by leveling the playing field by providing funding so those forensic document examiners who have proven themselves to be research oriented can obtain the funding necessary to conduct research that should answer the questions the courts are asking through Daubert. Additionally, one way to test the reliability of the research results, is to have simultaneous research projects underway conducted by forensic document examiners at the various agency levels. That should eliminate the appearance of bias or secrecy, a common charge from our critics.

- Government labs should be more open with local labs when it comes to certain evidence such as anonymous letters.

- The NIJ/FBI should continue working with the Scientific Working Groups and generate standards in all aspects of each field and then see that federal, state and municipal jurisdictions implement them.

- Some excellent hands-on training has been provided at the FBI Academy in Quantico. I would like to see more of that training, with more opportunities for state examiners to be able to attend those classes. In that it is a drain on manpower for the FBI to provide all of the teachers, it may be helpful to have the Secret Service or Postal Inspection Service assist, or provide some classes themselves. There is no substitute for hands on training, and the idea of the virtual academy seems like a cruel hoax to me.

- Continuing education should include those impacted by crime laboratory systems, such as attorneys and judges (state and federal), law enforcement personnel (agents, inspectors, investigators).

  The government (in particular the FBI) has always provided different aspects of training as it relates to Questioned Documents. It would be nice to see the government continue in this fashion, therefore continuing to provide additional education in different areas of forensic document examination. In addition, I feel it is vital for the governmental agencies to continue to reach out and embrace and support state and local forensic laboratories. For example I know the Secret Service has offered to have hubs as it relates to their FISH system. Communication, education and a pursuit for standardization is vital in our field and collaboration between governmental and state/local laboratories is vital.

  There needs to be additional funding of some of the studies being conducted on HW examination now, mainly the ones by Dr. Moshe Kam of Drexel University. This would satisfy the remaining Daubert concerns.

  Providing support for continuing education relieving the budgets of the forensic laboratory, allowing budget resources currently allocated to this to supplement additional personnel.

  Federalizing all Certification and continuing education funding would greatly assist local and state forensic laboratories, provided that this funding was not used to replace existing funds, requiring agencies to utilize the funds to further staff laboratories.

  The American Board of Forensic Document Examiners has set forth the criteria in forensic document examination. The Board of Director is made up of Federal, State, local and Private Examiners in North America. The Board has just authorized applicants from foreign law enforcement laboratories and private laboratories to apply for certification testing.

  One area not addressed thus far is that of collaboration between federal, state and local crime labs. Laboratory systems at each of these levels of government exist to service the particular needs of their agencies and may

develop a special expertise unavailable in other laboratories. These special skills tend to become known throughout the forensic community through interagency interaction and at professional meetings.

As it is not practical for all laboratories to develop the same level of expertise in all kinds of forensic examinations, this sharing of skills is desirable. The sharing of these specialized skills may benefit agencies at all levels of government, however, it can become burdensome for a particular agency to do many examinations submitted by other agencies.

The federal government can help this situation by making sure budgeting stays consistent with demands for forensic services as forensic laboratories aim to service the needs of their own and other agencies.

The FBI has long been a preeminent source of training in the various disciplines of Forensic Science. I believe it's imperative that they have the resources and personnel to continue in dispensing of quality training. The training made available for my discipline has been extremely limited and sporadic in recent years.

Need for research to further address technology issues which are being utilized to further criminal activity.

Collaboration between state/federal agencies. The FBI is notoriously paranoid and historically reluctant to share information with other federal of state law enforcement laboratories.

#7

- Final note: There is a place for forensic document examination in the labs and the courts. The results of an examination not only identify the suspect, it also eliminates the victim. Also, some crimes are not assisted by any of the other forensic disciplines. An excellent example is White Collar Crime. In White Collar Crime, no need for Firearms because there is no gun; latent prints have little value as the suspect is expected to have access to the questioned documents; DNA can't help. In these cases, the only evidence that has any substantive value is the document examination. White Collar Crimes (including Identity Theft) are major crimes in this country. White Collar Crimes not only finance those with greed, the money garnered from White Collar offenses support terrorist, drug, organized crime, and fencing activities. White Collar Crimes have a significant financial impact (negative) on our country's economy. Forensic document examination is one of the smaller disciplines (by membership), but this discipline is of great assistance and usually provides the proof regarding a suspect's or victim's involvement. Suicide and robbery notes are other examples where forensic document examination is the primary

forensic science needed. The contribution of a forensic document examiner toward either identifying or eliminating a suspect or victim can be instrumental in the pursuit of justice.

What are the needs of forensic science beyond DNA? They center on the issues of Daubert and the removal of junk science from the courtroom. The forensic document profession has been the focus of the challenges for the last 10 years. As a profession, we recognized there were some tasks we needed to do in order to address legitimate criticisms and the Daubert criteria. I believe the other comparative sciences will face the same criticisms in the future as most of the other disciplines have not subjected themselves to validation testing or task at hand reliability testing. The NIJ desires the truth in justice and due to the implementation of Daubert, a few of the forensic sciences have not documented what is needed to address the four criteria. The forensic document profession has begun the journey down this path. But, much more is needed in the area of research projects and accreditation. NIJ or other Federal funding is sorely needed and is more than justified with the current legal climate surrounding Daubert, accreditation, and research.

- All citizens deserve the best possible protection from all types of crimes. Forensic Document Examination (FDE) has frequently been relegated to a "low" priority, due to a close association with white collar crimes. The reality is that FDE cases have also involved key evidence in more serious crimes, such as murder and large scale organized crime.

  Forensic services often produce the best evidence in respective cases. To protect our citizens by providing adequate forensic services to successfully prosecute pending cases, incarcerate criminals and thus reduce future crimes, is a critical need for our society.

- Perhaps the commission and interested senators and representatives need to hear from the old bulldog detectives. The detectives are the ones who can provide insight into how the entire realm of forensic science helps to solve cases.

- Any decision made in a legal challenge has the great potential to influence future legal decisions, especially with regard to expert testimony. All forensic disciplines are integrally linked and attempts should be made to support all of them equally.

Summary of the issues:

- There is a critical need for continuing education programs.
- Many public forensic science organizations face serious budget challenges which result in long turnaround times.

- Forensic science practitioners need help to fight off Daubert related challenges relating to the reliability of certain types of forensic cases work.
- Standardization of training and practice was raised by a number of responders.
- Forensic science related issues about terrorism and WMD is an oft stated concern.
- Federal forensic labs should survey State and local labs to assess whether they are meeting their constituent's needs.
- Federal agencies need to do more to assist State and local forensic science needs.

Recommendations:

- Greater attention must be given to forensic science needs beyond DNA.
- A national forensic science commission is a step to define the problems facing the nation's forensic science delivery system.
- A funded, in depth study of the status and needs of forensic science including all forensic disciplines and medical examiners is needed.
- Research in pattern evidence (question documents, fingerprints, firearms evidence, etc.) is needed to contend with Daubert challenges.
- While "terrorism" and "WMD" may not be Department of Justice issues at the present time, appropriate federal agencies must be advised that State and local crime labs view these issues as areas of concern.
- High quality, accessible continuing education courses to train the next generation of forensic scientists is essential to any national forensic science strategy.
- Forensic science organizations wish help develop policies and practices to enhance the quality and timeliness of the nation's forensic science delivery system.

Addenda to the Question Document portion of the report

Information Package on the Discipline of Questioned Documents Analysis
The United States Senate Appropriations Committee directed that the forensic science organizations represented by the Consortium of Forensic Science Organizations (CFSO) compile a needs analysis of forensic science beyond DNA. This package is directed towards the explanation of the Disciple of Questioned Documents and its needs.

Job Description is defined in Standard E444-98 1

2.1 The **forensic document examiner** makes scientific examinations, comparisons, and analyses of documents in order to:

(*1*) establish genuineness or nongenuineness, or to expose forgery, or to reveal alterations, additions, or deletions,
(*2*) identify or eliminate persons as the source of handwriting,
(3) identify or eliminate the source of typewriting or other impression, marks, or relative evidence, and
(*4*) write reports or give testimony, when needed, to aid the users of the examiner's services in understanding the examiner's findings.

General Duties are defined in Standard E444-98

3.2 Questions about documents arise in business, finance, civil and criminal trials, or in any matter affected by the integrity of written communications and records.

3.2.1 Typical problems in this field are:

3.2.1.1 the identification of handwriting, typewriting,
3.2.1.2 the identification or elimination of the source of/and the output of other mechanical or electronic imaging devices such as printers, copying machines, facsimile equipment, and the like,
3.2.1.3 the identification or elimination of ink, paper, and writing instruments,
3.2.1.4 the establishment of the date, source, history, sequence of preparation, alterations or additions to documents, and relationships of documents.
3.2.2 Other problems are the decipherment and sometimes the restoration, or both, of obscured, deleted, or damaged parts of documents.
3.2.3 The work often includes a study of the information carried by a document for discovery of evidence of spuriousness, identification of persons, or to show significant relationships.

3.2.4 Document examination also includes the recognition and preservation of other relevant physical evidence that may be present on documents.

Guides have been established through the ASTM process and have been published. Some Guides are still in the ASTM process and other have been drafted by SWGDOC. Attachment xx.

Forensic Document Examiners Take Part in cases involving the following types of CRIMES:

Robbery, Homicide, Terrorism, Bombings, Forgery-Fraud, Burglary, Kidnapping, Blackmail – Extortion, Sex Crimes, Threatening Letters, Vandalism – Graffiti, Fugitive Tracking and Civil crimes etc.

3.3 Equipment used in forensic document examination includes:

microscopes and other optical aids; photographic and other imaging devices, a wide variety of imaging materials adaptable for use with a variety of lighting methods, including those involving radiant energy in the ultraviolet, visible, infrared, and other regions of the electromagnetic spectrum; as well as electrostatic or other devices for the detection, or visualization, or both of indentations and other features present in or on paper or similar substrata. Other analytical instrumentation may be used where appropriate.

3.4 Questions about documents are answered

through the application of knowledge, skill, experience, training, or education specific to forensic document examination (usually acquired through 24 or more months of contact training, or apprenticeship, or the equivalent and the study of the recognized texts in the field) as well as from a number of other fields, such as the physical sciences, mathematics, language studies, and the like. The field of interest includes manufacturing processes and the materials that go into the production of documents, as well as the methods, machines, instruments, and human agencies by which the parts of documents are formed or brought together.

3.5 The results of examinations are reported for use by

the judiciary, administrative and executive officers, law enforcement agencies, boards, commissions, lawyers, and individuals. These results are often presented in the form of expert testimony, explaining the bases for the conclusions, which may be illustrated by the use of demonstrative evidence.

1. AMERICAN SOCIETY FOR TESTING AND MATERIALS Designation: E 444 – 98 Standard Descriptions of Scope of Work Relating to Forensic Document Examiners1.
AMERICAN SOCIETY FOR TESTING AND MATERIALS, 100 Barr Harbor Dr., West Conshohocken, PA 19428

Attachment 1 Reprinted from the Annual Book of ASTM Standards. Copyright ASTM

180 Day Study Questionnaire Response

TOXICOLOGY

#3

- Quality technical training that is affordable and available

  Seem to be fewer qualified applicants for entry-level positions than in years past, especially individuals with substantial chemistry training.

  Lack of uniform standards in service delivery. For crime labs, accreditation is mostly voluntary.

#4

- Fund high quality training events for laboratory professionals in strategic geographical locations

  Fund development of models for forensic toxicology services to support DUI enforcement especially with respect to DUI-Drugs.

  Coordinate/fund the development and validation of robust methods to test saliva in DUI drugs law enforcement.

#5

- Forensic toxicology sections are ill-prepared to deal with chemical/biological toxic agents that may be used as weapons. Action plans for responding to the possibility are needed for use by local labs. Regional testing centers capable of conducting specialized testing of biological samples should be identified.

#6

- Develop/promote sources for the highest quality proficiency testing materials and programs for use in forensic toxicology.

Appendix A and B at the conclusion of this report are copies of the cover letter and survey which were sent by email on April 5, 2004.

Appendix A.

- **SORRY FOR THE SHORT NOTICE.**

Please note the below information carefully. We need information as quickly as possible but not later that April 20, 2004.

As you may know, recent legislation passed by the United States Senate Appropriations Committee directed that the forensic science organizations represented by the *Consortium of Forensic Science Organizations* (CFSO) compile a needs analysis of forensic science beyond DNA. DNA has received much publicity, very deservedly, but it is the CFSO's view that there are many other forensic disciplines that contribute to the criminal justice system and those must not be forgotten. The text of the Senate language is as follows:

> *Improving Forensic Capabilities - The National Institute of Justice [NIJ], in conjunction with its own Office of Science & Technology, the American Society of Crime Lab Directors, the American Academy of Forensic Sciences, the International Association for Identification, and the National Association of Medical Examiners, is directed to develop a plan which will address the needs of the crime lab and medical examiner community beyond the "DNA Initiative" and report back to the Committees on Appropriations no later than 180 days from the date of enactment of this Act. The report should address the following: (1) manpower and equipment needs, (2) continuing education policies, (3) professionalism and accreditation standards, and (4) the level of collaboration needed between Federal forensic science labs and State/local forensic science Labs for the administration of justice.*

The CFSO is composed of the IAI, the American Academy of Forensic Sciences (AAFS), the American Society of Crime Laboratory Directors (ASCLD) and the National Association of Medical Examiners (NAME). It is most unusual that individual associations are named in federal legislation but that is what has occurred. Each organization was asked to name three people to serve on a committee to prepare a needs assessment of certain disciplines represented by their organization. NIJ asked each organization to nominate three individuals to participate in the 180 day study. The AAFS nominees are President Ronald Singer, President Elect Dr. Ed Donoghue and Barry Fisher. AAFS has agreed to will compile data for toxicology, firearms/toolmarks and question documents. We will prepare a short report and presentation at a Summit Meeting to be held May 18 and 19 in Washington, DC.

The report is to cover: (1) manpower and equipment needs, (2) continuing education policies, (3) professionalism and accreditation standards, and (4) the

level of collaboration needed between Federal forensic science labs and State/local forensic science Labs for the administration of justice.

Unfortunately, there is limited quantifiable information on the subject areas we need to cover. It may be that all we can provide is anecdotal information. The IAI has provided a survey form for its members which I have modified for our use, Please distribute this questionnaire to knowledgeable people in your network of professional contacts and request that the send the form and any other information to me as soon as possible. My e-mail address is bajfisher@earthlink.net.

We need this information as soon as possible but no later than April 20, 2004. If you have questions, don't hesitate to contact me; e-mail is preferred. If you do not have answers to all questions, please answer those you can.

Thank you in advance for your quick response to this survey.

Barry Fisher
On behalf of the AAFS Ad Hoc 180 Day Study Committee

Appendix B.

180 Day Study Questionnaire

When complete, please return this questionnaire to Barry Fisher at bajfisher@earthlink.net.

Your Name: _____

Your Affiliation: _____

1. Are you responding about:

- ☐ Forensic toxicology
- ☐ Firearms/toolmarks
- ☐ Question documents

2. In the event that the NIJ moves forward with a National Forensic Science Commission, which are appropriate professional organizations that should be contacted to nominate individuals to serve on a commission?

_____

_____

_____

_____

3. In your opinion, what are the three biggest challenges facing your discipline (e.g., not enough trained practitioners, lack of quality continuing education programs, the need for more research funding, Daubert related concerns, accreditation issues, certification issues, etc.) Please provide as much information as possible. If you can provide a source of data to substantiate a point please do so. Anecdotal is useful too. Congress specifically is asking for information about (1) manpower and equipment needs, (2) continuing education policies, (3) professionalism and accreditation standards, and (4) the level of collaboration needed between Federal forensic science labs and State/local forensic science Labs for the administration of justice.)

4. Recognizing that the Federal Government's role is not to fund operational aspects of forensic science, what are appropriate things the government should do in forensic science.

5. Do you see a relationship between Homeland Security or Weapons of Mass Destruction (WMD) issues and your discipline? For example, are best practices needed for handling possibly contaminated evidence or for crime lab personnel assisting at crime scenes?

6. Because the study deals specifically with "…*continuing education policies, professionalism and accreditation standards, and the level of collaboration needed between Federal forensic science labs and State/local forensic science Labs for the administration of justice…"*, are there any other comments you may wish to add concerning these areas?

7. Is there anything else you would like to add that might be useful to this congressional study of the needs of forensic science beyond DNA?

Please continue on a separate sheet if necessary.