The National Forensic Science Technology Center (NFSTC) is a 501(c)(3) corporation headquartered in Largo, FL. Founded in 1995 by the American Society of Crime Laboratory Directors (ASCLD), the NFSTC quickly established itself as a leader in providing quality forensic services to the justice community (including public crime laboratories, medical examiners, law enforcement agencies, academic institutions, and other professional forensic science organizations).

The NFSTC maintains a full-time staff of 25 – 30 employees with a complement of over 140 consultants who provide expertise in the various forensic disciplines. The NFSTC occupies a 23,000 square foot facility that includes administrative offices, training and meeting rooms, a sound-proof recording studio, an instructional design studio equipped with an assortment of multimedia formatting technologies, and a fully equipped, functional training laboratory.

In 2000, the NFSTC began a partnership with the National Institute of Justice (NIJ), through a cooperative agreement. Since then, the NFSTC has received funding from the NIJ in the form of three separate cooperative agreement awards. This funding enables the NFSTC to develop and deliver valuable forensic training and technical assistance to the justice community at little or no cost. This partnership provides training opportunities for forensic analysts who might not otherwise be able to access such training due to their agencies’ budget constraints.

Our **VISION** is for the forensic science community and its users to have complete confidence in the quality of the science provided to the justice community.

Our **MISSION** is that we are dedicated to assisting the forensic sciences in the achievement of the highest level of quality services for the justice community.
NFSTC Stakeholders:

I am pleased to present the National Forensic Science Technology Center (NFSTC) 2006 Annual Report. During 2006, we commemorated the tenth anniversary of the incorporation of the NFSTC (October 1995). Throughout the years, we have continued to focus on providing no-cost goods and services to the forensic and judicial communities.

Each year, the NFSTC has expanded the diversity of forensic programs with which to serve our goal of partnering to ensure the public safety through a Cooperative Agreement with the Office of Justice Programs’ (OJP) National Institute of Justice (NIJ). In support of the goals and objectives of the Office of Justice Programs’ Strategic Plan, we work to strengthen partnerships at and between federal, state, and local levels while “...reaffirming our commitment to preventing and controlling crime, administering justice, and assisting victims.”

In 2006, the NFSTC developed and delivered programs spanning multiple disciplines and their inherent quality assurance issues in areas that include DNA, firearms examination, drug field testing, fire debris, and quality documents, among others. Benefiting laboratories, law enforcement agencies, members of the judiciary, and educators, the NFSTC has worked to assist these entities in their individual and collaborative efforts to provide the public with efficient, effective, high quality services.

This report outlines the achievements of the past year and permits a look into future deliverables. The core of our success is enhanced by innovative approaches to technical assistance, training, and community outreach through our talented staff and numerous members of our stakeholder community. Program development and delivery methodology have evolved to include sophisticated web-based deployment, podcast development, advanced multimedia enhancements, interactive assessment technology, and collaborative web conferencing. Once again, these advanced efforts reflect the NFSTC alignment with the strategic goal of the OJP, as stated by Regina B. Schofield, Assistant Attorney General, Office of Justice Programs (OJP) to disseminate “…state-of-the-art knowledge and practices across America.”

In May 2007, my tenure and that of two other members of the Board of Directors will expire. On behalf of the NFSTC Members, Board of Directors, and staff, I would like to take this opportunity to thank Barry Fisher and Michael Sheppo for their many years of dedication and service to the NFSTC.

As a one of the three Officers named in the 1995 Articles of Incorporation, Barry Fisher was a pioneer in the early formation of the NFSTC. His considerable accomplishments in the established forensic community are well known. We are grateful for Barry’s adventurous spirit coupled with his constant voice of reason in advocating for the NFSTC, which at its inception was based on an unprecedented concept for providing services to the forensic community.

Michael Sheppo joined the Board in 1996 and has given many years of exemplary service, primarily in the capacity of Board President (1997 to 2005). As President and through his participation in numerous professional organizations, Michael Sheppo has been instrumental in helping the NFSTC to form strategic relationships within the forensic science community. He helped to lead the organization in a direction that would establish a fundamental partnership with the National Institute of Justice (NIJ). We are grateful for Michael’s considerable contribution to the success of the NFSTC and we send our best wishes for success in his future endeavors.

I joined the Board of Directors in 2000 and enjoyed my role as the Secretary for several years and then as the President for the past two years. It has been a pleasure to work with the other board members as well as with the tremendous staff at NFSTC to whom the achievements in this report are credited. As the three of us leave the Board of Directors, we are confident that the NFSTC will continue to develop innovative programs that benefit the criminal justice system and ultimately enhance public safety.

1Office of Justice Programs Strategic Plan (Fiscal Years 2007-2012)
Audits and Assessments

External DNA Audits

Since 2002, the NFSTC has performed no-cost External DNA Audits for DNA laboratories using the Federal Bureau of Investigation standards checklist for quality assurance that is approved by the National DNA Index System (NDIS). Over the past 18 months, the program has grown exponentially. In the spring of 2005, the performance of Grant Progress Assessments (GPA) of DNA grantee recipients began. In 2006, assessments for Using DNA to Solve Cold Cases and Coverdell grants were added to the program.

Grant Progress Assessments

In 2006 alone, the NFSTC conducted a total of 277 assessments, which includes both DNA audits and GPA assessments. Assessors committed over 1470 work days and visited 183 different locations, generating approximately 540 individual audit/assessment reports. With this level of growth, the program’s required personnel resources were increased by adding 30 assessors and additional contract staff resources to assist in the management of the program. To assist the administration of the continuing expansion, program logistics were streamlined, including revisions of the multitude of forms and required documents.

Looking Ahead

During 2007, further adaptations and revisions to the program are planned to keep pace with the anticipated growth. An Assessment portal is being rigorously tested for its usefulness. This portal tool will allow for the rapid exchange of information between all program participants and stakeholders in a web-based format. Information and materials related to individual assessments can easily be accessed and retrieved, reducing time and effort. The Assessment management team will explore other methodologies to expedite the assessment process while continuing to provide a high quality program to the forensic community.
DNA Analyst Training

The President’s DNA Initiative (PDI) – DNA Analyst Training Program provides a technology-based training (TBT) resource to assist publicly funded crime laboratories in conducting forensic DNA analyst training. The self-paced multimedia content uses the experience and academic foundation of previous on-site DNA academies delivered by the NFSTC. The HTML-based training consists of thirty-five core content modules, corresponding multimedia, and course resources, including a laboratory manual, glossary, and train-the-trainer components.

An overview of the training program was presented at The Seventeenth International Symposium on Human Identification: 2006 (Promega).

An online learning assessment system was used by a DNA Technical Leaders Pilot Group to evaluate their trainees’ understanding of the theoretical content. In addition, the online assessment was used by Gregg LaBerge in November 2006 to complement Population Genetics and Statistics training. Feedback from the pilot group and training participants will be used to enhance the test bank capabilities and improve functionality of the user interface.

Under the direction of the NFSTC’s Technical Leader, a comprehensive pilot test of the PDI - DNA Analyst Training Program began in November 2006 with the training of three students. Incorporating online theoretical content with hands-on laboratory workshops, the NFSTC Technical Leader provides oversight to the students as they demonstrate competency in the core knowledge areas. The pilot training program is scheduled for completion in 2007.

In support of the PDI - DNA Analyst Training Program, the NFSTC offered five Screening of Biological Samples workshops. In addition, DNA analysts from publicly funded crime laboratories participated in Mitochondrial DNA and Quantitative PCR (qPCR) workshops.

Looking Ahead

Additional workshops are planned in 2007 to complement the DNA Analyst Training Program:

- Extraction and Quantitation
- Data Analysis and Interpretation
- Amplified DNA Product Separation
- Reporting, Courtroom Testimony, and Mock Court
DNA State Profiles

The DNA State Profiles area located on the Office of Justice Program’s DNA resource website offers a single access point for statistical data related to DNA funding for all 50 states. Policymakers, state decision makers, and the general public are able to view each state’s funded laboratories, legal issues, media reports, and success stories. The NFSTC developed the site structure and initial data input into a format that is easily updated.

Access to Educational and Resource Tools

*What Every Law Enforcement Officer Should Know About DNA Evidence* is an interactive training program that covers basic information about the identification, preservation, and collection of DNA evidence at a crime scene; it is accessible from the dna.gov website. The NFSTC repurposed this tool for the justice community to a format that is available at no-cost at: [www.dna.gov/training](http://www.dna.gov/training).

In February 2006, the *Principles of DNA for Officers of the Court* program was also made available to the public on the dna.gov website at no-cost. The response to this educational and resource tool has been significant. From the launch date (February 22, 2006) through the end of 2006, the number of visits to the program rose to over 5600. An average of 46.6 pages were accessed per visit and total pages accessed exceeded 263,500. By the end of 2006, over 3500 users had registered to view the training and 156 users have completed all of the modules.

Image and Animation Repository

The images and animations developed by the NFSTC for OJP-NIJ programs are available to the public for download and reuse. Currently, media files from the Principles of DNA for Officers of the Court are available on [www.dna.gov/repository](http://www.dna.gov/repository).

Looking Ahead

Another educational program, the *President’s DNA Initiative - DNA Analyst Training* program, will be added to the training resources available on the dna.gov website. Additional images and animations will continue to be added to the repository site. The Regional Cold Case Training materials will also be posted to the dna.gov site.
Principles of Forensic DNA for Officers of the Court

The release of the *Principles of Forensic DNA for Officers of the Court* program was announced at the American Academy of Forensic Sciences meeting on February 22, 2006. It was initially delivered on CD-ROM through the National Criminal Justice Reference Service (NCJRS) (publication # NCJ 212399) and through direct distribution to groups of external stakeholders.

The popularity of the program has been enhanced by the availability of this educational and resource tool online at: [http://www.DNA.gov/training/otc](http://www.DNA.gov/training/otc).

Developed to empower officers of the court (attorneys and the judiciary) with the knowledge of forensic DNA evidence, justice community response to the online version of this educational tool has been considerable. During the first ten months, over 263,500 pages were accessed during 5,658 site visits. Almost 24% of the site visitors spent from thirty minutes to over an hour accessing the online training.

In support of the online version and the existing CD-ROM, the NFSTC has developed a one-day training session for the justice legal community supported by members of the project’s working group.

To introduce Officers of the Court to members of the judiciary, this training session was presented in 2006 at the:

- American Bar Association Annual Conference
- Florida Public Defenders Association Annual Conference
- National Clearing House for Science, Technology, and the Law Conference

**Looking Ahead**

Working group members will be presenting the one-day training at the American Academy of Forensic Science Annual meeting in the spring of 2007. In addition, a comprehensive interactive case study is under development to demonstrate how the case correlates to key concepts presented in *Officers of the Court*. Final production of the case study began in the fall 2006 and will be continued in spring of 2007.

A Spanish version of Officers of the Court is also under development and planned for release in 2007.
Field Investigation Drug Officer

As the justice community faces the ongoing challenge posed by case backlogs at forensic laboratories, the NFSTC has developed a program that will provide immediate investigative information without the need for extensive laboratory analysis, as well as facilitation of case adjudication in the preliminary phase.

Based on the evaluation of an existing model operated by the Phoenix Police Department, the effective implementation of the Field Investigation Drug Officer (FIDO) program affords certified law enforcement officers the capability of providing a preliminary identification of the most commonly encountered drugs of abuse.

Comprised of a comprehensive training section, quality assurance guidelines, and established testing processes, FIDO reinforces confidence in field testing results at a consensus level for prosecutors and the courts. It also offers the potential for expansion to include pilot testing and evaluation of new field testing technologies.

During 2006, the program draft documents were completed and reviewed by the NIJ. In the latter part of the year, four pilot test sites were identified for program introduction and implementation. Representatives from police agencies in Florida, Oregon, Pennsylvania and Utah attended a program introduction and training session as preparation for the deployment of the FIDO program in their respective communities.

NFSTC staff members took part in a poster presentation at the American Academy of Forensic Sciences conference in February 2006 by presenting a study of the Preliminary Validation of Commercially Available Field Test Kits for Drugs of Abuse.

Looking Ahead

A six month pilot testing phase began in March 2007. Statistical data will be captured and each site will evaluate the implementation of the program within their jurisdiction for successes and failures. Suggested program revisions will be reviewed and, if appropriate, implemented prior to the presentation of the final deliverable to the NIJ for review.
Through a partnership with the Technical Working Group for Fire and Explosions (TWGFEX) and the National Center for Forensic Science (NCFS) in Orlando, FL, the NFSTC has produced and distributed a total of 151 Fire Debris Validation Kits for use by laboratories in the validation/verification of fire debris analysis procedures.

The kits were distributed in early 2006 to laboratories conducting fire debris analysis. The evaluation of the kit required approximately six months of testing by the recipient laboratories.

The kit consists of a set of instructions, flammable liquid validation standards of known but undeclared composition, a CD-ROM containing a copy of the TWGFEX QA standards, an ASTM methods document with text hyperlinks for easy cross-reference, a step-by-step outline of validation steps, and a Quality Assurance manual template.

The instructional CD-ROM contains a master Activity Table, from which activities, worksheets, and references are linked, including:

- Initial Activity - designed to explore the basic requirements of quality assurance documentation necessary for conducting forensic analysis of ignitable liquids
- Instrumentation Activities - performed to validate/verify the laboratory analytical instrumentation namely, the gas chromatograph and/or the gas chromatograph – mass spectrometer
- Recovery Activities - performed to validate/verify the various methods of collection of liquid ignitable residues from fire debris
- Figure Reference Document - accessed for links to examples of instrumentation activity results presented in two file formats: Excel Worksheet and DATA.

Other components included 20 different reference materials, ampules of standard mixtures, cans containing complex matrix sample, and a

Looking Ahead

The recipient laboratories have been asked to evaluate the usefulness and applicability of the kit; this process began in early 2007.
Firearms Analyst Training

The forensic community has identified a pending shortage of qualified firearms examiners. Historically, the ranks of these analysts have been filled by sworn law enforcement officers or others who have undergone extensive training and apprenticeships within crime laboratories.

The constraints of Daubert and admissibility have pressured the field toward examiners with science degrees and standardized training in their backgrounds. The relatively low number of firearms examiners compared to other disciplines has resulted in a deficit of individual laboratory trainers and mentors.

Working with the Association of Firearms and Tool Mark Examiners (AFTE), subject matter experts, and firearms examiners, the NFSTC is developing a training program for newly hired and current Firearms Examiners.

- CD-ROM provided at no-cost to forensic laboratories involved in firearms identification
- Technology-based training (TBT) format, supplemented with photographs, graphics, and animations; it is accompanied by a practical training guide
- Curriculum designed for use in an academy or laboratory setting
- Modular self-paced units of instruction that can be easily transformed for independent use in other environments, such as crime scene training and continuing education for existing firearms examiners.

Looking Ahead

It is anticipated that an evaluation version of at least six modules will be distributed by June 2007 at the AFTE training seminar. The final CD deliverable will be completed by December 2007.
Forensic Services Review

In recent years, the forensic disciplines practiced in public crime laboratories have been under intense scrutiny by their external stakeholders. Intensified by the pressure of a significant increase in case backlogs, laboratory management is closely examining analytical capabilities. To assist in this process, the NFSTC has developed a comprehensive review process methodology.

The Forensic Services Review Project consisted of two distinct yet related deliverables:

- A pilot project was developed and utilized to review efficiencies and impediments within the Biology section of the Illinois State Police Forensic Services Division.
- A generic program developed as a result of the Illinois pilot project. The generic version may be adopted by any laboratory seeking to conduct an internal efficiency review of any forensic discipline.

To streamline the services review, the Forensic Services Review Project is presented as a sample framework for facilitating the laboratory's service review process.

The methodology was developed based upon an ADDIE (Analysis > Design > Development > Implementation > Evaluation) project management system and is presented in phases:

- Analysis Phase: The project problem is identified.
- Design Phase: The project problem strategies are identified.
- Identification Phase: The project team is identified.
- Development Phase: The project materials are identified and developed.
- Implementation Phase: The project strategies are conducted and reviewed.
- Evaluation Phase: The project is reviewed and evaluated.

To access the program documents online, go to: [http://www.nfstc.org/programs/](http://www.nfstc.org/programs/) (Select Forensic Services Review Project > Access the Project Documents)

Looking Ahead

The NIJ has requested that pilot testing projects be developed to include other forensic disciplines, such as latent fingerprints and toxicology.
Quality Documents

Providing quality services is a top priority for the forensic laboratory. Two years ago, the NFSTC launched the no-cost Quality Documents program series by making a Quality Manual template program available. Developed by the NFSTC and a group of quality managers, it is an easy-to-use template with over 90 document samples, designed to be used as a guideline for the creation of a customized quality system.

The program is currently available on the NFSTC website: http://www.nfstc.org/programs/index.htm.

In the next phase of the program, a handbook publication entitled Introduction to Accreditation for Forensic Labs (2nd Edition) by Murray Malcolm and Harold Peel was purchased by the NFSTC and delivered in 2005 to all identified U.S. public crime laboratories.

In 2006, two more accreditation related deliverables were added to the Quality Documents program:

- A copy of the ISO/IEC 17025:2005 document was delivered through a licensing agreement to public crime laboratories across the nation.

- A Standards File resource containing a template standards file and associated reference documents was also distributed to public crime laboratories. It contained the program overviews and supplemental requirements of two accrediting bodies, the American Society of Crime Laboratory Directors Laboratory Accreditation Board International (ASCLD/LAB) and Forensic Quality Services-International (FQS-I).

Looking Ahead

The NFSTC, ASCLD/LAB, and FQS have agreed in principle to cooperate in the development of tools related to uncertainty of measurement and measurement traceability.
E-Crime Awareness Tools

The Electronic Crime Partnership Initiative (ECPI) is funded by the U.S. Department of Justice, National Institute of Justice (NIJ). Committed to enhancing law enforcement officers’ ability to solve computer crimes, the ECPI is a multidisciplinary team of professionals that includes experts from law enforcement, academia, the government, and the private sector.

Experts at ECPI teach police officers to solve computer crimes and develop digital evidence in crimes, such as rape and murder. Officers learn that computers can facilitate criminal acts and are trained to conduct more sophisticated investigations that can build stronger cases.

The NIJ has established working groups within the Electronic Crime Partnership Initiative (ECPI) that define the core of the electronic crime research agenda. These working groups include:

- Tools and Technology
- Standards and Certification
- Awareness and Outreach
- Technical Assistance
- Policy and Legal
- Education and Training

For more information about these working groups: [http://www.ojp.usdoj.gov/nij/topics/ecrime/ecpi.htm](http://www.ojp.usdoj.gov/nij/topics/ecrime/ecpi.htm)

The NFSTC’s continuing efforts for the NIJ’s E-Crime Program and the Electronic Crime Partnership Initiative (ECPI) include the following:

- Participation in ECPI working group meetings
- E-Crime community awareness and outreach efforts
- Attendance and support for NIJ E-Crime program review meetings
- Support for the analysis, design, and development of NIJ’s new *Electronic Crime Scene Guide*
- Ongoing technology support for NIJ and ECPI E-Crime awareness efforts and symposiums

Looking Ahead

To support the efforts of the NFSTC in this rapidly expanding area of forensics, the NIJ has increased funding for 2007. This funding is designated for the development of additional awareness tools and a one-day course to support the release of the updated *Electronic Crime Scene Guide*. 
Community Outreach

Inform all interested parties about the NFSTC programs.

The NFSTC and its partners in the Forensic Resource Network (FRN) participate in events, conferences, and focus groups, with numerous organizations, including ASCLD, AFQAM, IACP, NIJ, FSAB, IAI, AFTE, ABC and regional forensic associations.

During these events, both podium and poster presentations are used to inform as many members of these communities as possible about the NIJ programs that are available at little or no-cost to stakeholders. Posters provide a visual representation of the NFSTC general services and programs. In 2006, the NFSTC also used the Project Safe Neighborhoods program as an example of strategic partnership for attendees at the ASCLD annual conference.

Throughout the year, the NFSTC website (www.nfstc.org) provides program updates as well as general knowledge about the NFSTC organization and activities. Stakeholders are invited to inquire or comment through the website email address (info@nfstc.org). The NFSTC facilitates the annual update of the informational brochure that describes the members and programs of the FRN. The NFSTC Community Outreach newsletter is distributed at various Outreach events and to visiting stakeholders as another means of communicating the message of program availability to our stakeholders.
Community Outreach

**Gain Input** from the forensic science and law enforcement communities to assist in targeting programs and services to fit their needs.

To assess the needs of the justice community, the NFSTC requests feedback and input across a variety of agencies and forensic disciplines. This takes place during conferences, through focus groups, board meetings, and direct requests as well as through targeted meetings held at the NFSTC. For example, the NFSTC hosted a meeting of the NFSTC Board of Directors and directors from Florida’s crime laboratories in 2006.

**Support** other organizations who support forensic science service delivery.

The NFSTC hosts forensic community related events at our Largo, Florida facilities. These include meeting and training rooms as well as laboratory facilities and instrumentation. For example, several International Association of Identification (IAI) workshops were held on-site during 2006. For more information and a virtual tour go to: [www.nfstc.org/aboutus/index.htm](http://www.nfstc.org/aboutus/index.htm). Click on Facilities.

The NFSTC has co-hosted events with the NIJ in off-site locations. In 2006, funding and logistical assistance was provided for four Regional Cold Case Training events that were held in Kansas City, MO, Indian Rocks Beach, FL, Philadelphia, PA, and Scottsdale, AZ.

Funding support was also provided through the NFSTC during the year for justice community organizations, including the American Board of Criminalists (ABC); financial assistance for this meeting facilitated the group’s ability to develop new, updated, discipline-specific examinations.

**Looking Ahead**

Through the NIJ-NFSTC cooperative agreement, funding for Cold Case Training will continue with Basic as well as Advanced Cold Case sessions planned for 2007. In addition, a symposium on trace evidence, is slated to be held in Clearwater Beach, Florida. The IAI has planned a number of workshops in 2007. Representatives of the NFSTC will continue to attend a selection of conference events.
External Stakeholder Feedback

We asked, "How has your organization benefited from the receipt of services provided by the NFSTC?"

DNA for Officers of the Court

Included in the resources made available is the excellent “Principles of Forensic DNA for Officers of the Court” that explains the scientific basis for DNA reporting and testimony. This type of product seems to be most ably written by the NFSTC in its role as intermediary between DNA scientists and the individuals who rely on the accuracy and proper interpretation of DNA testing results.

Michael Hass, Miami Dade Police Department Crime Laboratory

Quality Documents

The accreditation materials provided by NFSTC (Quality Manual, etc.) have been very helpful providing guidance for developing and placing into effect our Laboratory’s Quality Manual and SOPs.

Frederick W. Fochtman, Ph.D., DABFT, Director and Chief Toxicologist
Allegheny County Medical Examiner's Office

We were provided with a CD copy of ISO/IEC 17025:2005 as well as a CD referred to as the ISO Quality Documents Reference Program. These are excellent resources to guide us as we prepare for ASCLD/LAB-International accreditation.

Frank Dolejsi, Minnesota Bureau of Criminal Apprehension
Member of the NFSTC Board of Directors

Community Outreach

On behalf of the American Board of Criminalistics (ABC), we would like to thank NIJ and NFSTC for the funds and logistic assistance you provided...to assist ABC in the development of our new, updated, discipline specific examinations. The end result of this investment came...at the AAFS meeting...ABC administered 150 pilot examinations to forensic science professionals....ABC was able to acquire enough data through these pilot exams to help validate our new examinations in Drug Analysis, Molecular Biology, General Criminalistics and Fire Debris Analysis. Without your support for the process, we could not do as much as we did in bringing these new examinations to the forensic community.

Michael M. Healy, F-ABC
President, Board of Directors

NFSTC has partnered with the Association of Forensic Quality Assurance Managers (AFQAM) to promote standardized practices and professionalism in quality assurance management for the forensic community. The professional and financial assistance provide by NFSTC has enabled AFQAM to become a primary information resource on Forensic Quality Management.

Rod Kennette, AFQAM Member

The National Forensic Science Technology Center staff has worked very closely with our instructors to make the training as realistic and up to date as possible through the use of their facility, equipment and the talents of their staff.... Few facilities in this country offer the versatility, convenience and safe learning environment that NFSTC has made available to the forensic community with its laboratory and classroom facilities.... Because of the availability of their facilities and the cooperation of their staff, the law enforcement and forensic identification communities are able to receive the type of specialized training that is desperately needed to meet the needs of the criminal justice system today and the high expectations of our communities. Without the use of their facilities, we would not be able to provide this training for the forensic community.

Michael J. Campbell, Training Coordinator
Ron Smith and Associates, Inc.
External Stakeholder Feedback

External DNA Audits

The NFSTC provides DNA audits. We appreciate the opportunity to have the free audit to meet the expectations of the FBI Director’s Quality Assurance Standards.

Eric Buel, Laboratory Director
Vermont State Forensic Laboratory

...External auditing [has] been highly successful. In the past we have struggled to find outside experts to provide an external audit. Out west there are few if any DNA experts...outside of our lab system. Combine that with the fact that the states are spread out, it made it difficult for us to find an auditor and then there were travel issues for any one who may be coming to our State. The NFSTC program has enabled us to get quality audits without these types of issues.

Pilar A. Shortsleeve, Supervising Criminalist / Forensic Biology
Utah Bureau of Forensic Services

Academies & Workshops

The DNA Academy training program was extremely thorough, covering all aspects of DNA analysis in use by our laboratory…. We were impressed with the technical knowledge level of the analyst after attending the DNA Academy.

Lorna Beasley, DNA Section Supervisor
Texas Department of Public Safety Crime Laboratory

Some of the benefits of the additional [DNA] training...received through NFSTC include…[trained analysts] are less likely to commit error and more likely to be able to troubleshoot based upon the increased knowledge. [They] developed relationships with other colleagues which can be beneficial for information sharing in the future.

Phyllis T. Rollan, Assistant Laboratory Director and Forensic Biology Section Chief
Montgomery Regional Laboratory, Alabama

The material covered by the NFSTC Forensic Biology Screening Workshop supplemented and, in some areas, exceeded the material covered in the laboratory’s training program…. Attendees gained additional reference materials which greatly benefited their in-house training program. The costs for training off-site were covered by NFSTC so there was no additional financial burden to the laboratory. The attendee’s mentor was free to focus on additional casework responsibilities while the trainee was in attendance at the workshop. This benefited both the laboratory operation and the attendee.

Dean Gialamas, Director, Forensic Science Services Division
Orange County Sheriff’s Department

When [the analyst] returned to our laboratory, it was clear that the training that she had received was of high quality. Not only had the Drug Academy covered drug analysis in depth, it also had given competent training in court testimony. As a result, she was able to start independent casework sooner than she would have had she been trained totally internally. With our caseload continually increasing, it made a significant impact to be able to have [her] join in doing casework. We are most appreciative of the assistance the NFSTC provided.

Dale A. Gooden, Forensic Scientist Manager
Michigan State Police

Rapid Response

NFSTC has provided NIJ with the ability to promptly respond to technical assistance challenges being faced by state and local forensic practitioners.

John Paul Jones, NIJ Program Manager

Fire Debris Validation Kits

We were provided a fire debris validation kit that we anticipate will be a resource for our scientists involved with evidence from suspected arson scenes.

Frank Dolejsi, Minnesota Bureau of Criminal Apprehension
Member of the NFSTC Board of Directors
National Environmental Laboratory Accreditation Conference

In 2004, the Environmental Protection Agency’s (EPA) Office of Research and Development issued a number of solicitations for cooperative agreements in an effort to assist the National Environmental Laboratory Accreditation Conference (NELAC) in its efforts to achieve self-sufficiency. The NFSTC was awarded one of the cooperative agreements to facilitate the process by which the NELAC would become a self-sufficient entity whose primary goal would be to ensure the uniform adoption and application of the NELAC Standard. In addition, the NFSTC would provide support to NELAC for the development of a national database of accredited laboratories conducting environmental analysis.

The NFSTC began working with the NELAC Board of Directors and other NELAC subcommittee members in November 2005 to develop a strategy for self-sufficiency. The NELAC Board of Directors appointed a Self Sufficiency Task Group (SSTG) to work with the NFSTC to develop strategies and a business plan for self-sufficiency and to make recommendations to the Board. The initial work was begun by the SSTG soliciting input from NELAC members and stakeholders during the NELAC interim meeting in Chicago in January 2006.

Throughout the course of the year, the SSTG held weekly conference calls that were hosted and facilitated by the NFSTC to further its investigations and research towards the self-sufficiency effort. With input from NELAC members, the SSTG developed a draft business plan that included mission and vision statements, a purpose statement, organizational characteristics, a potential structure for a new organization and a timeline and communication strategy for implementation.

The NFSTC facilitated a solicitation process that sought responses from organizations interested in offering assistance with the NELAC self-sufficiency process. Of the five organizations responding, the SSTG determined that the Institute for National Environmental Laboratory Accreditation’s (INELA) purposes, goals, and characteristics more closely matched those proposed for the new organization. A memorandum of understanding was executed resulting in the formation of a joint partnership planning team (PPT) whose objective was to explore the options for combining the two organizations. The result of the work performed by the PPT was a recommendation to combine NELAC and INELA. This recommendation was accepted by the Boards of each organization and a partnership was formed under the name “The NELAC Institute.”

Looking Ahead

Going forward, the NFSTC will continue to support the activities of The NELAC Institute as it progresses toward self-sufficiency. The desired outcome is to become less involved in the new organization’s operations as it becomes increasingly independent and achieves its business objectives.
Deployable Forensic Laboratory

During the summer of 2006, the NFSTC began a partnership with the Department of Defense (DOD) and the Defense Threat Reduction Agency (DTRA) to develop a readily deployable forensic laboratory. A similar laboratory structure employed in the exploitation of Improvised Explosive Devices (IED), was originally used to support the global war on terrorism in Iraq and Afghanistan. This concept will be modified to expand the availability and portability of forensic analysis capabilities in the United States and internationally.

The NFSTC is working with DTRA and Applied Marine Technology Inc. (AMTI) to integrate and configure the laboratory as a flexible, versatile infrastructure for forensic applications. As such, the laboratory will provide an at-the-ready setup that can be used to expand the capabilities of the warfighter in gathering various types of forensic intelligence. From a domestic perspective, these mobile laboratories can be deployed in response to a natural disaster or an accidental incident and as a force multiplier to support existing forensic operations. For example, in a situation like the aftermath of Hurricane Katrina, when the New Orleans forensic laboratory could no longer provide services, this deployable forensic laboratory could provide a rapid response to an urgent need. In another scenario, the mobile laboratory could be deployed anywhere in the United States to supplement a functional laboratory in an effort to reduce case backlogs.

The laboratory architecture is comprised of four shelter structures that are attached to form a single unit. The individual shelters measure 8’ by 20’ by 8 ½’ and can be transported via highway, rail, ship, or air. Delivery to isolated areas is possible under suitable helicopters. The expandable sections are self-supporting and can be set up on virtually any terrain or for use while mounted on a truck or trailer. When the four-shelter laboratory is opened and attached, it affords approximately 1600 square feet of laboratory space.

The interiors are equipped with modular components that are configured to be condensed into the center of each container. Full setup of the laboratory can be accomplished in less than one hour. The laboratory is dust and light proof with self-contained power and air conditioning and is capable of sustaining power for a minimum of 33 hours on a single tank of diesel fuel. An access-controlled entryway vestibule provides an area that functions as a ‘mud room’ to minimize dust contaminants in the laboratory environment.

The deployable forensic laboratory can be equipped to house conventional forensic applications such as DNA analysis, firearms examination, drug toxicology, and serology within a certified ISO container. One of the four shelters would function as an administration/communications sector.

Looking Ahead

The NFSTC has contracted with DOD/DTRA to provide design development for various forensic applications as well as training services that will be delivered through streaming media technology. The delivery of the first phase of this project is targeted for the end of 2007.
Technical Assistance Staff

Assisting Organizations
Support Staff

Sustaining the Mission

Support
Staff Contributions

We asked, “How does the work produced in your position benefit the forensic community?”

I develop training materials using a number of tools from web design to video production. My responsibilities also include the purchase, installation, and use of new equipment as well as providing support for technical/multimedia related questions that may arise. It is very exciting to complete a project and see the resulting use by the forensic community.

Danny Nichols, Multimedia Design Specialist

As the DNA Technical Leader, I am tasked with developing and providing Forensic Biology training for State and Local crime laboratories. This includes distance delivery training for DNA Analysts funded through the President’s DNA Initiative, forensic biology screening workshops, and custom DNA analyst training. I enjoy this type of interaction with the forensic community and these training programs have been well received by both the students and their laboratories.

Debra Figarelli, DNA Technical Leader

As Communications Design Specialist, I am tasked with developing Community Outreach vehicles to inform laboratories, organizations, agencies, and individuals about NFSTC deliverables. Our website, newsletters, event presentations, and brochures bring news of the availability of our various services to the forensic community. I also fill a variety of requests for media files and program materials from educators, publishers, producers, and the general public. It is very rewarding to receive positive feedback expressing that the NFSTC deliverables have not only assisted but enhanced their ability to deliver services to their stakeholders.

Jane Smith, Communications Design Specialist

The National Institute of Justice (NIJ) provides millions of dollars in grant funding to laboratories and related forensic service providers. Many times public outcry and public opinion focus on wasteful government spending practices without realized benefits. The NFSTC Assessment Program provides the oversight capabilities for NIJ to ensure the proper expenditure of this funding. In addition, the program provides the opportunity for agencies and laboratories to directly report the many successes achieved through the utilization of grant funding. The measures of success combined with oversight capabilities significantly contribute to the overall mission and initiatives of the NIJ in facing the challenges of crime and justice.

David Sylvester, Program Director-Assessments

My function as the NFSTC’s Compliance Manager provides a check and balance system that helps to ensure that the programs we develop meet the letter and spirit of the Cooperative Agreements we are currently engaged in with our funding agencies. Adherence to the compliance standards ensures the delivery of the NFSTC’s high quality products and services.

Priscilla Miller, Grant Compliance & Contracts Manager

As the Human Resources and Organizational Development Manager, I am responsible for managing all of the operational HR functions for the organization including employment law and policies administration, as well as benefits, compensation, and payroll administration. These functions serve as the infrastructure that enables the employees of the NFSTC to provide services to the forensic community. In addition, I am accountable for managing organizational development through recruitment and selection administration; employee performance management and development plans; and delivery of training and strategic coaching as requested. These activities support employee competence and quality service delivery to the forensic community by ensuring that NFSTC’s internal and external stakeholders have access to appropriate and effective resources and tools. I gain a great deal of personal satisfaction from building and supporting the HR related systems that make it possible for NFSTC to fulfill its mission.

Elizabeth Yourkievitz, Human Resources and Organizational Development Manager

Instructional Design contributions for the PDI DNA Analyst Training include support for Technical Leaders in evaluating their student’s learning through the use of online assessments. We collected and implemented preferred assessment delivery options from Technical Leaders across the country. Hundreds of assessment questions have been made available in a secure, usable and randomized format. Instructional Design aspects of the Firearms Analyst Training project currently in progress include supporting training officers with consistently presented content correlated to AFTE Knowledge and Ability Factors with quality visual enhancements of concepts. This training will also provide an assessment tool based on delivery preferences and question content resulting from the collaboration with AFTE Subject Matter Experts.

Carol Fisher, Instructional Design Specialist

We support the forensic community by promoting good stewardship of government resources by internal monitoring of all financial transactions.

Dennis Thureson, Accounting Manager
Deliverables Technology

Technology is not only part of our company name; it resides at the core of the NFSTC mission. We explore different ways of using technology to enhance our deliverables. Whether we are providing technical assistance, delivering training, or communicating through outreach endeavors, one of the most vital elements is the ability to direct the service to the target audience using the tools and resources best suited to that audience. We continually strive to improve the way that information is formulated and presented to our stakeholders. Our specialty is providing our deliverables using state-of-the-art multimedia resources that are user-friendly. We envision a justice community that has access to resources that accommodate the various learning styles of each individual. By maximizing the use of technology, we can accomplish this goal.

Web Conferencing

During the content development process, subject matter experts (SMEs) provide the content, which is then edited and formatted by our editing team. Since these experts are frequently located in various parts of the country, the editing process is accomplished using web conferencing. The subject matter is discussed by phone while the document is shared by the team and SME over the Internet. All parties are able to view the changes online as they occur.

Technology-based Training

Technology-based training (TBT) deliverables integrate multimedia components (interactive animations, audio, and video) to enhance the content. NFSTC instructional designers work with our multimedia designers and subject matter experts to develop the types of media that best illustrate the content. These training tools are delivered through a variety of formats, including CD, DVD, web-based delivery, and podcasting. The student’s ability to access training is significantly expanded when a variety of delivery options are available. This is particularly true for Generation X and Y students who are instinctively comfortable with the TBT approach to learning and have grown up in the age of cell phones, laptops, and MP3 Players.

The use of podcasting offers a very portable solution for training delivery. Examples of how the NFSTC has provided this solution include the conversion of the What Every Law Enforcement Officer Should Know about DNA Evidence brochure and quick reference guide into podcast audio book format. In addition, we are producing the National Institute of Justice’s Expert Systems podcast, which is scheduled to be released in 2007.

The NFSTC submitted a proposal to address the portable training demand by purchasing at least one MP3 player for each of the 425 crime laboratories in the United States. The MP3 player would be a crime laboratory library resource that could be checked out by analysts at different times to download and use training material.
**Deliverables Technology**

**e-Learning Tools**

As with traditional learning methods, students demonstrate their comprehension of subject matter through assessment tools. This system provides a broad range of online assessment question formats including true/false, multiple choice, and fill-in-the-blank, among others. Interactive testing permits the display of instructor-created feedback, related explanations, and links to relevant course material. e-Learning resources also provide a survey option that assists the NFSTC in the collection of student feedback as we continue to improve our instructional methods.

**Internet Access**

Many of our Community Outreach efforts are accomplished through communications posted on the NFSTC website. The site offers our stakeholders the opportunity to ‘visit’ our facility through virtual tours; on-site visitors can easily obtain information about the area before their arrival.

The NFSTC website also provides yet another access point for program delivery. The Quality Documents and Forensic Services Review programs are available to our stakeholders and to the public from our site. (www.NFSTC.org/programs).

The website and associated portal sites are critical and effective tools that maximize access to various elements of the Assessments program. Laboratory stakeholders are able to find program information and our contract assessors (involved in conducting external DNA laboratory audits and grant assessments), use these sites to post and retrieve reports, thus streamlining the process.