



# FLC NEWS LINK

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

## T<sup>2</sup> Events

Patuxent Partnership Business Dev. Symposium  
Solomons Island, Md.  
April 3, 2003

T<sup>2</sup> Society's T<sup>2</sup> Forum IV  
Vienna, Austria  
April 23-25, 2003

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

Offshore Technology Conference  
Houston, Tex.  
May 5-8, 2003

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

Technologies for Public Safety & Critical Incident Response Expo  
St. Louis, Mo.  
Sept. 23-25, 2003

Go to:  
<[www.federallabs.org](http://www.federallabs.org)>  
for a complete calendar of events

## T<sup>2</sup> Fact

In the summer of 1826 Joseph Nicéphore Niepce framed a pear tree, the sky, and several buildings opened the lens of his camera for eight hours and exposed a thinly varnished pewter plate to produce what is considered the world's first photograph.

-Associated Press

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Check out FLC NewsLink online

[www.federallabs.org](http://www.federallabs.org)

## Research Centers Engineer Assistance

**Rehabilitation Engineering Research Centers (RERCs)** plan and conduct research leading to new scientific knowledge and new or improved methods, procedures and devices that benefit people with



disabilities. They are engaged in developing and disseminating innovative methods of applying advanced technology, scientific achievement, and psychological and social knowledge, with the goal of solving rehabilitation

problems and removing environmental barriers.

The authority for RERCs is contained in Section 204(b)(3) of the Rehabilitation Act of 1973, as amended (29 U.S.C. 762(b)(3)).

RERCs work at the individual level, focusing on technology to lessen such things as sensory loss, mobility impairment, chronic pain, and communications difficulties. RERCs also work at the systems level, eliminating barriers to fully accessible communications and



RERC developments include the RERC on Aging's Wrist Assist. The multi-positioning, fully adjustable temporary handle is designed for persons with arthritic and physical limitations.

housing. Each center is affiliated with a rehabilitation setting, thereby providing the environment for cooperative research and the transfer of rehabilitation technologies into rehabilitation practice.

Partnering with industry, product developers, private-sector entrepreneurs, and even hobbyists, RERCs embody the

potential to make sweeping changes that affect public policy and the

See RERC Explanation, page 4

## FLC Leads Assistive Technology Resources

by Joseph P. Lane

The FLC identified "assistive technology" as a strategic technology focus area in the mid-1990s. At the time, few people knew that the term represented devices and services that



Joseph Lane  
T<sup>2</sup>RERC  
Project Director

maintain or restore functional capabilities for people with disabilities.

The FLC's management foresaw the growing importance of this field to our workforce, our

citizens, and our nation. Now that Baby Boomers are nearly a decade older, this most experienced segment of the workforce is aging—with sensory, physical and cognitive

impairments. People with disabilities are living longer than ever before and fighting to maintain their independence by living in the least restrictive environment possible.

Families are striving to simultaneously maximize the quality of life for their children and their parents, despite the presence of congenital or acquired functional impairments. Now, as then, assistive technology matters to the FLC. While the Americans with Disabilities Act is nearly 15 years old, it still is not fully implemented for government employees.

Section 508 of the Rehabilitation Act is relatively new, but dramatically restricts government procurement to



Assistive technology resources include Rehabilitation Engineering Research Centers, the Assistive Technology Industry Association, and the Rehabilitation Engineering and Assistive Technology Society of North America.

those devices and services that are fully accessible to people with disabilities. The concept of "dual use" technologies—which has lain dormant for the past decade—is being revived through the New Freedom Initiative.

Fortune 500 companies are turning their attention to this field as the age wave begins to intersect their product planning horizons.

What are now niche markets subsidized through third-party payment will soon be mainstream markets viewed as consumer products.

See Assistive Resources, page 4

## DC Dispatch T<sup>2</sup> Recommendations

by Dave Appler  
FLC Washington, DC Representative

Over the past 10 months, the President's Council of Advisors on Science and Technology (PCAST) has been reviewing technology transfer (T<sup>2</sup>).



Dave Appler

During a December 2002 meeting, FLC Chair Ann Rydalch was afforded the opportunity to provide the panel with some points of view from the FLC perspective. On March 3, the panel issued a draft executive summary report

See DC Dispatch, page 5

## Lab in the Limelight ITS Communicating Progress

The Institute for Telecommunication Sciences (ITS) is the chief research and engineering arm of the National Telecommunications and Information Administration (NTIA).

ITS supports such NTIA telecommunications objectives as the promotion of advanced telecommunications and information infrastructure development in the United States, enhancement of domestic competitiveness, improvement of foreign trade opportunities for U.S. telecommunications firms, and the facilitation of more efficient and effective use of the radio spectrum.



ITS research includes broadband wireless technology, digital land mobile radio capability, and audio/video quality.

See Lab in Limelight, page 4

## Fed Labs Flash

Technology Transfer Notes from Within the Federal Laboratory Community

### Jefferson Lab Builds Cryomodules

After months of intense R&D, **Jefferson Laboratory (JLab)** is in construction mode,



Researchers work on a cryomodule for the DOE's new Spallation Neutron Source facility.

building cryomodules for the Department of Energy's (DOE) newest research facility—the Spallation Neutron Source (SNS)—near Oak Ridge, Tenn. Used in the final portion of the SNS accelerator, JLab's superconducting radiofrequency techniques and advanced cryomodule design are being

incorporated into the SNS accelerator to enable low-cost, high-efficiency operation.

SNS is being built by a team of federal labs, including **Argonne National Laboratory, Brookhaven National Laboratory, Lawrence Berkeley National Laboratory, Los Alamos National Laboratory, Oak Ridge National Laboratory,** and JLab to provide the most intense pulsed-neutron beams in the world for scientific research and industrial development.

**More info: Debbie Magaldi, 757-269-5102**

### NNSA Doubles Funding to TVC

The National Nuclear Security Administration (NNSA) will double its funding to \$3 million for Technology Venture Corporation (TVC) to

further implement technology commercialization at national laboratories in California, Nevada and New Mexico. The funding is part of the \$400-billion omnibus package signed by President George W. Bush.

"This additional funding is extremely important," said Senator Pete Domenici, R-NM. "TVC has emerged over the years as a national model of a public-private partnership that is spinning off new companies and creating good jobs."

The additional funds make it possible for TVC to expand its efforts of establishing public-private partnerships to commercialize technology originating at **Lawrence Livermore National Laboratory, the Nevada Test Site,** and Los Alamos National Laboratory.

**More info: TVC's Randy Wilson, 505-843-4287**

### APG Advancing on Chemistry Lab

Two Baltimore-based companies will begin work soon on a \$38-million contract to build an Advanced Chemistry Laboratory in the Edgewood area of Aberdeen Proving Ground.

The laboratory, a 74,000-square-foot facility, will replace three older laboratories, primarily the Amos A. Fries Chemistry Building.

Much of the research performed in the new laboratory will support the nation's homeland defense efforts and its work to counter the evolving threat of chemical warfare and the use of chemical or biological agents by terrorists.

### HHS Announces Contracts to Develop Safer Smallpox Vaccines

Health and Human Services Secretary Tommy G. Thompson announced the award of two contracts totaling up to \$20 million in first-year funding to develop safer smallpox vaccines.

The three-year contracts were awarded to Bavarian Nordic A/S of Copenhagen, Denmark, and Acambis Inc. of Cambridge, Mass. The National Institute of Allergy and Infectious Diseases (NIAID) will administer the contracts.

"To protect ourselves from the remote but extremely grave threat of a deliberate release of smallpox virus, we need a vaccine that can be safely given to all Americans, including individuals with weakened immune systems, children and pregnant women," said Secretary Thompson. "The new contracts will help us meet this need by accelerating research on second-generation smallpox vaccines."

### Argonne Conducts Collaboration

**Argonne National Laboratory** and IGC-SuperPower, the wholly owned subsidiary of Intermagnetics General Corp., have signed a \$1.8-million collaborative development agreement to accelerate technological advances in manufacturing cost-effective, second-generation high-temperature superconductors. Argonne will contribute its advanced materials characterization capabilities—such as the Advanced Photon Source, the nation's most brilliant research X-ray source.

## Lab Work

### PNNL Scientists Finding Antibodies Fast

Scientists at the Department of Energy's (DOE) **Pacific Northwest National Laboratory (PNNL)** have extracted part of the human immune system and reconstituted it in brewer's yeast in a fashion that enables powerful machines to quickly identify new antibodies. The advance could have major repercussions for fundamental biological science, as well as for industries that use antibodies for sensors, biodetectors, diagnostic tools and therapeutic agents.

The technology could replace the need to produce antibodies within animals, such as mice, and opens up new possibilities for rapidly designing medical treatments more acceptable to the human immune system. Antibodies are proteins produced by white blood cells as part of the immune response.



PNNL's new approach for generating synthetic antibodies uses high-speed flow cytometers to sort cells, thus eliminating the use of live animals.

the surface of yeast cells using a platform designed by collaborator **Dane Wittrup** of the **Massachusetts Institute of Technology**. The combined technologies offer a more powerful, less expensive method for identifying antibodies.

Antibodies play an increasingly important role in industry because they are effective tools for recognizing specific molecules. When antibodies bind to a specific protein on bacteria, it signals other cells to either kill or remove the bacteria. In medical treatments, antibodies are being injected into the body to seek out specific proteins on cancerous cells, for example, and target treatment to those cells. Biowarfare detectors can use antibodies to locate proteins as a way of identifying harmful agents.

Most importantly, by incorporating Wittrup's yeast surface display method, PNNL scientists can readily modify how an antibody binds to proteins. Being able to increase how tightly a protein and antibody bind together, for example, could increase antibody effectiveness for detecting pathogens or disease.

**More info: 1-888-375-PNNL or e-mail at <inquiry@pnl.gov>**

"Our antibody library offers many advantages over traditional approaches. We expect it will be a more effective tool for scientists," said **Michael Feldhaus**, PNNL scientist and lead author of a paper that appeared in the February issue of *Nature Biotechnology* and was posted online January 21.

"Regulated expression of these antibodies allows the library to be expanded while maintaining its diversity. Furthermore, our unique identification process means we can screen for antibodies in days rather than the months it may take using other approaches."

Feldhaus and colleague **Robert Siegel** built a library of 1 billion human antibodies and expressed them on



Scientists Michael Feldhaus (left) and Rob Siegel (right) developed a library of 1 billion human antibodies in collaboration with MIT professor Dane Wittrup.

## FLC NewsLink

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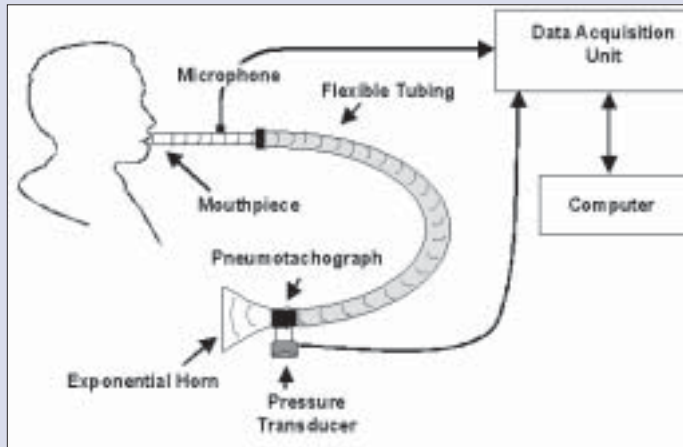
# Tech Watch

## Federal Laboratory Technologies Ready for Transfer

### Medical

## "Sounds" Like a Bad Cough

Researchers from the Health Effects Laboratory Division of the **National Institute for Occupational Safety and Health (NIOSH)** developed a system that records and analyzes sounds and airflows produced during a cough.



*A block diagram of the system used to record airflow and sound during coughs.*

The recording apparatus consists of a system of concatenated tubes and acoustical dampers to record the cough flows and acoustics with high fidelity.

The novel technique used to measure the sound pressure waves improves existing technology by improving the signal-to-noise ratio, decreasing reflections and eliminating the filtering effects of chest wall tissue.

Various types of analyses, including development of a cough sound index (CSI), were used to characterize the acoustical and mechanical properties of test coughs and were interpreted in terms of a model to estimate alterations in airway function. In clinical trials, the CSI proved effective for

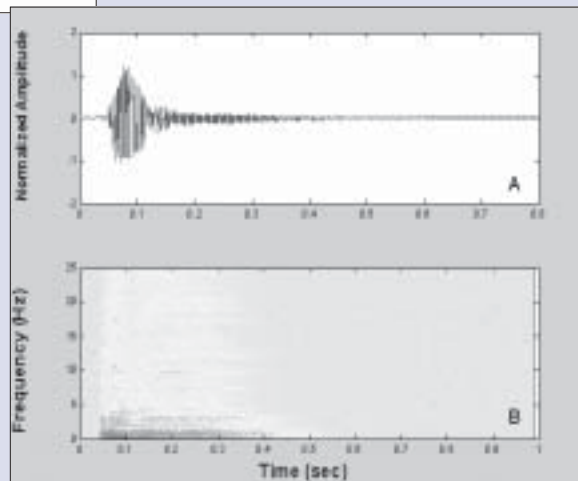
discriminating between control subjects and those with obstructive lung disease.

Forced expirations are currently used in many types of pulmonary function tests. This complex maneuver can be impossible to perform for certain subsets of the population such as children, elderly and subjects with severe respiratory disease.

Cough analysis is attractive to clinicians since the cough maneuver is relatively simple to perform.

The data generated from the cough recordings can be used to diagnose pulmonary disease, as well as track the effectiveness of treatment regimens over time.

**More info:** [www.cdc.gov/od/ads/techtran/index.htm](http://www.cdc.gov/od/ads/techtran/index.htm)



*A) Sound pressure wave of a recorded cough. B) Corresponding joint time-frequency spectrogram. Intensity is represented by color (shading). Red (dark) represents high intensity, blue-green (light) represents low intensity.*

### Energy

## SIMPLE and CHEAP

**Los Alamos National Laboratory** has developed technological advances in polymer electrolyte membrane (PEM) fuel cells that are potentially useful for the development of readily manufacturable, low-cost, high



performance fuel cell systems operating at near-ambient pressures.

Industries promoting PEM fuel cells for stationary and auxiliary power applications are receiving considerable attention because of the attractiveness of the primary markets, such as small, home-based, power generation on the roughly 3–5 kW level.

The technology's advantages include:

- Simple total system (minimal number of components)
- Inexpensive balance of operating plant
- Unpressurized system with net performance comparable to a pressurized system
- Rapid startup.

An ambient pressure fuel cell system has been developed with a fuel cell stack formed from a plurality of fuel cells having membrane/electrode assemblies (MEAs) that are directly hydrated with liquid water and bipolar plates with anode and cathode sides for distributing hydrogen fuel gas and water to a first side of each one of the MEAs and air with reactant oxygen gas to a second side of each one of the MEAs.

A near-ambient pressure blower blows air through the fuel cell stack in excess of reaction stoichiometric amounts to react with the hydrogen fuel gas.

U.S. patent rights are available for licensing on a nonexclusive basis.

**More info:** [www.lanl.gov/worldview](http://www.lanl.gov/worldview)

## Proven to Work

### Detecting Everything from Fire to Termites to Chemicals

**Argonne National Laboratory's (ANL)** Smart Sensor Developer Kit provides the first-ever user-configurable, active microsensor technology that can be easily and cheaply incorporated into a wide range of instruments for many applications.

The multi-agent chemical microsensor employs films consisting of nanometer-size particles that induce highly sensitive, measurable reactions when exposed to sampled gaseous chemicals.

The reactions are translated into voltammetric "signature" outputs, providing extremely low-level detection of chemicals that previously was not possible with films consisting of larger particles. Chemicals are quickly identified by comparing their voltammetric signatures to chemical signatures in an onboard library.

The onboard measurement and analysis software can be run using many popular single-chip microcontrollers, the type found in most low-end wireless pagers and smoke detectors.

An optional wireless modem allows the unit to be remotely reprogrammed and recalibrated in the field to specify new levels of detection and update the onboard library of chemical signatures.

The new sensor can simultaneously interpret multiple chemical signatures and transmit an alert, if necessary. ANL's microsensor is smaller than a dime and, even when included with the highly sensitive voltammetric measurement technology, the total package is smaller than a wireless pocket pager.

The unit is capable of wide-range, onboard chemical identification and quantification of almost any gaseous chemical and can even periodically clean itself using current from its battery.

To date, instruments already being commercialized that employ the technology include intelligent fire detectors, an

"electronic nose" to sniff out termite infestations, and a personal monitor that can detect chemical agents and other hazardous materials.



*The Smart Sensor Developer Kit consists of a dime-sized sensing element and onboard signal processing, measurement, and analysis capabilities in a system smaller than a pocket pager.*

The Smart Sensor Developer Kit was developed by the Energy Systems Division of ANL and General Atomics Corp., San Diego, Calif.



*The Smart Sensor has many applications, including livestock breeding.*

ANL's Smart Sensor Developer Kits are available for licensing to companies in many industries.

Specific applications already being addressed include:

- Termite infestation identification
- Pesticide application monitoring
- Leak detection
- Livestock breeding
- Groundwater contaminant monitoring
- Personal and environmental chemical monitoring.

**More info:** **Richard Greb, 630-252-5565, or <rgreb@anl.gov>**

**Assistive Resources** from page 1

A host of resources exists for technology transfer professionals to learn more about assistive technology research, regulations, and opportunities.

For information on current research programs, industry activity, peer-reviewed publications and professional practices, the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) is the field's premier professional society ([www.resna.org](http://www.resna.org)). Also refer to the Assistive Technology Industry Association ([www.atia.org](http://www.atia.org)).

The **Rehabilitation Engineering Research Center on Technology Transfer** at the University at Buffalo lists problem statements for which solutions are being sought at <http://cosmos.buffalo.edu/t2rerc/programs/demandpull/index.html>.

For help with workplace accommodations, the Computer/Electronic Accommodations Network (CAP) offers free assessment services and required technologies free of charge to most government employees ([www.tricare.osd.mil/cap](http://www.tricare.osd.mil/cap)).

For information on the variety of commercially available assistive devices, check [www.abledata.com](http://www.abledata.com) and [www.assistivetech.net](http://www.assistivetech.net), both funded by the National Institute on Disability and Rehabilitation Research of the U.S. Department of Education, which provides the latest information on federally funded research, development, training and dissemination programs at [www.ncddr.org](http://www.ncddr.org).

The National Center for Medical Rehabilitation Research at the National Institutes of Health is also full of information on technology and research dedicated to assistive technology at [www.nichd.nih.gov/about/ncmrr](http://www.nichd.nih.gov/about/ncmrr).

**FLC 2003 National Meeting**

May 5-9, 2003

Tucson, Arizona

Adding Value  
FEDERAL LABORATORY CONSORTIUM  
**FLC**  
FOR TECHNOLOGY TRANSFER  
to the T<sup>2</sup> Frontier



FLC Awards T<sup>2</sup> Training Lab  
Directors Panel T<sup>2</sup> Marketing  
Successful Scientists Panel

Join the Exploration!

[www.federallabs.org](http://www.federallabs.org)**Lab in the Limelight** from page 1

ITS also serves as a principal federal resource for addressing the telecommunications concerns of other federal agencies, state and local governments, private corporations and associations, and international organizations.

Cooperative research agreements based upon the Federal Technology Transfer Act of 1986 are the principal means of aiding the private sector. This Act provides the legal basis for and encourages shared use of government facilities and resources with the private sector in advanced telecommunications technologies.

**ITS History**

The Institute began in the 1940s as the Interservice Radio Propagation Laboratory, which later became the Central Radio Propagation Laboratory (CRPL) of the National Bureau of Standards in the U.S. Department of Commerce. In 1965, CRPL became part of the Environmental Science Services Administration (ESSA) and was renamed the Institute for Telecommunication Sciences and Aeronomy (ITSA). Finally, under the President's Reorganization Act #1 of 1977, the NTIA was formed.

Since that time, ITS has performed telecommunications research and provided technical engineering support to NTIA and to other federal agencies on a reimbursable basis. Over the past decade, ITS has expanded its historical role by conducting cooperative research and development with U.S. industry

and academia. ITS participates in technology transfer and commercialization efforts by fostering cooperative telecommunications research with industry where benefits can directly facilitate U.S. competitiveness and market opportunities. ITS has participated for a

number of years in CRADAs with private sector organizations to design, develop, test, and evaluate advanced telecommunication concepts. Research has been conducted under agreements with Bell South Enterprises; Telesis Technology Laboratories; US WEST Advanced Technologies; Bell Atlantic Mobile Systems; GTE Laboratories, Inc.; US WEST New Vector Group; General Electric Company; Motorola Inc.; Hewlett-Packard Company; Integrator Corporation; AudioLogic, Inc.; Industrial Technology, Inc.; Netrix Corporation; Lucent Technologies; ARINC; Lehman Chambers; Lucent Digital Radio; Intel Corporation; and the American Automobile Manufacturers Association.

Not only does the private industry partner benefit, but NTIA is able to undertake research in commercially important areas that it would not otherwise be able to do.

**ITS Opportunities**

ITS is interested in assisting private industry in all areas of telecommunications. Private sector organizations are encouraged to contact ITS if they believe that ITS may have technology that would be useful to them. Because of the great commercial importance of many new emerging telecommunication technologies—including PCS, wireless local area networks, digital broadcasting, LMDS, and intelligent transportation systems—ITS plans to vigorously pursue technology transfer to the private sector through CRADAs, thereby contributing to the rapid commercialization of these new technologies.

In addition, ITS plans to commit substantial resources of its own to the development of these new technologies and standards.

**More info: Kenneth C. Allen, Program Coordinator, 303-497-5216; [info@its.blrdoc.gov](mailto:info@its.blrdoc.gov)**

## ITS Institute for Telecommunication Sciences

Boulder, Colorado



number of years in CRADAs with private sector organizations to design, develop, test, and evaluate advanced telecommunication concepts.

Research has been conducted under agreements with Bell South Enterprises; Telesis Technology Laboratories; US WEST Advanced Technologies; Bell Atlantic Mobile Systems; GTE Laboratories, Inc.; US WEST New Vector Group; General Electric Company; Motorola

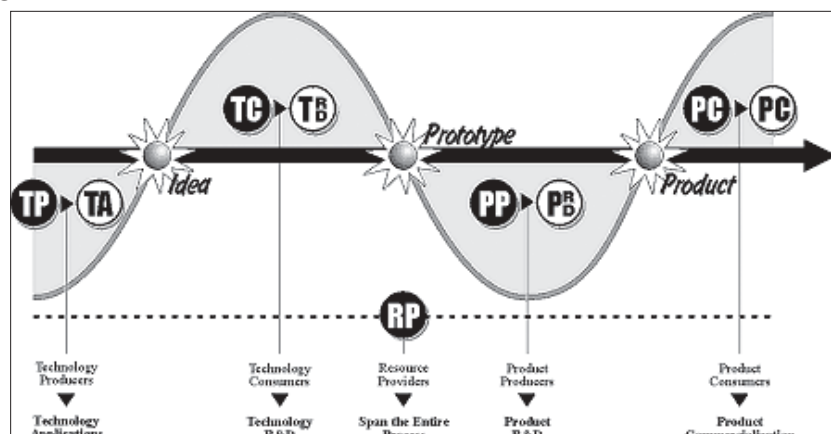
**RERC Explanation** from page 1

nature of our built and virtual environments.

Technology transfer (T<sup>2</sup>) plays a large part in ensuring that RERC innovations get to the end-user.

The RERC on T<sup>2</sup> improves the quality of life for people with disabilities by advancing T<sup>2</sup> methods through research, transferring technologies into products through development, and facilitating the commercialization of new and improved assistive devices.

These three outcomes are accomplished through collaborations with academic, industrial, consumer, and government stakeholders. The center conducts research on the T<sup>2</sup> process as it is applied to the field of assistive technology and develops,



*Technology-related activity is on the left side of the model, and product activity is on the right. The technology-to-product transformation occurs around the midpoint (prototype event). It is important to understand that the broader technology transfer process involves technologies and products, despite the term's focus on technology.*

validates, and disseminates comprehensive T<sup>2</sup> models. The dissemination program includes a state-of-the-practice conference and the

development of a T<sup>2</sup> program to be offered for presentation in year three.

The RERC functions as an intermediary and a catalyst, improving the process while expanding the network of stakeholders involved with the field. The result is new and improved products available in the marketplace that benefit professional service providers, family members, and people with disabilities.

The T<sup>2</sup> process progresses from idea to prototype to product. This progression raises the importance of distinguishing between a technology and a product. The T<sup>2</sup> process encompasses both technologies and products.

**More info: <http://cosmos.buffalo.edu/t2rerc>**

Inside the FLC

## FLC on Tour

FLC Marketing and Public Relations Chair **Al Jordan** led the Federal Gallery of the Technology Transfer Conference and Expo (TTCE) in Chicago, Ill., March 3-6, 2003.



A visitor to the NASA TTCE booth checks out the future of spacewear.

As part of National Manufacturing Week's (NMW) National Design Engineering Show, TTCE provided an opportunity for the FLC to

showcase the outstanding research and innovation being done by its member laboratories.

Exhibiting as part of TTCE's Federal Gallery were **NASA, Aberdeen Test Center, Argonne National Laboratory, and the Idaho National Engineering and Environmental Laboratory.**

Jordan also highlighted the value of the FLC to laboratories, industry and academia during his presentation in both the TTCE theater and NMW presentation room.

"This type of exposure provides veterans of T<sup>2</sup> with a forum to learn new ways to take advantage of what the FLC has to offer, while at the same time generates interest on the part of newcomers to the world of T<sup>2</sup>," said Jordan.

The FLC also had a strong presence in



An SAE attendee checks out tomorrow's technology today in a Dodge Charger prototype.

Detroit, Mich., that same week as it took part in the Society of Automotive Engineers' (SAE) World Congress.

Exhibiting to the automotive industry brought federal laboratories to the forefront of the automotive research and development world.

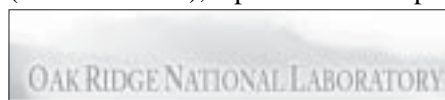
The FLC booth was buzzing with attendees wanting to know more about the research and cooperative opportunities associated with labs such as Argonne, **Oak Ridge National Laboratory, Naval Research Laboratory, Aberdeen Test Center, and the Air Force Research Laboratory-Materials Command.**

## Awarding T<sup>2</sup> Excellence

As we count down to the 2003 FLC national meeting, FLC NewsLink will highlight the winners of the 2003 FLC Awards for Excellence in Technology Transfer



**Oak Ridge National Laboratory (ORNL)** researchers **Ying Xu, Dong Xu, and Victor Olman** co-developed the Expression Data Clustering Analysis and Visualization Resource (EXCAVATOR), a patentable computer package for gene-expression data clustering and analysis.



It enables researchers to more efficiently "mine" key information from massive amounts of gene expression data. It employs a set of unique clustering algorithms developed by ORNL's Protein Informatics Group. With EXCAVATOR, even researchers with few computer skills can analyze gene-expression data in seconds. With this information, genetic diseases can be diagnosed more quickly.

The award-winning technologies transferred by the **Edgewood Chemical/Biological Forensic Analytical Center (EC/B FAC), Edgewood Chemical Biological Center,** relate to the design, development, training, fielding, and continued consultation for mobile laboratories and unique solutions for efficient and accurate field analysis of chemical and biological materials. Developed by EC/B FAC's **Charles E. Henry** and **Dr. Dennis J. Reutter,** these laboratories and products are now considered the state-of-the-art in laboratory design by several lead federal agencies in the United States, international bodies, several foreign governments, industry, and academia. The T<sup>2</sup> process included CRADAs, patents, license agreements, memoranda of agreement, and interagency agreements.



Inventor **Harry F. "Fred" Schramm** has developed Compressed Symbology for Direct Parts Marking to provide an inexpensive method to mark a wide variety of parts, including those thought too difficult to mark, with positive and verifiable identification methods. The technology was developed at **NASA's Marshall Space Flight Center** in response to NASA's need for configuration management in tracking millions and millions of parts, even tiny electrical parts no larger than a dime.

Providing fast, large-scale inoculations without spreading blood-borne pathogens is a longstanding veterinary and human healthcare challenge. **Kansas City Plant** personnel **Marisa McGregor, Ron Taylor, Ed Wenski, Bob Metzler, Jim Mahoney, John Fanska, Brian Irvan, Lorri Ellis, Patt Sweet, and LaCurtise Smith** have pioneered a needle-free system that offers advantages over traditional syringe and needle systems—reduced pain, improved bio-availability of vaccines, improved worker safety, safer disposal of potentially dangerous needles and related waste, and lower costs. This new, safe Needle-Free High-Speed Vaccine Injector System is the result of U.S. engineering and manufacturing expertise combined with 40 years of Russian research and field experience with vaccine delivery systems.



**Argonne National Laboratory** researchers **Dr. Ian Foster, Dr. Carl Kesselman, and Steve Tuecke** have developed the Globus Toolkit™, a community-based, open-architecture, open-source set of software for libraries that support computational "Grids." The Globus Project™ has already transformed collaborative scientific research across the world and is the basis for new distributed-computing strategies of such companies as IBM, Microsoft, Platform Computing, Entropia, Sun Microsystems and Compaq.

### DC Dispatch from page 1

that listed nine recommendations for future T<sup>2</sup> consideration.

#### PCAST's T<sup>2</sup> Recommendations

- Existing T<sup>2</sup> legislation works and should not be altered.
- Federal agencies, government contracting laboratories, and the Department of Commerce (DOC) need to formalize their oversight of and accountability for T<sup>2</sup>.
- Industry differences need to be recognized and practiced by institutions that license government-sponsored technology, but made consistent within individual disciplines.
- The DOC should document "best practices" for T<sup>2</sup>, as well as refine a set of metrics to better quantify practices and their effectiveness.
- The DOC should include "education" as a part of its T<sup>2</sup> mission and task the individual agencies to disseminate related materials specific to their research and development programs.
- Individual agencies and government laboratories need to provide regular transaction "process reviews" to reduce the complexity and time required to complete T<sup>2</sup> transactions.
- The Office of Science and Technology Policy should assist the new Department of Homeland Security in rapidly developing T<sup>2</sup> policies and

capabilities that meet the agency's immediate and long-term needs.

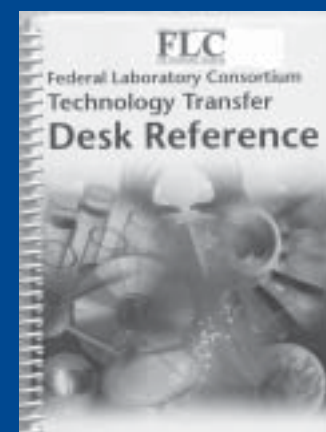
- The DOC should study and assess the implications for technology development and transfer in a global environment.
- Recent discussions about the availability of research tools that result from federally funded research need to be monitored to ensure that there is a balance between protecting the commercial value of such inventions and assuring access to these tools for further research and exploration.

I will continue to monitor PCAST for the issuance of their final report and take steps to make it available to the FLC membership. PCAST's first recommendation, which states that T<sup>2</sup> legislation is working and does not need revision, is very important due to the composition of the PCAST panel.

In addition to members of the federal R&D community, the panel also includes representatives from industry and academia. With this cross-section of panel members, it would appear as if there is no strong desire for new legislation; however, the possibility always exists for legislation concerning some aspect of a federal agency or federal program.

Write Dave: [dappler@flcdc.cnhost.com](mailto:dappler@flcdc.cnhost.com)

## T<sup>2</sup> Procedures T<sup>2</sup> Legislation T<sup>2</sup> History T<sup>2</sup> Mechanisms The FLC's Role in T<sup>2</sup>



The desktop essential for laboratory representatives, Office of Research & Technology personnel, business development managers... any and all T<sup>2</sup> pros!

## Coming Soon!

ETC...

# New Leadership on the Horizon

The FLC general membership will elect the positions of Chair, Vice-Chair, and three Members-at-Large during the FLC National Meeting in Tucson, Ariz., May 5-9, 2003. New this year – the regional elections for the Mid-Continent, Northeast, and Southeast. Voting for both elections will be conducted onsite throughout the week and through absentee ballot. The candidates will be introduced on Tuesday, May 6 at the business luncheon, with voting taking place both Tuesday and Wednesday. Election results will be announced during Thursday's lunch.

**2003 FLC Chair Candidates**



**Ed Linsenmeyer**  
Naval Surface Warfare Center  
Coastal Systems Station



**Theodore J. Roumel**  
CRA National Institute  
of Health



**Larry Dickens**  
Oak Ridge  
National Laboratory



**Dr. Mike Sullivan**  
Naval Air Warfare Ctr.  
Weapons Division

**2003 FLC Vice-Chair Candidates**



**2003 Member-at-Large Candidates**



**Sue Ibrahim**  
U.S. Army  
Yuma ProvingGround



**Michael Leavitt**  
Idaho Nat. Eng.  
and Environmental  
Laboratory



**J. Terry Lynch**  
NIST



**Carolyn McMillan**  
NASA/Marshall  
Space Flight Center



**Robert Morelli**  
National  
Security Agency



**Jana Smith**  
Rocky Mountain  
.Oilfield  
Testing Center



## The FLC Laboratory Web Site Reference



*This lightweight, quick reference guide to federal laboratory web sites puts you at the front door of science and technology*

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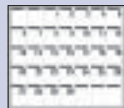
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### Nature v. Nature

Naval Meteorology and Oceanography Command (NMOC) transfers technologies and capabilities that assist the warfighting mariner and the recreational seagoer.



### Mark Your Calendar

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



### FLC 2003 National Meeting

Learn more about how you can be part of the FLC 2003 national meeting, "Adding Value to the T<sup>2</sup> Frontier," in Tucson, Arizona, May 5-9.



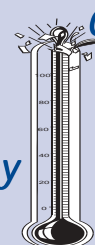
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