



FLC NewsLink

Federal Laboratory Consortium for Technology Transfer
The Only Government-wide Forum for Technology Transfer

T² Events

American Society of
Mechanical Engineers
Nov. 17-22, 2002
New Orleans, La.

American Nuclear Society
2002 Winter Meeting
Nov. 17-21, 2002
Washington, D.C.

American Association for
the Advancement of Science
Annual Meeting and Expo
Denver, Colo.
Feb. 13-17, 2003

National Design
Engineering Show
March 3-6, 2003
Chicago, Ill.

FLC National Meeting
May 5-9, 2003
Tucson, Ariz.

BIO 2003
Annual Convention
Washington, D.C.
June 22-25, 2003

Go to:
<www.federallabs.org>
for a complete
Calendar of Events

T² Fact

Susan LaFlesche, one of the first Native American women physicians in the U.S., formed a new branch of medicine by combining modern medical practice with native healing practices. The method is now used to treat ethnic populations around the world.

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Homeland Security Recruits Science & Technology

The past year has made evident the technological advancements of terrorists and the need to develop technologies to combat such advancements.

This paradigm shift is the focus of a report by John Marburger and E. Floyd Kvamme, co-chairs of the President's Council of Advisors on Science and Technology (PCAST). The report states that, for the first time in history, one individual or small group has the ability to threaten the lives of very



President George W. Bush discussed the security of America at Mount Rushmore on August 15

large groups.

It is for this reason PCAST issued *The Report on Maximizing the Contributions of Science and Technology within the New Department of Homeland Security (DHS)*.

The report urges the Bush Administration and Congress to make research and development (R&D) and technological deployment a primary function of the DHS the moment it is formed. The report provides a proposed R&D structure and operational considerations.

PCAST's suggested model includes an Under Secretary for Science and

See *Homeland Recruits*, page 4

PNNL, SafeView Inc. Team to Detect Trouble

A technology designed to rapidly identify hidden weapons, explosives and other contraband—even plastic, ceramic and other nonmetallic weapons—through clothing is the cornerstone of a new company formed to commercialize the technology for a variety of security applications. The technology, which uses millimeter waves to generate holographic images, was developed by the Department of Energy's (DOE) Pacific Northwest National Laboratory (PNNL) for the Federal Aviation Administration to scan airline passengers as they pass through airport security checkpoints.

PNNL is operated for the DOE by Battelle, which is headquartered in Columbus, Ohio. Battelle has licensed the technology to SafeView Inc., a new corporation based in Menlo Park, Calif.



Unlike current metal detectors, the system is designed to detect plastic and ceramic weapons, and other nonmetallic contraband.

Under the terms of the licensing agreement, SafeView will establish and maintain a product development office in Tri-Cities, Wash. The holographic imaging system is distinctly different from current surveillance systems that rely on metal detectors, X-ray imaging and, in some cases, strip searches. Metal detectors cannot screen for plastic or ceramic weapons, plastic explosives or other nonmetallic contraband, while X-ray imaging subjects people to potentially harmful ionizing radiation.

"We believe that the imaging system has enormous potential for use in screening people at points of entry to mass transit systems, including airports, subways and trains; border crossings; government

installations such as courtrooms, military bases, prisons, embassies and office buildings; crowded public places such

See *PNNL Detection*, page 4

DC Dispatch

Homeland Security, DC Trade Groups Shape Potential Partnerships
by Dave Appler
FLC Washington, DC Representative

Technology transfer has been relatively quiet this legislative year. The consensus in Congress is that the legislative framework is working well.



Dave Appler

There has been discussion of Bayh-Dole and some proposed legislation concerning coordination and funding of T2 in the Department of Energy (DOE), but generally the time on the Hill seems to be one of assessing what is there.

See *DC Dispatch*, page 5

Lab in the Limelight

LBNL Advances Forensic Capabilities

Using infrared light, forensic investigators can tell whether a document is a forgery and if paper currency is counterfeit. They can take a paint chip and tell the make, model, and age of a car. Now the boundaries of infrared forensics are being pushed into uncharted territory by researchers at Lawrence Berkeley National Laboratory (LBNL), and the results look promising for criminal and antiterrorism investigations, as well as for historians and archaeologists.

Working at the Advanced Light Source (ALS)—an electron synchrotron that has been optimized for the production of x-ray and ultraviolet light but that also generates intense beams of photons in the infrared (IR) spectrum—LBNL researchers have applied IR spectromicroscopy in a proof-of-principle study to characterize a variety of inks on paper with unprecedented sensitivity. They have also used these IR beams to obtain chemical "sweatprints" that may be every bit as unique and ubiquitous as physical fingerprints.



LBNL researchers have taken fingerprinting to a new level, benefiting everyone from criminal investigators to historians.

See *Lab in the Limelight*, page 4

Fed Labs Flash

Technology Transfer Notes from Within the Federal Laboratory Community

Stadler Enjoys Challenge of INEEL Geocentrifuge

Alan Stadler joined the DOE's Idaho National Engineering and Environmental Laboratory in February 2002 as the principal investigator for the Subsurface Science Initiative's (SSI) new two-meter Geocentrifuge Research Laboratory.



Alan Stadler

Stadler said he was drawn to the position by the start-up nature of the SSI program and the chance to set up a new geocentrifuge. "A two-meter geocentrifuge doesn't come online every day.... It's rare for a scientist to be given a blank slate like this. It's a once-in-a-career opportunity."

Stadler's role includes developing the physical infrastructure of the new facility, and initiating and facilitating research activities, especially in the area of caps and barriers.

DOE in Search of Future's Energy

The DOE's National Energy Technology Laboratory is seeking applications for the research and development of technologies enabling the development of fossil fuel energy resources needed to ensure the availability of affordable energy for the nation's future.



Activities should promote the efficient and sound production and use of coal, natural gas and oil. Approximately \$23.85 million is planned for this solicitation. The DOE anticipates making 50-75 awards. Eligible are for-profit and nonprofit organizations, universities or other institutions of higher education, and non-federal agencies or entities. Applications are due October 28, 2002.

More info: Solicitation No. DE-PS26-02NT41613, <http://e-center.doe.gov>

Montana Research Facility Expands Horizons

In August, one of the largest research facilities in the world broke ground to expand its main laboratory complex.

The Fort Keogh Livestock and Range Research Laboratory, operated by the U.S. Department of Agriculture's (USDA) Agricultural Research Service (ARS), covers 55,000 acres of native rangeland, planted dryland, irrigated pasture and irrigated cropland near Miles City, Mont. A USDA facility since 1924, Fort Keogh has more than 40 permanent employees, as well as 25 working horses and a herd of about 1,500 cows.

ARS, the USDA's primary scientific research agency, operates the facility in cooperation with Montana State University's Agricultural Experiment Station. Fort Keogh researchers focus on beef cattle genetics and reproductive physiology, range animal nutrition, and range ecology and management.

Over the years, they have pioneered methods for the genetic evaluation of beef cattle and established a purebred Hereford line that is a cornerstone of the breed. They have also helped ranchers in the Northern Plains reduce soil loss, enhance plant growth, and increase the production of domestic livestock and wild animals.

More info: www.larri.ars.usda.gov



Photo by Jack Dykinga

Producing healthy calves is the goal of researchers at the ARS's Fort Keogh Livestock and Range Research Laboratory in Montana. They are currently studying hormonal and genetic causes of dystocia, or

NIH Pursues Small Business Innovation

The National Institute of Allergy and Infectious Diseases (NIAID) of the National Institutes of Health (NIH) has issued a program announcement for a Small Business Biodefense Program within NIAID's SBIR/STTR obligation. The estimated FY2003 budget available for support of SBIR/STTR grants in biodefense and emerging infectious diseases is \$35 million.

For this topic, SBIR and STTR Phase I applications may last up to two years and \$500,000 total cost per year. SBIR and STTR Phase II applications may last up to three years and request \$2 million total costs per year. Also, NIAID will entertain well-justified Phase II applications for an SBIR biodefense award with greater than 50% contractual costs when those costs are necessary to support clinical studies and trials or product development.

More info: <http://grants.nih.gov/grants/guide/pa-files/PAS-02-149.html>

LOOKING FOR A CURE

Open-angle glaucoma, the most common form of the disease, is a leading cause of blindness in the United States and the number one cause of blindness in African Americans. Now, researchers at Scheie Eye Institute at the



University of Pennsylvania researchers may have found a way to prevent glaucoma.

University of Pennsylvania School of Medicine, led by Jody Piltz-Seymour, MD, have determined that eye drops used to treat elevated pressure inside the eye can be effective in delaying — and possibly preventing — the onset of glaucoma.

The rate of developing glaucoma was reduced by more than 50% in participants who used the eye drops.

More info: www.upenn.edu/researchatpenn

Lab Work

From Outer Space to Under Water

With an increased need for intelligence, it's certain that new satellites and observation vehicles are in the works for both short- and long-term specialized uses.

Scientists at NASA's Marshall Space Flight Center (MSFC) are working with ways to decrease a satellite's weight and size, while increasing its useful lifespan, through the use of composite pressure vessels. This work may provide a valuable asset for homeland security and the country's future energy needs.

The weight of the fuel tanks and pressure vessels in satellites and upper stages is rather significant to the overall system's weight; and small changes to the performance of these vessels can greatly enhance the vehicle's performance. Typical vessels for these applications are aluminum or stainless steel tank liners over-wrapped by graphite/epoxy composite materials. The tanks must be capable of operating under great load since flight-certified vessels commonly contain pressures of 3000 to 5000 psi, with some as high as 8000 psi. The tanks

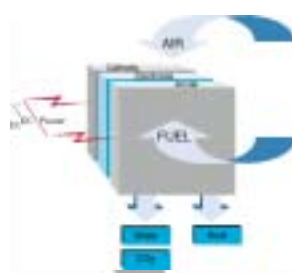
may also contain fluids that are not compatible with most materials nor suitable for long-term storage.

Inventor Tom Delay of the MSFC addressed these concerns by making the metal liners thinner and using improved fibers and resins. This technology produces a tank that is one-fourth the weight of current designs—with much greater damage and fire resistance. Hybridized structures consisting of a variety of composite materials and selecting the appropriate tank liner produce a vessel that addresses the needs of the demanding application.

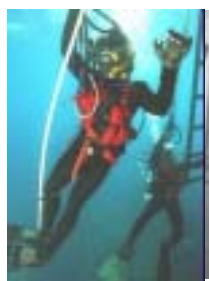
DeLay is also working with ways to produce the vessels in other shapes. These conformal tanks can improve the packing efficiency and complement the vehicle design. Other possible uses for this technology include breathing air tanks for firemen and military scuba divers; missile and rocket fuselage, casings and fuel tanks; fuel tanks for over-the-road tankers; and the construction of hydrogen fuel cells for alternate power vehicles. This patented technology is available for licensing and commercialization through the MSFC's Technology Transfer Department.



DeLay's lightweight satellite technology could have a host of other uses...



...from fuel cells to breathing tanks.



NewsLink

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Tech Watch

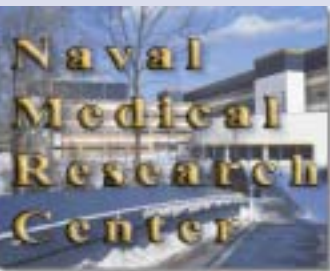
Federal Laboratory Technologies Ready for Transfer

Biotechnology

Antigens Against Anthrax

Navy researchers developing a DNA anthrax vaccine are beginning to understand the molecular basis of anthrax and have moved forward in new vaccine development efforts.

A Navy research team is focusing on a key factor in causing disease, a multicomponent toxin secreted by the bacteria that consists of three separate gene products—protective antigen, lethal factor, and edema factor.



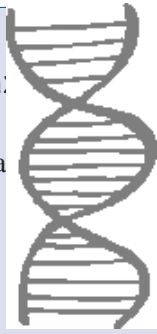
Researchers discovered that using a vaccine with DNA fragments encoding nontoxic analogues of the

anthrax toxin generated a powerful immune response in a lab model.

The new DNA vaccine was developed jointly by the **Naval Medical Research Center (NMRC)**, **Ohio State University**, and the **National Institutes of Health**. The team published its initial findings in *Infection and Immunity*, a peer-reviewed journal published by the American Society for Microbiology.

NMRC has also developed an Early Warning Outbreak Recognition System (EWORS). Researchers at NMRC Unit No. 2 in Jakarta, Indonesia, developed a unique software system (patent pending) to detect outbreaks of infectious diseases in Southeast Asia.

EWORS is a hospital-based, computerized data management, analysis and reporting system that enables real-time dissemination of epidemiological data to a centralized reporting "hub" and other EWORS.



Studies

Federal WTC Study

The **National Institute of Standards and Technology (NIST)** detailed its \$16 million, 24-month federal building and fire safety investigation to study the structural failure and subsequent progressive collapse of several World Trade Center (WTC) buildings after the Sept. 11 terrorist attacks. The study will focus on the buildings' construction, the materials used, and all of the technical conditions that contributed to the outcome of the disaster. The investigation objectives are to determine technically why and how the WTC buildings collapsed following the initial impact of the aircraft; why the injuries and fatalities were low or high depending on location (per the technical aspects of fire protection, occupant behavior, evacuation, and emergency response); what procedures and practices were used in the design, construction, operation and maintenance of the WTC buildings; and which building and fire codes, standards and practices warrant revision and are still in use. **More info: Michael E. Newman, 301-975-3025; <http://wtc.nist.gov>**



As part of its investigation, NIST will analyze steel from the World Trade Center site. The piece of steel shown was directly hit by the aircraft that crashed into the North Tower.

Agriculture

Potato Protection

Researchers at the **DOE's Idaho National Engineering and Environmental Laboratory** have a CRADA with a small business in Aberdeen, Idaho, to experiment with destroying anthrax using ozone.

The **O3Co.** developed a patented process to deliver high ozone concentrations — 300 to 800 parts per million — to freshly harvested potatoes on conveyor belts. Ozone destroys harmful bacteria, allowing the safe storage of potatoes for months. Believing this process can sterilize mail, INEEL researchers are testing for anthrax spores with harmless surrogates. Unlike chlorine dioxide, a hazardous chemical used to treat potatoes and disinfect anthrax-contaminated facilities, ozone leaves no residue and, with potatoes, takes seconds to work.



Ozone can be created by lightning or through a high-voltage system such as O3Co.'s patented corona discharge ozone generator. The electricity breaks oxygen molecules apart and releases one atom. The unstable nature of ozone causes the extra oxygen atom to attach to something—like carbon. Since viruses and bacteria such as anthrax are virtually all carbon, the extra oxygen molecules attach themselves and create carbon dioxide. This oxidation cremates the bacteria.

More info: Ken Watts, 208-526-9628, kdw@inel.gov; <http://www.inel.gov>; O3Co., 208-397-3033



Proven to Work

High-Level Scares Call Sandia National Laboratories to Action, Twice

Congressional Cleanup

During the anthrax scare last fall, federal authorities used a decontamination formulation developed at the **National Nuclear Security Administration's (NNSA) Sandia National Laboratories (SNL)** to rid Capitol Hill buildings of anthrax.

The formulation was only one of the decontamination products selected to remediate the Hart Senate Office Complex and the Dirksen and Ford Congressional Offices in Washington, D.C. Foam was also used to decontaminate mailrooms on Capitol Hill and at the ABC facilities in New York.

SNL licensed rights to commercialize the chem-bio formulation to **Modex, Inc.** and **EnviroFoam Technologies.**



SNL researcher Mark Tucker examines two petri dishes: one with a simulant of anthrax growing in it, the other treated with the decontaminating foam developed at SNL. The nonhazardous foam begins neutralizing both chemical and biological agents in minutes.

The formula, which contains ordinary household substances found in hair conditioner and toothpaste, neutralizes both chemical and biological agents in minutes. It can be applied to a contaminated surface as a liquid spray, mist, fog, or foam. Noncorrosive, nontoxic and nonhazardous, the decontaminating foam works against a wide variety of chemical and biological agents, and has performed well in multiple independent lab tests and military field trials against viable anthrax spores, chemical warfare agents, as well as

simulants of anthrax, chemical agents, vegetative cells, toxins, and viruses. **More info: John German, (505) 844-5199, jdgerma@sandia.gov, www.sandia.gov/media/cbwfoam.htm; www.deconsolutions.com (Modex); www.easydecon.com (EnviroFoam Tech.)**



A bomb technician aims a PAN disrupter at a suspect bomb. The disrupter has become the primary tool used by bomb squads to disable conventional, handmade-type bombs remotely.

Sandia Bomb Squad Tool Disables Bomber's Shoe

The shoe bombs Richard Reid allegedly tried to detonate aboard a flight from Paris to Miami were surgically disabled by bomb specialists using an advanced bomb squad tool originally developed at SNL. The Massachusetts State Police bomb squad disabled Reid's shoe bombs with assistance from the FBI using a percussion-actuated nonelectric (PAN) disrupter.

The PAN disrupter interrupts a bomb's internal gadgetry quickly—before the bomb can detonate—and remotely, with human bomb specialists a safe distance away.

One of several advanced bomb-disablement tools developed at Sandia and licensed to **Ideal Products** of Lexington, Ky., the PAN disrupter was also used to disable the Unabomber's device #17, following the arrest of Ted Kaczynski. **More info: www.federallabs.org**

PNNL Detection from page 1

sports arenas, concert halls and museums; and commercial buildings,” said Mike Lyons, chairman of SafeView’s Board of Directors. “While the technology was developed to identify dangerous objects or contraband that people might bring into a facility, we believe it also could be used to protect against theft by identifying concealed items that people might try to remove from facilities, ranging from museums to nuclear plants,” added **Doug McMakin**, a PNNL engineer who was a principal developer of the technology.

Looking much like a conventional metal detector, the system projects ultrahigh frequency, low-powered radio waves onto the front and back of the person being screened. These waves—known as millimeter or centimeter waves because they have wavelengths of about one centimeter—penetrate clothing and bounce off the person and the items he or she may be carrying. A sensor array captures the reflected waves

and sends the information to a high-speed image-processing computer.

The computer analyzes the information and produces a high-resolution, three-dimensional image from the signals that allows an operator to screen for suspicious materials.

The security scanner has its roots in a three-dimensional holograph imagery technology program that was established at PNNL in the 1970s to develop nondestructive evaluation technologies for nuclear reactors. In the mid-1980s, the FAA became interested in the technology’s potential for scanning people passing through airports and began funding research in 1989.

Inquiries to SafeView, Inc. should be directed to Richard Rowe, CEO, at 650-289-5192, rick@safe-view.com.

Questions about other PNNL research and technologies should be directed to 1-888-375-PNNL (phone) or inquiry@pnl.gov (e-mail).

Lab in the Limelight from page 1

“The combination of IR spectroscopy and microscopy is an extremely powerful analytical technique,” said **Dale Perry**, a chemist with LBNL’s Earth Sciences Division and one of the team members conducting this research. Other members of the team are **Tom Wilkinson**, **Wayne McKinney**, and **Michael Martin**.

The team has been conducting its proof-of-principle studies on the IR spectromicroscope at ALS Beamline 1.4.3, which was designed under the leadership of McKinney and is now managed by Martin. Beamline 1.4.3 is one of three experimental end stations operating off a single ALS bend magnet that make use of IR photons.

IR forensics is derived from the fact that all molecules, because of the nonstop motion of their atoms, vibrate at a characteristic frequency that falls within the IR spectrum. When an individual molecule is struck by an IR photon that matches its vibrational frequency, it will resonate; this resonance, detected through a variety of spectroscopic techniques, can be used to precisely identify the molecule, much like a fingerprint can be used to identify an individual person.

The use of IR spectromicroscopy in forensics dates to 1949, but its applications were sharply limited because a large sample size was required for analysis. This changed with the commercialization of thermal IR sources such as Globars™ in the early 1990s. Globars™ are silicon-carbide filaments that radiate IR light when heated; using Globars™, forensics

researchers can work with samples as small as 75 microns (75-millionths of a meter). But even that can be excessive when dealing with criminal evidence or precious historical artifacts. In their most recent study, published in the June 2002 issue of the *Journal of Applied Spectroscopy*, Perry, Martin,



The infrared forensics team shown here at ALS Beamline 1.4.3 are (from left) Tom Wilkinson, Mike Martin, Wayne McKinney, and Dale Perry.

McKinney and Wilkinson worked with the U.S. Secret Service to demonstrate the effectiveness of synchrotron-based IR spectromicroscopy on inks.

“The Secret Service is interested because they can use IR data on ink to identify the possible origins of a document, verify that the document is as old as it is claimed to

be, and check if the same ink is used throughout a document,” said Perry. “IR data is also potentially effective for identifying chemical aspects in other ink-based items such as currency and stamps.” Synchrotron-based IR spectromicroscopy should also be applicable to the characterization of trace amounts of biological fluids on cloth or blood on glass; tracing explosive chemicals, poisons, or illicit drugs to their manufacturers and suppliers; and even identifying the geographic origins of dust particles.

Said Perry, “In light of what we’ve already demonstrated at the ALS, synchrotron-based IR spectromicroscopy as a forensics tool has a bright outlook.”

More info: Lynn Yarris, lcyarris@lbl.gov

Homeland and Recruits

from page 1

Technology charged with the “responsibility, authority, and accountability for managing R&D.” This position would oversee chemical, biological, radiological and nuclear countermeasures, cyber security, as well as the transfer of counterterrorism technologies from industry, academia, and federal laboratories.

The reports warns that “there may be no civilian commercial demand to motivate the private sector to pursue homeland security R&D.” To meet this challenge, PCAST proposes creating new standards such as awarding contracts, grants, liability

protections, and tax incentives to promote the development of new technologies within both the private sector and national laboratories.

Under the proposal, federally funded R&D centers (FFRDCs) and a DHS Laboratory would be the best means for the government to access advice and applications for securing the homeland.

A Homeland Security Advanced Research Agency would work to fund industry and academia in their pursuit of technologies and applications.

The plan will meet the needs of technology transfer by using Cooperative Research and Development Agreements (CRADAs) and

You Be the Judge

FLC Seeks Judges for National Meeting’s T² Excellence Awards

One of the most coveted awards in the field of technology transfer, the **FLC Award for Excellence in Technology Transfer**, recognizes laboratory employees who have accomplished outstanding work in the process of transferring federally developed technology to the marketplace. Judging the nominations each year is a panel of experts from industry, state and local government, academia, and the federal laboratory system. Having a diverse group of evaluators ensures that each nomination is judged objectively on its merits.



Vic Chavez
Awards Committee Chair

The FLC is currently seeking volunteers to evaluate the 2003 Excellence in Technology Transfer Awards. As an evaluator you will have the opportunity to review the best and most innovative technologies produced by FLC member laboratories and choose the “best of the best.” A sense of commitment and dedication is required, as evaluators review and score an average of 60-75 nominations each year. The position is a rewarding one as you play an active role in spotlighting exceptional technologies that continue to put the FLC on the map as a leader in technology transfer. In addition, you will have the opportunity to network and share ideas with fellow evaluators.

If you are interested in helping the FLC continue its successful mission of promoting the transfer of technology between the public and private sectors, as well as having a direct say in what technologies are worthy of the prestigious honor of an Excellence in Technology Transfer Award, contact Michele Chambers (mchambers@utrsmail.com) no later than Friday, September 27, 2002.

Thanks for your consideration, and we look forward to having you become a part of the FLC Awards Team.



**FLC National Meeting
May 5-9, 2003
Sheraton El Conquistador
Resort & Country Club
Tucson, Ariz.**

intellectual property licenses. PCAST’s proposal stresses the need for a streamlined technology transfer system to ensure access without delay. It is believed that such a system “encourages participation by innovative companies that otherwise avoid government contracts.”

In conclusion, PCAST notes that the nation’s science and technology leadership can and will preserve our nation’s advantage against terrorist enemies. PCAST hopes the suggested plan will work toward that end, but at the same time stresses the need for any plan to be flexible and able to adapt to the ongoing technological abilities of the nation’s adversaries.

FLC File

FLC E&T Expands Mission



From left: Kevin "Mike" Permentor, Joan Miller, Lynn Murray, Dr. Steve Boardman, Dr. Kelvin Willoughby

The Education and Training (E&T) Committee recently launched a significant new training initiative—the "FLC T2 Training Resources Project: What Do You Need, What Do You Have"—in conjunction with **Westminster College** in Salt Lake City, Utah, and the federally funded and **National Technology Transfer Center (NTTC)**-administered Entrepreneurial Technology Apprenticeship Program (ETAP).

The project team met at Westminster College on August 27-28, 2002, to define the project's parameters, desired outcomes, approach, methodology, deliverables, and schedule. Project team members include: **Lynn Murray**, Chair, E&T Committee (Director of Communications and Technology Outreach, Volpe Transportation Center/USDOT); **Joan Miller**, E&T committee member and ETAP Technical Consultant; **Kevin "Mike" Permentor**, ETAP apprentice and project intern (Florida A&M University, '01); **Dr. Kelvin Willoughby**, ETAP Apprenticeship Supervisor and Professor of Management and Entrepreneurship, Westminster College; and **Dr. Steven Boardman**, FLC Management Support Office Training Coordinator.

The T2 Training Resources Project will enhance the training support provided by the FLC to federal laboratories by determining the T2 training requirements of laboratory personnel and identifying the resources that are available to fulfill those requirements. The goal of the project is to create a database "tool" documenting the existing training resources available in the federal laboratory system, the FLC, and not-for-profit institutions such as the **Licensing Executives Society (LES)**, **Association of University Technology Managers (AUTM)**, and the **NTTC**.

Upcoming issues of *NewsLink* will highlight the work and progress of the project.

Inside the FLC

Regional Roundup

FLC Committees Offer Job & Personal Rewards

The best way to learn how an organization works, and to get the most out of it, is to offer your service, said **Ed Linsenmeyer**, Vice-Chair. A member and/or chair of FLC committees and activities over the years, he said, "I highly value the personal relationships I have made in my committee work, and my work with the Fire Fighting Task Force and the assistive technology projects."

Here is an opportunity to learn more about the FLC—join one of these committees below.

Program Committee

The Program Committee plans and promotes FLC conferences and seminars, primarily the annual national meeting. With the committee's assistance, **Norma Cammarata**, Program Chair for the last three years and 2003, selects the best venue and location for the national meeting. Together they develop a theme and an agenda that incorporates training, education, and other sessions, including an awards banquet. Norma works closely with the chairs of the Education & Training and Awards committees on training sessions and the awards ceremony/banquet, as well as the task leader from the Management Support Office (MSO), who assists with all phases of meeting planning.

Because the national meeting is a highly visible aspect of the FLC, the chair and the committee try to anticipate the needs and interest of the membership, while offering stimulating and useful sessions to attract outside interest in the organization.

More info: Norma Cammarata, 301-394-2952, normac@arl.mil

Awards Committee

"This is a great committee for anyone wishing to participate in helping recognize the great efforts of all our researchers from all agencies," said **Vic Chavez**, Chair. "It's very satisfying to be a part of the team that can help improve a great event and appropriately recognize those who make it possible for all of us to be successful."

The Awards Committee plans the annual awards ceremony and related events, including the poster sessions for the award winners. The committee works closely with the MSO to prepare the request for nominations and with the evaluators to select the award winners. The

chair is responsible for coordinating all activities related to the awards and the ceremony, including all logistics. Committee members play a key role by working with the evaluators to select the award winners, developing the ceremony agenda, assisting with logistics, and helping with lessons learned.

More info: Vic Chavez, 505-843-4190, vachave@sandia.gov

Legal Issues Committee (LIC)

The LIC provides a forum for feedback on legal issues that affect technology transfer laws and regulations and, therefore, daily jobs in the labs. The lack of guidelines and "case" precedent or Comptroller General opinions often leave T2 practitioners in a quandary with regard to advising scientists and lab management on the legality of procedures.

Chair **Robert Charles** sees the LIC as helping the Executive Board to understand its options and to carry out the organization's functions. For example, there may be a need to clarify the legality of private or public entity cosponsorship at the FLC national meeting or regional events involving educational functions or partnership building, or there may be need for legal maintenance of a strategic fund.

The LIC Chair encourages all—anyone curious about legal issues, with or without a law background—to sign up for the legal-mail roundtable.

More info: Robert Charles, 301-619-7663, robert.charles@det.amedd.army.mil

Policy and Planning Committee (PPC)

Always chaired by the Vice-Chair (per the FLC Bylaws), the PPC is responsible for recommendations to the Executive Board (EB) regarding plans, goals, policies and positions to support the Strategic Plan. Current PPC Chair **Ed Linsenmeyer** is in the process of revising the Operations Manual, with more accessible information that will help avoid dispute, assist with resolution, and be easily amended by the EB. Now in its second draft, the Operations Manual should be ready this fall. Be a part of the great advances the FLC is making.

More info: Ed Linsenmeyer, 850-234-4161, linsenmeyerec@ncsc.navy.mil

DC Dispatch from page 1

Of course, 9/11 and homeland security have changed the focus and priorities immeasurably. In that regard, the President's Science Advisor has developed a proposed research and development (R&D) strategy for homeland security.

There is a lot of discussion of an attempt to increase federal funding in physical sciences, mathematics, and engineering to achieve a better balance in relation to the significant increase in the biomedical sciences.

The result is the introduction of H.R. 4664, the Investing in America's Future Act, which would authorize doubling the National Science Fund budget over a number of years. The potential bill is receiving strong support from a wide array of organizations and members of Congress from both parties.

Special Interest Groups

In terms of outreach, I am contacting trade and professional organizations, particularly here in Washington, to make them aware of the FLC and the benefits of working with the federal labs. I think some of our best successes in

technology transfer have occurred when the FLC has worked with a specific interest group and we have been able to match their technical needs with laboratory capabilities. For example, this kind of partnership has worked well in our assistive technologies, firefighting technologies, and underground utility projects.

In the past we have talked with the **Civil Engineering Research Foundation (CERF)** and the **National Coalition for Advanced Manufacturing (NACFAM)**.

CERF has worked with the FLC on the Underground Utility Initiative. Its members, from both government and industry, are

currently focusing on building security and structural reinforcement integrity since 9/11.

Collaboration Potential

NACFAM has worked closely with the entire manufacturing community to identify technology needs or focus areas it believes are essential to sustaining productivity growth in the U.S. With the FLC, NACFAM has explored ways for the labs to collaborate with the manufacturing industry to meet these needs.

It is our intent that interactions such as these will lead to increased opportunities for federal lab collaborative efforts.

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Homeland defense issues could lead to more federal R&D funding for biomedicine, physical science, and engineering.

ETC...

AFRL-IF Offers U.S. Protection

Shortly after the September 11 terrorist attacks last year, the **Air Force Research Laboratory (AFRL)** developed a publicly accessed database of over 200 laboratory technologies, each defined by its various capabilities and times for delivery, from the present to 5 years. Of that number, approximately 50 are technologies available at AFRL's

Information Directorate (IF). AFRL headquarters is publicizing the database as a valuable tool for homeland defense. But the challenge is getting people to recognize and understand what the technology can do beyond the original intent or requirement.

"The technologies we create and have available touch many of the requirements for Homeland Defense & Security," said **Frank**

Hoke at the AFRL-IF in Rome, N.Y. "Can we solve the problems? Not by ourselves, but we have the capabilities to *help* resolve issues now, and therefore help enhance the security of this nation."

As one of AFRL's 10 Directorates across the U.S., the IF (Rome Labs) develops the supporting infrastructure for the Air Force to command and control its operational responsibilities in peace or war. "Tomorrow's environment" and the decision cycle for the Air Force are all influenced by technologies developed by Rome personnel. According to Hoke, "We strongly believe that information is the key to deterring adversaries—direct enemies on the battlefield or indirect, such as terrorists or cyberwarriors... Information technology for command and control knows no boundaries, so we cross all aspects of military action."

The IF receives business guidance from AFRL headquarters at **Wright-Patterson Air Force Base**, and about 80 IF professionals work out of the Dayton, Ohio main lab. There they specialize in platform connectivity through the information infrastructure and systems integration. With over 400 professionals and a \$600 million information technology R&D budget, the IF lab in Rome works collaboratively with industry and academia, in particular the partnerships in information science and technology through the Information Institute, an organization

with over 60 educational institutes nationwide. As a result, they benefit from the fresh ideas from academia to support Air Force R&D needs—and stay out front in their research efforts.

Although Hoke is the only full-time tech transfer representative at IF, he emphasized that the IF lab not only regards T2 as an essential part of every scientist and engineer's duty, but they are evaluated on their tech transfer efforts in annual performance reports. Highly supportive of tech transfer, **Ray Urtz**, IF Director, implemented a technology transfer award recognizing significant innovative technology developments during the year.

Hoke noted IF tech transfer successes, primarily the Cyberwolf Security Event Management tool. This product started as an AFRL-funded Phase I SBIR with **MountainWave Inc.** "We coached this small company along in the development of this product and assisted in refining concepts and architectures for fielding this product to the warfighter," Hoke said. An SBIR Phase II award "created a more robust product" that was subsequently evaluated by federal agencies and programs. **Symantec** will soon purchase MountainWave Inc. and further develop this security tool.

In 1996, the **Northeast Law Enforcement and Corrections Technology Center (NLECTC)** co-located

with IF to enable the transfer of law enforcement technologies. Through this organization, there is a Memo of Understanding with the New York State Electronic Crimes Task Force, and in 2000 the National Cyberscience Lab was created. Significant law enforcement capabilities are introduced through the NLECTC teaming. The IF also has a nonprofit organization, New York State Technology Enterprise Corporation, which serves as a conduit to New York State directly as a broker of information technology and its applications.

More info: Frank Hoke, 315-330-3470, Franklin.Hoke@rl.af.mil



Bill Wolf, Chief, Defensive Information Branch, Information Directorate, discusses the automatic detection of



Air Force engineers demonstrate the AFRL/IF Datawall, a self-contained and ultra high-resolution large screen display with multi-modal, wireless interaction that allows users to display and manipulate multiple applications through a collaborative environment.

www.federalmlabs.org

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