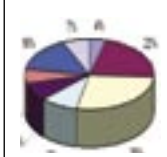


## T<sup>2</sup> INSIDE

 Space & Naval Sees Clearer, page 2

 ARS Leads Ethanol Production, page 3

 Resourceful FLC T<sup>2</sup> Training, page 5

## T<sup>2</sup> SURVEY

What's the biggest challenge in completing your T<sup>2</sup> job?

- Locating technologies
- Legislation issues
- Senior management support
- Sufficient time
- Other: \_\_\_\_\_

Respond to [tgrayson@utrs.com](mailto:tgrayson@utrs.com). Results to be posted in the next issue of FLC NewsLink and at [www.federallabs.org](http://www.federallabs.org).

## T<sup>2</sup> FACT

In an effort to solve a bet over whether all four of a horse's feet leave the ground at the same time when running, American photographer Edward Muybride set up 24 cameras with shutters hooked to trip-wires to freeze a galloping horse's motion in 1877. This effort is credited with being the start of high-speed photography and proved that a horse does have all four legs in the air for at least a moment when running.

## T<sup>2</sup> EVENTS

FLC Mid-Continent/Far West Regional Meeting  
South Padre Island, Texas  
Sept. 7-10, 2004

FLC Mid-Atlantic Regional Meeting  
Flintstone, Md.  
Sept. 14-16, 2004

Colorado Innovation Summit  
Denver, Colo.  
Sept. 23-24, 2004

FLC Southeast Regional Meeting  
Clearwater, Fla.  
Oct. 27-29, 2004

## OLETC Provides Tech Testing

by Kara L. Grey, OLETC

Picture this. Shots have been fired in a residential neighborhood near the center of town. A known felon is holding his estranged girlfriend and her children hostage. A SWAT team is called in and, when the suspect takes refuge in a dumpster, snipers take up positions in the surrounding buildings.

Having the tools to better manage such critical situations is a necessity for the law enforcement community. Remembering all the checklists can be a challenge in highly volatile situations. Enter Command Board™, a fold-up briefcase-like mobile command post that enables an officer to manage an incident seamlessly—from the hood of a patrol car. It includes all the information an officer on the scene would need to manage the situation.

This seemingly simple, yet critical, technology is just one of many that have been commercialized with the assistance of the Office of Law Enforcement Technology



Each spring OLETC stages a mock prison riot at the former West Virginia State Penitentiary to allow corrections officers the opportunity to test new technologies.

Commercialization (OLETC—pronounced O-let-SEE) for use in the law enforcement and corrections industries. A program of the Office of Science and Technology at the National Institute of Justice (NIJ), OLETC is a champion in the drive to put

See OLETC, page 4

## CCET's T<sup>2</sup> Training

From concept to marketplace, the Center of Commercialization and Entrepreneurial Training (CCET) offers a far-reaching technology training program for those involved in federal laboratory technology transfer.

A division of Technology Ventures Corporation, in partnership with the National Nuclear Security Administration, CCET's program objective is to develop and provide a nationally applied entrepreneurial training program designed to familiarize the emerging technology-based entrepreneur with the many components of forming, planning, financing, operating, and expanding a business entity in the commercial marketplace.

CCET, headquartered in Albuquerque, N.M., is specifically aimed at assisting federal laboratory technology transfer.

The program currently presented in New Mexico (**Sandia National Laboratories** and **Los Alamos National Laboratory**), Nevada (**Nevada Test Site**), and California (**Sandia National Laboratories** and **Lawrence Livermore National Laboratory**) offers individuals a comprehensive view of entrepreneurship and the complexities of going into business.

The program comprises two six-month series each year at each location.

See CCET T<sup>2</sup> Training, page 4

## MDA Offers T<sup>2</sup> Training for Industry and Govt.

by Duane Zieg and Leslie Aitcheson, National Technology Transfer Center

The Missile Defense Agency (MDA)—although not having any federal laboratories of its own—does have an active technology transfer training program for its researchers.

The focus is on training MDA-funded researchers to plan for, and implement, technology transfer strategies that will help them make a successful business of their technology.

Two primary training opportunities exist for MDA-funded researchers. The first, the

Business Focus Workshop (BFW), provides a unique opportunity for all MDA SBIR/STTR awardees to receive personalized business assistance. The BFW is a one-day program designed to help selected awardees and begin to address many of the aspects of their commercialization efforts.

The attendees, usually four per day, work with a business consultant who assists with developing a preliminary commercialization strategy.

After that, the attendees present their strategy to the other BFW consultants and participants. An open discussion of the

strategy follows each presentation. The exercise of developing the commercialization strategy provides a great learning experience. Also, the feedback received following the presentation gives each attendee valuable information and highlights other aspects to consider as they create a more formal commercialization strategy or business plan.

The second training opportunity is the Technology Applications (TA) Review. TA is designed for MDA-funded researchers at companies, research institutions, and fed-

See MDA T<sup>2</sup> Training, page 4

## DC on T<sup>2</sup>

### House GOP Leaders Make R&D Legislative Push

by Neil MacDonald  
Federal Technology Watch

Under a banner of "Spurring Innovation," the Republican leadership launched an intensive legislative effort in the House last week to pass several R&D and technology-related bills.

Seeming reenergized by their holiday recess and refocused by news of the teaming of Sens. John Kerry and John Edwards for the Democratic presidential ticket, several senior House Republican lawmakers took part in a press conference July 7 in the Capitol to explain the "importance of completing the competitiveness agenda."

"We're focused on creating jobs and making the American people more secure," said House Speaker Dennis Hastert (R-Ill). "We're especially focused on improving competi-

See DC on T<sup>2</sup>, page 5

## NASA to Xerox, Copy



NASA and Xerox personnel conduct a live demonstration of the NX system on June 3, 2004, at NASA Ames Mars Dome Center.

proven technology and expertise to advance agency missions.

The collaborative effort will benefit NASA scientists and affiliates and the commercial sector through innovations that provide software solutions to large-scale problems in information management. "This joint venture combines the best software technology from NASA and Xerox," said **G. Scott Hubbard**, director of NASA's **Ames Research**

See NASA, Xerox, page 4

by Betsy Robinson,  
NASA Ames Research Center

NASA and Xerox are forming a new technology partnership in which the Stamford, Conn., company will help NASA develop state-of-the-art collaboration and knowledge management systems, while providing new tools and applications to help NASA implement the Vision for Space Exploration.

By collaborating with public companies like Xerox, NASA will be able to save taxpayer dollars on research and development by using



# Fed Labs Flash

Technology Transfer Notes

## PNNL Rewarded for Innovation

**Novella Bridges, Darrell Fisher** and **Anna Gutowska**, research scientists at the Department of Energy's **Pacific Northwest National Laboratory**, recently received the American Chemical Society's (ACS) 2004 Regional Industrial Innovation Award. The award is given to individuals and teams whose creative innovations have contributed to the commercial success of their company and to the good of society.

The team is being honored for their collaborative work on the development of radiolabeled composites, known as RadioGel™, as therapeutic agents for the high dose treatment of solid cancers that cannot be removed surgically.

RadioGel™ is an injectable solution that holds the therapeutic radioisotope in place at the target site for highly localized radiation therapy of cancerous tissue with minimal effects on adjacent healthy tissues and normal organs. It has applications for treating cancers of the liver, pancreas, brain, neck and kidneys.

Bridges, Fisher and Gutowska were presented with the award in June at the ACS 59th Northwest/18th Rocky Mountain Regional Industrial Innovation Award Program in Logan, Utah.

Bridges specializes in inorganic chemistry. She earned a bachelor's degree in chemistry from Jackson State University in 1994 and a doctorate in inorganic chemistry and organometallics from Louisiana State University in 2000.

Fisher has more than 30 years of experience in radioisotope science, and more than 90 publications and four patents. He earned a bachelor's degree in biology from the University of Utah in 1975, and master's and doctorate degrees in nuclear engineering sciences from the University of Florida.

Gutowska has served as a leader in the field of polymer development. Her extensive research experience is focused on stimuli-sensitive polymer research, with a major focus on medical applications. She holds four patents, and has written more than 24 publications. Gutowska earned a master's degree in chemistry from the University of Warsaw, Poland in 1978; and a doctorate in pharmaceuticals and pharmaceutical chemistry at the University of Utah in 1994.

## R&D Honors LANL



LANL Director  
Pete Nanos

Scientists at the University of California's **Los Alamos National Laboratory** (LANL) have captured five of *R&D Magazine's* 2004 R&D 100 Awards. The latest winners bring LANL's total to 83 awards over the past 17 years.

The projects recognized this year span a diverse range of scientific and technical areas—from innovative imaging techniques and advances in computing to revolutionary new materials. This year, LANL was tied with its sister laboratory, **Lawrence Livermore National Laboratory**, for the largest number of awards received by a Department of Energy laboratory.

In recognizing the achievement, Laboratory Director G. Peter Nanos noted, "These awards demonstrate once again that Los Alamos is home to innovation and great science. I am extremely proud of each of our award recipients."

## Easing Tech Jobs

The challenge of determining whether thin films—some no thicker than a single molecule—are strong enough for a growing number of important technology jobs just got easier and quicker thanks to an inexpensive testing method reported in the upcoming issue of *Nature Materials* by a team led by researchers at the **National Institute of Standards and Technology** (NIST).

Useful for evaluating all types and combinations of materials, the new method measures and analyzes the strength and stiffness of a

thin-film sample in about 2 seconds, as compared with several minutes for indentation and other conventional approaches.

In addition, the NIST-developed technique accommodates high-throughput testing, so that hundreds or even a few thousand systematically varying samples can be tested in rapid succession.

Called SIEBIMM (for strain-induced elastic buckling instability for mechanical measurements), the new method builds on the science of buckling, which for most of its 400 years has been concerned with crumbling buildings or crumbling of the Earth's crust.



*The NIST technology could spur progress in a large variety of existing and emerging technology areas that rely on thin-film advances for improved performance or enhanced protection—such as solar cells, fuel cells, magnetic storage devices and nanotechnology devices.*

## DOE Labs Active in T<sup>2</sup>

by Neil MacDonald, Federal Technology Watch

Technology transfer and licensing conducted by the Department of Energy's national laboratories in FY03 was described as "robust and expanding" by Assistant Secretary Vicky Bailey.

A record 11,633 technology transfer transactions were negotiated and executed during the year by DOE, its national labs and facilities, she noted.

These included 5,333 user facility agreements, 1,952 work-for-others projects with non-federal partners, and 661 new or active cooperative R&D agreements (CRADAs).

In addition, there were 3,687 intellectual property licenses.

## Lab Work

### For Space and Naval Tech, Seeing is Believing

One area of substantial interest and significance to **Space and Naval Warfare Systems Center San Diego** (SSC San Diego), as the Navy's lead command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) center, is integrated circuit design and fabrication technology.

Integrated circuits are the hearts and brains of computer hardware systems that provide the nation's warfighters with C4ISR capabilities.

One such capability provided by SSC San Diego is micro-displays. The technology is based on a number of patents by SSC San Diego inventors Dr. **Randy Shimabukuro**, Dr. **Stephen Russell** and **Bruce Offord**.

An extremely bright, high-resolution display eliminates requirements for millions of interconnections between the display and its control circuitry, reducing the required number to only three (power, signal and ground).

The technology offers improved imaging and video in virtual presence applications for the warfighter. It also demonstrates dual-use applications for emergency

service personnel such as law officers, firefighters and paramedics, who can utilize imaging systems in the field to provide situation assessment updates as they work to contain emergencies.

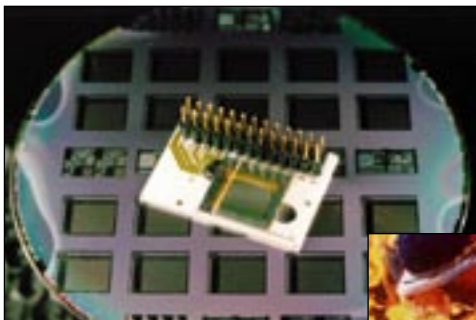
In February 1999, Optron Systems, Inc., licensed the technology. Under a Cooperative Research and Development Agreement (CRADA), SSC San Diego and Optron Systems collaborated on the fabrication of a first-generation, monochrome microdisplay.

In March 1999, Radiant Images, Inc., a spinoff from Optron Systems, was formed to commercialize the invention.

The company has obtained investment capital and produced a second-generation, full-color microdisplay for initial sales to original equipment manufacturers.

When fully implemented, this technology can provide warfighters and emergency response personnel with such capabilities as head-mounted displays that convey information required in the completion of their duties, leaving their hands free to perform operations like firing weapons or tending to injured.

When fully implemented, this technology can provide warfighters and emergency response personnel with such capabilities as head-mounted displays that convey information required in the completion of their duties, leaving their hands free to perform operations like firing weapons or tending to injured.



SSC San Diego's first-generation monochrome prototype on a silicon-on-sapphire wafer with microcircuits and the second generation full-color display.



## FLC NEWSLINK

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*Opinions or views expressed in FLC NewsLink are those of the contributors and do not necessarily reflect those of the FLC, its officers, or its representatives.*

FLC Management Support Office  
950 North Kings Highway, Suite 208  
Cherry Hill, NJ 08034  
856-667-7727  
856-667-8009 fax  
[www.federallabs.org](http://www.federallabs.org)



# Tech Watch: Laboratory Techs Ready for Transfer

## FAA, TSL's Explosive Technology

A method of preparing samples for testing explosive and drug detectors of the type that search for particles in air has been developed at the Federal Aviation Administration's **William J. Hughes Technical Center**, servicing the Transportation Security Laboratory.

A liquid containing the substance of interest is placed on a flexible Teflon™ surface and allowed to dry, then the Teflon™ surface is rubbed onto an item to be tested for the presence of the substance of interest.

The particles of the substance of interest are transferred to the item but are readily picked up by an airstream or other sampling device and carried into the detector.

One of the fastest methods of screening a large number of people or items for the presence of explosives or drugs is to draw a sample of air across each person or item and then see if the air contains explosive particles or drug residue.

This is a quick, nonintrusive, and effective method of determining if the person or item has been in contact with explosives or drugs.

A problem arises, however, in testing and calibrating the device used to measure the presence of the substance of interest.

The problem is in duplicating the way that the substances get placed on and released from the surfaces of items touched by terrorists, such as luggage handles, packages, and their clothing.

In addition, the amount of explosive or drug on a person or item differs if the person or item has had substantial contact (i.e., the person has manufactured an explosive device or been directly involved in a drug transaction) or only casual contact (i.e., money in a bank drawer that came in contact with other money used in a drug transaction or handled by someone who had been working with explosives) with the substance.

This latter requires the development of test samples with different (known) levels of explosives or other substances.

The present invention comprises the steps of preparing a liquid containing the explosive or other substance of interest, placing some of the liquid on a Teflon™ coated surface, allowing the liquid to dry, and then rubbing the coated Teflon™ on an item, thereby transferring the explosive or other substance of interest to the surface of the item.

More info: *Deborah Germak, (609) 485-9862, Deborah.germak@faa.gov (Patent No. 6,470,730)*

## Sandia's Arm-Saving Armor

Researchers at **Sandia National Laboratories** (SNL) have created gauntlets that will aid in saving the arms of military personnel riding atop Humvees and other military vehicles during combat.

The shoulder-length Sandia gauntlets are made of layers of heavy Kevlar—reinforced material used in bulletproof vests and tires—



**ARMS PROTECTION**—Airman Garrett Martin demonstrates the SNL gauntlet atop a Humvee at Albuquerque's Kirtland Air Force Base. The gauntlet can help save the arms and lives of military personnel riding atop military vehicles during combat operations.

with carbon-composite forearm and upper arm protective inserts.

The heat protection characteristics of the Kevlar layers mitigate the thermal effects of warhead blasts on tissue, while the combination of carbon-composite and Kevlar diminishes both blunt trauma effects and the penetration or shredding effects of warhead shrapnel on both tissue and bone, said Jack Jones, project lead and SNL physical security specialist.

"If the Sandia Gauntlets can protect just one soldier, sailor, airman, or marine from losing an arm, then the effort will be well worth it," said Jones. "This project is very important to

our service members and allies who are in harm's way in Iraq and Afghanistan."

Jones and Jim Purvis, with the assistance of Larry Whinery and Richard Brazfield from SNL's parachute lab, designed and fabricated the gauntlets.

Purvis conceived the idea during an overseas trip in mid-October 2003, after

reading about a soldier who lost his arms during the Iraq war.

In December, several SNL gauntlet sets were given to the 1-82 FA, 1st Cavalry Division out of Ft. Hood, Texas; 515th Corps Support Battalion, 720th Transportation Company; and the U.S. Air Force 355th Logistics Readiness Squadron/CCDE.

The gauntlets were then shipped to forces in Iraq for recommendations. The gauntlets were well received there, said Jones.

SNL criteria were for a one-size-fits-all design with blunt trauma protection for the hand, wrist and elbow, as well as heat and blast protection. "Army doctors report a large increase in personnel losing their arms above the elbow," said Jones. "Prior to the use of Kevlar armored vests, many died. Now they are surviving, but their arms are too mangled to repair due to burns and shrapnel penetration damage. The Sandia Gauntlet is a solution to the problem."

The next step, Jones said, is to identify a company to produce the gauntlets.

More info: *Jack Jones, jacjone@sandia.gov, 505-845-9867*

## Proven to Work

# ARS Computer Models Guide Ethanol Production Research

By *Jim Core, Agricultural Research Service*

**Agricultural Research Service** (ARS) scientists are demonstrating that they can reduce ethanol fuel production costs by developing less expensive techniques for milling the corn used to make the fuel.

Computers are playing a key role in this research at the **ARS Eastern Regional Research Center** (ERRC) in Wyndmoor, Pa., where scientists have completed several computer research models for performing cost analyses for ethanol production.

One model can estimate the cost per gallon to produce ethanol with various processes, according to **Andy McAloon**, head cost engineer with ERRC's Crop Conversion Science and Engineering Unit.

He and chemical engineer **Winnie Yee** help researchers at ERRC create computer models that predict the costs of possible alternatives to standard industry practices.

One model helps estimate costs for making ethanol by dry-grind processes, in which corn kernels are converted into ethanol without salvaging fiber, germ (oil) and protein.

ERRC chemical engineer **Frank Taylor** worked with McAloon and Yee to update a 25-million-gallon-a-year model for dry-grind ethanol production



Food technologist David Johnston (left) and research leader Kevin Hicks check the fermentability of enzymatically milled corn.

tion with the Corn Refiners Association and the University of Illinois, the model will be used to improve an ERRC wet milling process using unique enzymes.

This process requires much less sulfur dioxide during the steeping stage of wet milling than traditional wet milling.

More info: *www.ars.gov*

to a 40-million-gallon version, the size of most new plants.

The model can examine a number of possibilities, such as developing new processes to reclaim waste heat or converting some of the fiber to ethanol.

The model also will predict how these steps would affect the cost of making a gallon of ethanol.

In addition to dry-grind models, ERRC food technologist David Johnston worked with the other ARS scientists to create what they believe will be the first publicly available corn wet milling process and cost model.

Wet milling involves separating components from starch before using it for ethanol production.

Developed in cooperation with the Corn Refiners Association and the University of Illinois, the model will be used to improve an ERRC wet milling process using unique enzymes.

**Federal  
Technology  
Transfer 2004**

*From exotic medical equipment  
to items filling supermarket  
shelves, Federal T<sup>2</sup> 2004 tells the  
concept to completion stories  
of federal technology now in  
the marketplace.*

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CCET T<sup>2</sup> Training, from page 1


Seminar topics range from entering the entrepreneurial world, market research, financial planning, developing and presenting the business plan, organizational structure/format to securities laws and regulations, and intellectual property issues and forms. Participants are encouraged to take the full six-month series.

Participants get to hear from subject matter experts from the local community specifically recruited for their expertise and presentation skills.

Participants receive not only the information furnished by the presenter, but the relevant chapter of the Entrepreneurs Training Manual that covers the subject matter of the session.

The free program has received outstanding evaluations from participants and local area subject matter experts, both of whom have stated that there is nothing else available to the aspiring technology-based entrepreneur.

More info: Lee Trussell, 505-843-4256, [grayson.l.trussell@lmco.com](mailto:grayson.l.trussell@lmco.com) or Valerie McKinney, 505-843-4231, [Valerie.m.mckinney@lmco.com](mailto:Valerie.m.mckinney@lmco.com)



**The FLC Green Book**

*Federal Technology Transfer Legislation and Policy* provides the principal statutory and presidential executive order policies that constitute the framework of federal T<sup>2</sup>.

Order Your Copy, 856-667-6770

## OLETC, from page 1

technology to use for public safety. Located in Wheeling, W. Va., OLETC is a clearinghouse for new inventions, innovations and technologies specific to the public safety industry.

As the premiere commercialization program in the nation for law enforcement and corrections technologies, OLETC has developed a national reputation for providing invaluable commercialization assistance, as well as resources for finding appropriate technologies. In the "push-pull" spectrum of technology development, OLETC is burning the candle at both ends. Entrepreneurs can bring their innovation to OLETC for commercialization assistance, while at the same time, law enforcement and corrections agencies can come to OLETC for information about technologies that may be available to solve their needs.

President and CEO Larry Kosiba describes OLETC's function as being that of a marriage broker.

"Our mission is to find new and emerging technologies that will satisfy the operational needs that exist in public safety—a way to take the R&D that is developed and find real-world applications." - Larry Kosiba, OLETC President and CEO

"Our customers are the law enforcement and corrections officers," Kosiba said. "We know the state of the art in the industry today, and we can help entrepreneurs better understand the industry to meet the needs that exist."

Randy Stewart, Ph.D., CEO of the Colonie Group, developed a fiber optic perimeter sensing technology that is designed to detect and distin-

## NASA, Xerox, from page 1

Center, Moffett Field, Calif. "Since both partners bring new technology to the project, we will get new tools tailored specifically for NASA needs in a very cost-effective way," Hubbard said.

"Working with high-tech companies allows NASA to pursue its mission of space discovery in a more collaborative spirit, while taking advantage of the best technology the commercial sector has to offer," said Craig Steidle, NASA's associate administrator for exploration systems.

The first result of the partnership is a new system called the NX Knowledge Network. NX incorporates NASA Ames' Netmark search and re-composition software and content management with collaboration software from Xerox's global research centers.

One pilot application will help researchers at the NASA Astrobiology Institute (NAI) sort and quickly analyze data, collaborate, and answer questions, such as whether organic life exists on Mars.

NAI researchers use NX on a distributed basis across a dozen universities in addition to NASA Ames.

NX also will enable applications to help manage project risk, investigate mishaps and analyze anomalies.

"Many of the challenges at NASA mirror those of the global commercial enterprise," said Xerox chief technology officer Herve Gallaire.

"We see this as an excellent opportunity to partner two highly sophisticated technical teams to address complex, yet real-world information management problems."

guish various hits on the system. For the corrections industry, this could mean distinguishing between a rabbit bumping the perimeter fence or an inmate trying to climb it. The technology was originally developed for defense applications, but OLETC quickly saw the potential in corrections.

"They are frankly more aggressive than your own sales people," Stewart said of the OLETC staff.



"Our mission is to find new and emerging technologies that will satisfy the operational needs that exist in public safety – a way to take the R&D that is developed and find real-world applications." - Larry Kosiba, OLETC President and CEO

law enforcement and corrections industries, and this adds value for the client.

Another significant value to OLETC's services is the objectivity that comes from being an independent organization. OLETC is a nonprofit program funded through a cooperative agreement with NIJ.

Services are provided free of charge, which means honesty and objectivity are an integral part of the OLETC mission. Entrepreneurs know that they can get objective and honest feedback about their technologies. At the same time, law enforcement and corrections personnel know they can obtain objective suggestions and referrals from

MDA T<sup>2</sup> Training, from page 1

eral laboratories who are pursuing a commercialization strategy and have developed a marketable product or are capable of providing a marketable service. In many cases, researchers at these organizations have previously attended BFWs.

Each participant attending the TA Review gives a series of presentations to a panel of MDA-provided reviewers, from both the commercial world and government, who have extensive experience in areas such as technology commercialization, business development, intellectual property, product development, and financing. The review panel is drawn from a large pool of senior executives and highly experienced technologists who volunteer their time for MDA technology transfer training; many have been with the program since the late 1980s at the beginning of the "Star Wars" program.

The review panel has been termed a "Board of Advisors for a day," and represents technological and strategic intellects few companies or government offices could assemble on their own.

The presentations to the group of 15 to 20 advisors include a description of the technology and its compelling advantages, as well as information about the presenting organization and its business plan.

The panel then provides analysis and recommendations based on the information presented.

Often, members of the review panel are able to provide specific additional recommendations and offers of assistance even after the TA Review.

OLETC staff because they are not financially obligated to any one technology.

In order to be considered for OLETC assistance, the technology/entrepreneur must meet the priorities set by the Law Enforcement and Corrections Technology Advisory Council (LECTAC). LECTAC is made up of more than 100 senior law enforcement and corrections officers, public safety managers and representatives from NIJ. The current LECTAC priorities, adopted in September 2003, are:

- Counterterrorism
- Crime mapping
- DNA testing
- Information management
- Less-than-lethal devices
- Location and tracking
- Nonintrusive contraband detection
- Noninvasive drug detection
- Officer protection
- Secure communications
- Vehicle stopping.

If a technology meets these priorities, it must then satisfy OLETC's own criteria.

The technology must be one that is not currently available, is an improvement on an existing technology, presents a cost advantage, or is a next-generation innovation.

Once a technology is accepted for assistance, OLETC provides three major avenues of service to the entrepreneur.

The Commercialization Planning Workshop® (CPW®), held three times a year, brings 12 technologists together with experts in the field of commercialization. The CPW® creates a "total immersion" experience for the technologists, which results in the drafting and presentation of a one-year commercialization plan.

At the semiannual OLETC Advisory Council meeting, as many as eight entrepreneurs have the opportunity to present and demonstrate their technologies to this elite group of 24 members.

The third weapon in the OLETC arsenal is the annual Mock Prison Riot™ held each spring at the former West Virginia State Penitentiary in Moundsville, W. Va. Here, selected technologies can be field-tested by pros in realistic scenarios.

In the post-September 11 climate, Kosiba said OLETC will play a larger role in homeland security, citing that the operational needs of the law enforcement industry have changed. Before that day, the hot topics in the industry were building better bullet-resistant vests and preventing dangerous high-speed chases.

Now, local agencies have to deal with previously unthought-of issues.

More info: [www.oletc.org](http://www.oletc.org) or call 1-888-306-5382



## Inside the FLC

FLC Mid-Continent,  
Far West Meeting

A joint regional meeting of the FLC Mid-Continent and Far West regions will take place in South Padre Island, Texas, September 7-10, 2004.

The meeting focuses on the Clean Cities Initiative, NASA opportunities, forest fire technologies, emergency management needs, regional awards, and general T<sup>2</sup> issues.

Training sessions cover royalties, licensing, marketing, and intellectual property.

A welcome reception will take place on September 7, a business meeting will be held on the morning of the 10th, and an awards ceremony will highlight the evening of the 10th.

More info: Contact Ann Kerksieck, 870-241-3382, or [alkerksieck@futura.net](mailto:alkerksieck@futura.net); or visit [www.zyn.com/flc/meeting](http://www.zyn.com/flc/meeting)

## FLC S&amp;LG Wants You!

The FLC's State & Local Government Committee, lead by **jennelle Derrickson** of the FAA's William J. Hughes Technical Center, is developing a presentation to showcase federal laboratory work.

The committee requests that all federal laboratories submit information concerning their successful partnerships with state and local government entities, including nonprofits and universities.

Partnership areas may include, but are not limited to technical support, cooperative R&D, facility usage, mentoring programs, educational outreach, workshops, symposia, and seminars.

To learn more about the project or to submit information, contact jennelle at 609-485-5096 or at [jennelle.derrickson@faa.dot.gov](mailto:jennelle.derrickson@faa.dot.gov). You can also fax information to jennelle at 609-485-4005.

FLC T<sup>2</sup> Desk Reference

The Desktop Essential for Laboratory Representatives, Office of Research & Technology Personnel, Business Development Managers  
Any and all T<sup>2</sup> Pros!  
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FLC Reports on Available T<sup>2</sup> Resources

As part of its continuing effort to serve the needs of FLC members, the FLC Education and Training (E&T) Committee recently completed the Technology Transfer (T<sup>2</sup>) Training Resources Database (TRDB) project.

This searchable database, which resides on the FLC web site and was developed by the E&T Committee in conjunction with Westminster College in Salt Lake City, Utah, comprises T<sup>2</sup> education and training resources that are available to federal laboratory personnel and other T<sup>2</sup> professionals. (Note: Throughout this article, the term "resources" includes lectures, seminars, courses, workshops, online classes, mentoring programs, and other types of training.)

A thorough analysis of the data in the TRDB was performed, utilizing both simple descriptive ratios and more complex cross tabulations of the data. The goal was to identify available T<sup>2</sup> training resources as well as identify overarching trends in the field of technology transfer and provide timely and useful information to the technology transfer community.

The article presents the results of that analysis and addresses the subject areas addressed by the T<sup>2</sup> resources identified, the availability of academic credit, T<sup>2</sup> resource providers, where to find training, the levels of training available, methods of instruction, and training costs.

T<sup>2</sup> Training Resources Subject Areas

As indicated by the TRDB data, the subject areas addressed by T<sup>2</sup> training resources cover a wide variety of topics

(see Figure 1), with "Best Practices" (which comprise 26% of all T<sup>2</sup> training resources) emerging as the most popular topic.

"Best Practices" is a general term used by the TRDB to denote the more abstract aspects of technology transfer. For example, learning how to foster an innovative atmosphere within a laboratory

would typically be included in a "Best Practices" course.

"Licensing," which accounts for 22% of all training resources, is a close second.

It should be noted that "Technology Transfer Mechanisms" and "Legislation" account for only 11% of all training resources identified through the research.

These data may represent T<sup>2</sup> professional's underlying perception of the relative importance of these areas of technology transfer.

T<sup>2</sup> Resources for Academic Credit

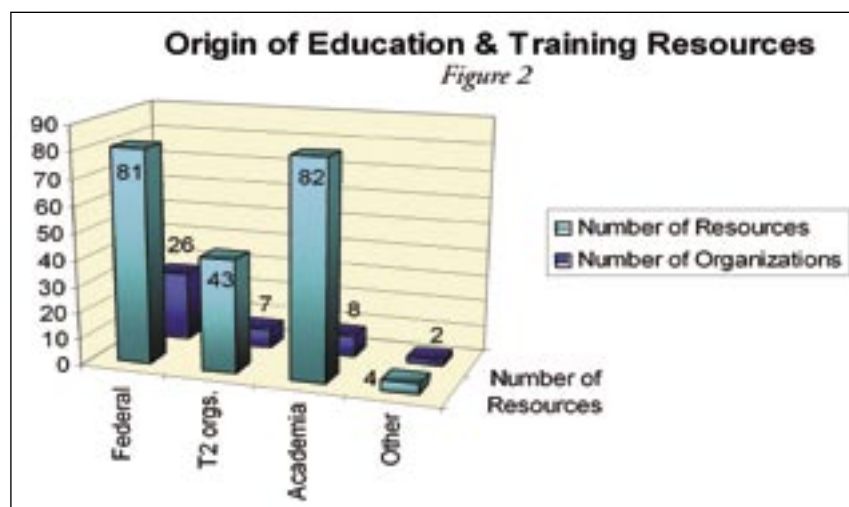
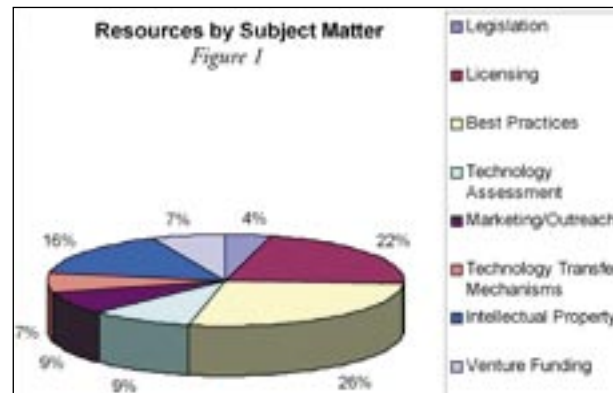
Our research reveals that most T<sup>2</sup> training resources award some type of academic credit. The credit may be in the form of a continuing education unit (CEU) or higher education credit that may be applied toward an advanced degree.

However, most of the training resources identified were awarded by academic institutions and were applicable to a degree or certification. It should be noted that although the CEU is a valuable component to training and, in fact, some agencies require employees to obtain a certain number of CEUs per year, CEUs nevertheless comprise only

8% of the identified resources. This might suggest less focus on specific agency training needs or the additional expense of the CEU, which is not applicable to academic degree programs. (Additional analysis is needed concerning CEUs.)

Among the providers of T<sup>2</sup> training, academic institutions are the most productive, providing over ten T<sup>2</sup> training resources per institution (see Figure 2).

The specialized technology transfer organizations (e.g., the FLC, Licensing Executives Society, See FLC Report on T<sup>2</sup> Resources, page 6

DC on T<sup>2</sup>, from page 1

tiveness in this country ... that's why we're so concerned about Senator Kerry's selection of Senator John Edwards."

He claimed Sen. Edwards, a former trial lawyer, had an agenda that "will kill [US] jobs." Remarks in a similar vein were made by GOP Majority Leader Rep. Tom DeLay of Texas, House GOP Conference Chairman Rep. Deborah Pryce of Ohio, Chief Deputy Whip Rep. Eric Cantor of Virginia, Rep. Todd Tiahrt of Kansas, and Rep. Pete Sessions of Texas.

"Bills the Science Committee is bringing to the floor will create and maintain jobs—not only today but for years to come—because they will strengthen the overall research base of the United States," said House Science Committee Chair Sherwood Boehlert, (R-N.Y.). "We're not just throwing money at problems. We're coming up with focused, long-term solutions to specific areas of weakness," he said.

H.R. 3598, which reauthorizes internal programs of the National Institute of Standards & Technology and the Manufacturing Extension Partnership

(MEP) program, was given special mention by Boehlert. "[It] will create some new programs to increase research and education in the manufacturing sciences," he said.

Recently passed bills in the House include:

- H.R. 4218, High Performance Computing Revitalization Act of 2004
- H.R. 4516, Department of Energy High-End Computing Revitalization Act of 2004
- H.R. 3890, reauthorizing the Steel and Aluminum Energy Conservation and Technology Competitiveness Act of 1998
- H.R. 1856, Harmful Algal Bloom and Hypoxia Research Amendments Act of 2003
- H.R. 3598, Manufacturing Technology Competitiveness Act of 2004
- H.R. 3980, Windstorm Impact Reduction Act of 2004

• H.R. 4754, FY05 Commerce, Justice, State Appropriations Act.

"There's going to be a lot of rhetoric this campaign season about jobs and about R&D," Chairman Boehlert said. "I urge all of you to look at the facts."



[www.federal labs.org](http://www.federal labs.org)



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# Air Force T<sup>2</sup> Training

Guarding hard-won business knowledge has always been the secret to success in the business world.

But at Eglin Air Force Base, military and civilian leaders established the Air Armament Academy (A3) not to guard business knowledge, but to share these collective assets—both the “know-how” and “know-why,” of providing armament to the Air Force.

“The dynamic business environment of the 21st century demands the employment of innovative training methods to enhance our ability to make smart business decisions, and to deliver superior support to the warfighter,” explained Maj. Gen. Robert Chedister, commander of the Air Armament Center and president of the A3.

As a major associate unit at Eglin, the **Air Force Research Laboratory Munitions Directorate** (AFRL/MN) participates heavily in the curriculum of the A3 by providing training in science and technology areas such as managing innovation, technology transfer, and technology transition.

**Steve Korn**, MN’s Associate Director of Weapons and dean of the A3 Science and Technology College, says, “Having Eglin leaders share their years of experience and knowledge is the cornerstone of A3.”

Mr. Korn leads quarterly Technology Transfer, Technology Transition, and Managing Innovation in the 21st Century, and Small Business Innovation Research (SBIR) courses, which include key insights based on his 35 years of experience in the field of munitions technology development.

People interested in more information about the Air Armament Academy can contact the A3 Project Office at DSN 872-1365, or via the Internet at <<https://afkm.wpafb.af.mil>>, select “Education,” then “Air Armament Academy.”

FLC Report on T<sup>2</sup> Resources, from page 5

etc.) follow closely behind, with approximately six training resources per organization, while the federal sector provides three training resources per organization.

While these data are tempered by a number of factors, they hint at overall T<sup>2</sup> commitment and focus.

The data suggest a number of possible explanations, including the possibility that academic institutions put more emphasis on technology commercialization activities, an organizational commitment toward technology commercialization activities within the federal sector, or perhaps academia, as a whole, is on the leading edge of a growing trend within the commercialization community.

### T<sup>2</sup> Resource User Participation

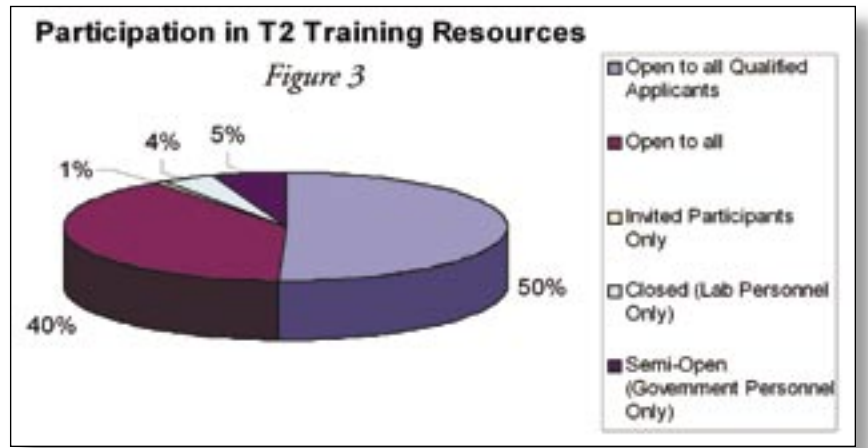
There are few if any barriers to the typical T<sup>2</sup> professional participating in T<sup>2</sup> training (see Figure 3).

Most resources, regardless of the provider, are open to all or to all qualified participants; indeed, almost 90% have either few or no barriers to participation.

This encourages participation in training resources and leads to greater productivity among T<sup>2</sup> professionals.

However, the lack of prerequisites or other eligibility requirements for participation in training resources could be an indicator of a lack of organization-specific training, which is important in creating proficiency for the organization and is a trend that would be worth tracking in subsequent

years. An interesting trend that emerged while analyzing the schedule of available technology transfer training resources indicates that, surprisingly, most of the T<sup>2</sup> training resources



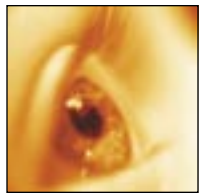
identified (52%) have no predictable beginning or end, falling into the categories of ongoing, anytime or occasional.

This might suggest some degree of instability in the technology transfer field stemming from a variety of factors, including the relative newness of the field, budgetary constraints, or the perceived importance of technology transfer to the overall laboratory mission. These data may indicate a need for organizations to address increasing the regularity of scheduling when planning T<sup>2</sup> training resources.

*This article will be continued in the September issue of FLC NewsLink. Topics covered will include where to find training, training levels, training delivery methods, and training costs.*

*The FLC E&T Committee is chaired by Lynn Murray of the Volpe National Transportation Systems Center. Lynn can be contacted at [murrayl@volpe.dot.gov](mailto:murrayl@volpe.dot.gov).*

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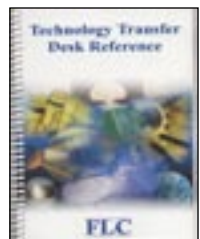
### Locate Technology

Locate federal laboratories ready to transfer their technologies to the marketplace and find laboratories ready for collaborative R&D.



### Find a Laboratory

Use the FLC web site to find a federal laboratory in your region.



### Enhance Your T<sup>2</sup> Knowledge

Visit the T<sup>2</sup> Education and Training page to learn about the tools and services available to help government, industry, and academia sharpen their techniques.



### Mark Your Calendar

See the Upcoming Events page to learn where and when T<sup>2</sup> events are taking place.

