



FEDERAL LABORATORY CONSORTIUM
FLC
FOR TECHNOLOGY TRANSFER

*The Only Government-wide
Forum for Technology
Transfer*

Role of the Federal Laboratory Consortium for Technology Transfer (FLC)

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FLC Washington, DC
Representative
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GARY K. JONES

- FLC Washington, DC Representative (2005-present)
 - Responsible for FLC coordination in the D.C. area with federal agencies and their labs; congressional staff; and trade, professional and other organizations

- Prior professional experience
 - Academia: Graduate (technology mgmt), undergraduate (international business)
 - Industry: Energy and federal government contracting
 - Government: State - economic development agency
Federal - DOE HQ contractor



OVERVIEW

Role of the FLC:

... Mission

... Membership

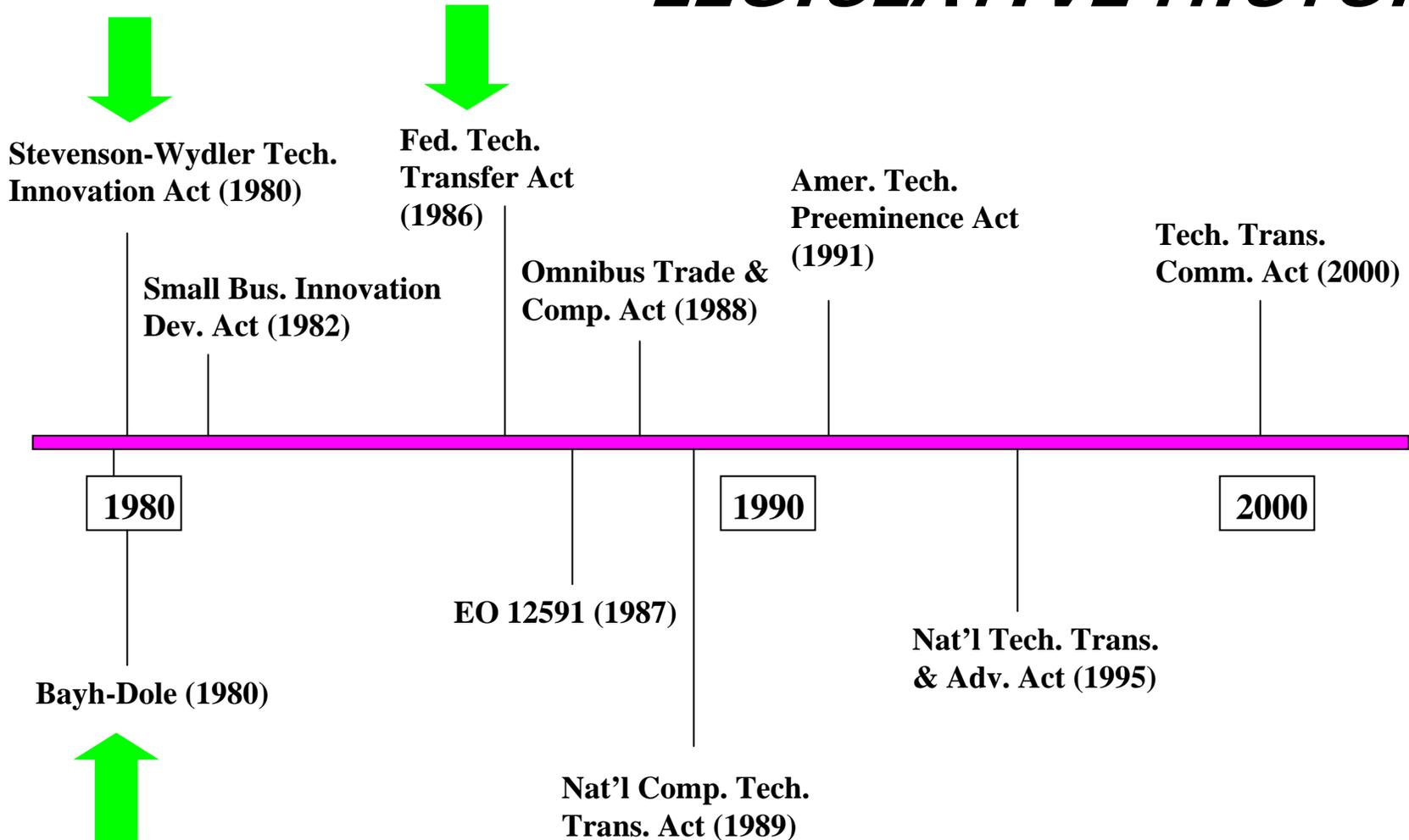
... Organization

... Primary Activities

Opportunities to Get Involved!



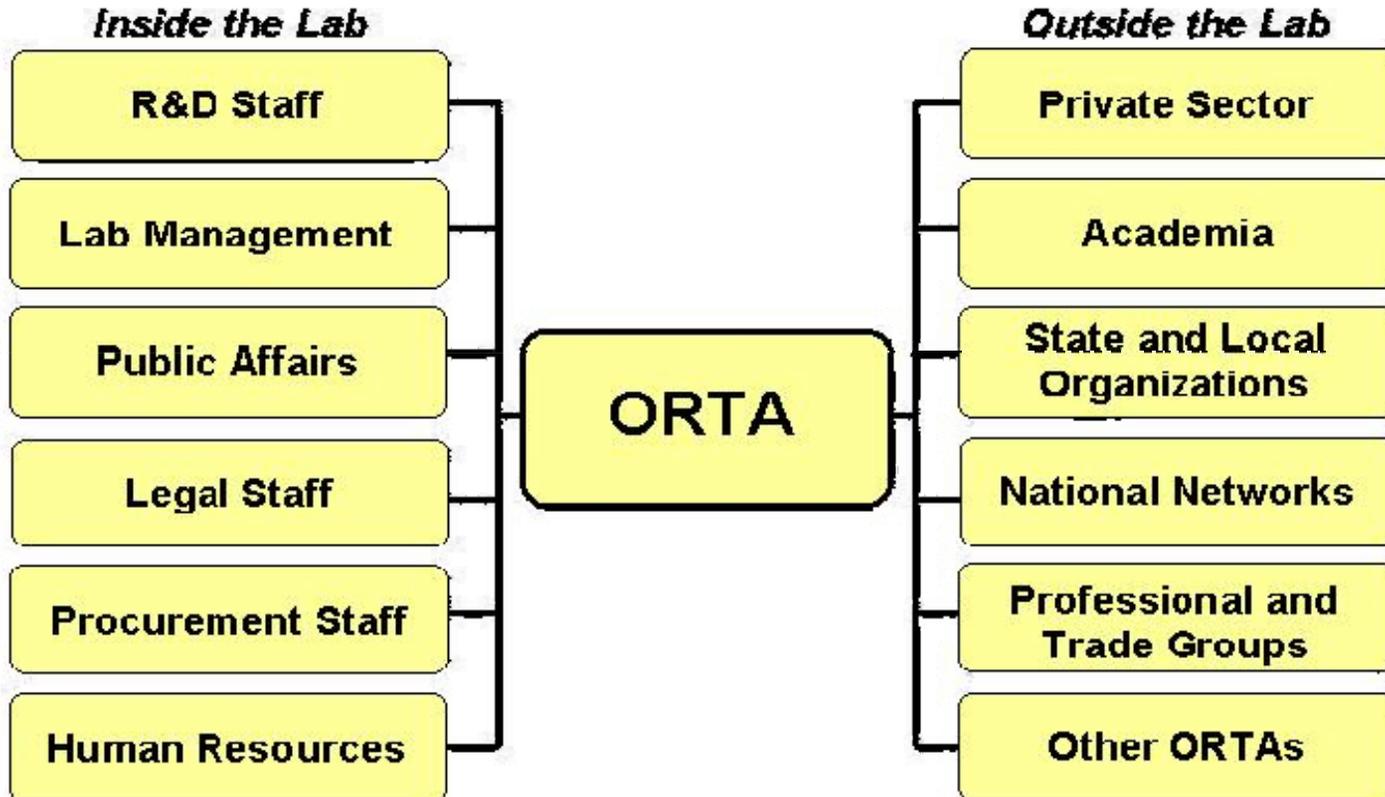
LEGISLATIVE HISTORY





OFFICE OF RESEARCH & TECHNOLOGY APPLICATIONS

Focal Point for Technology Transfer





COMMON TECH TRANSFER MECHANISMS

- Patent License Agreement
- **Cooperative Research and Development Agreement (CRADA)**
- Work for Others – Work for Private Parties
- Collegial exchange
- Educational Partnership Agreement
- Use of Facilities Agreement
- Cooperative Agreement
- Commercial Test Agreement
- Material Transfer Agreement
- Partnership Intermediary Agreement
- Commercial Service Agreement
- Personnel Exchange



WHAT IS THE FLC?

The FLC

- Was formally created by Congress under the Federal Technology Transfer Act (Public Law 99-502)
- Is composed of tech transfer professionals from the federal laboratories, their respective agencies, and affiliated organizations
- Is the only government-wide forum for technology transfer

Membership Reflects

18 federal departments and agencies

> 700 federal government R&D laboratories and centers

> \$100B annual budget

> 100,000 scientists and engineers



THE FLC MISSION

To assist the federal agencies, laboratories, and their partners to accomplish
the rapid integration of research
and development resources within the mainstream
of the U.S. economy

Education and Training, Best Practices, Recognition, Communications,
Technology Clearinghouse

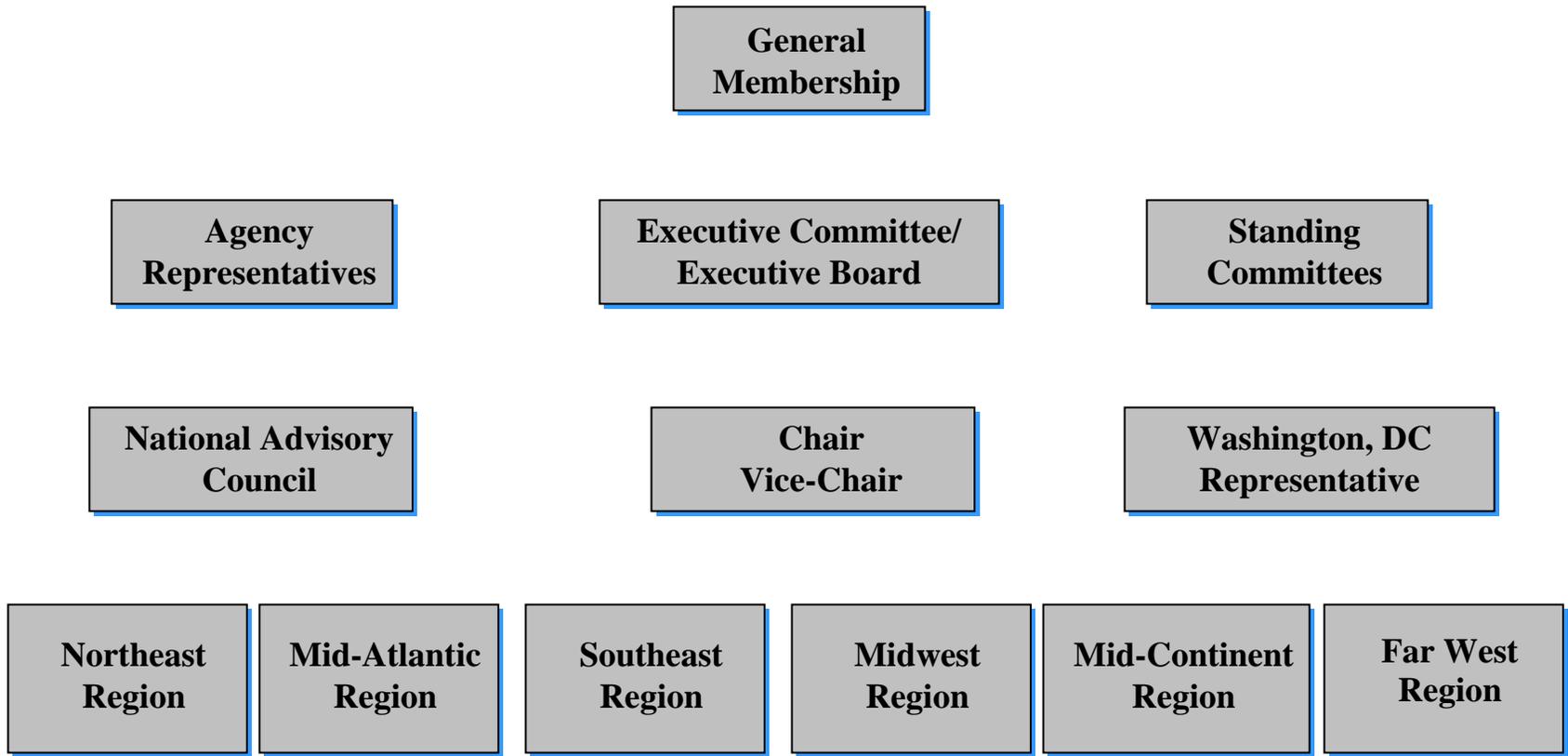


NATIONAL ORGANIZATION

- **Member Organizations**
 - Federal R&D laboratories and centers
 - Departments and agencies they represent
- **Consortium Members**
 - Technology transfer professionals from each of the member organizations
 - Includes Consortium Representatives and Consortium Participants
- **Consortium Affiliates**
 - Technology transfer organizations other than a federal laboratory or parent agency
 - Employees or associates of affiliate organizations
 - Affiliate participants cannot hold office

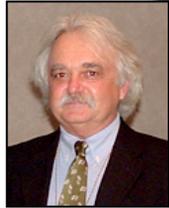
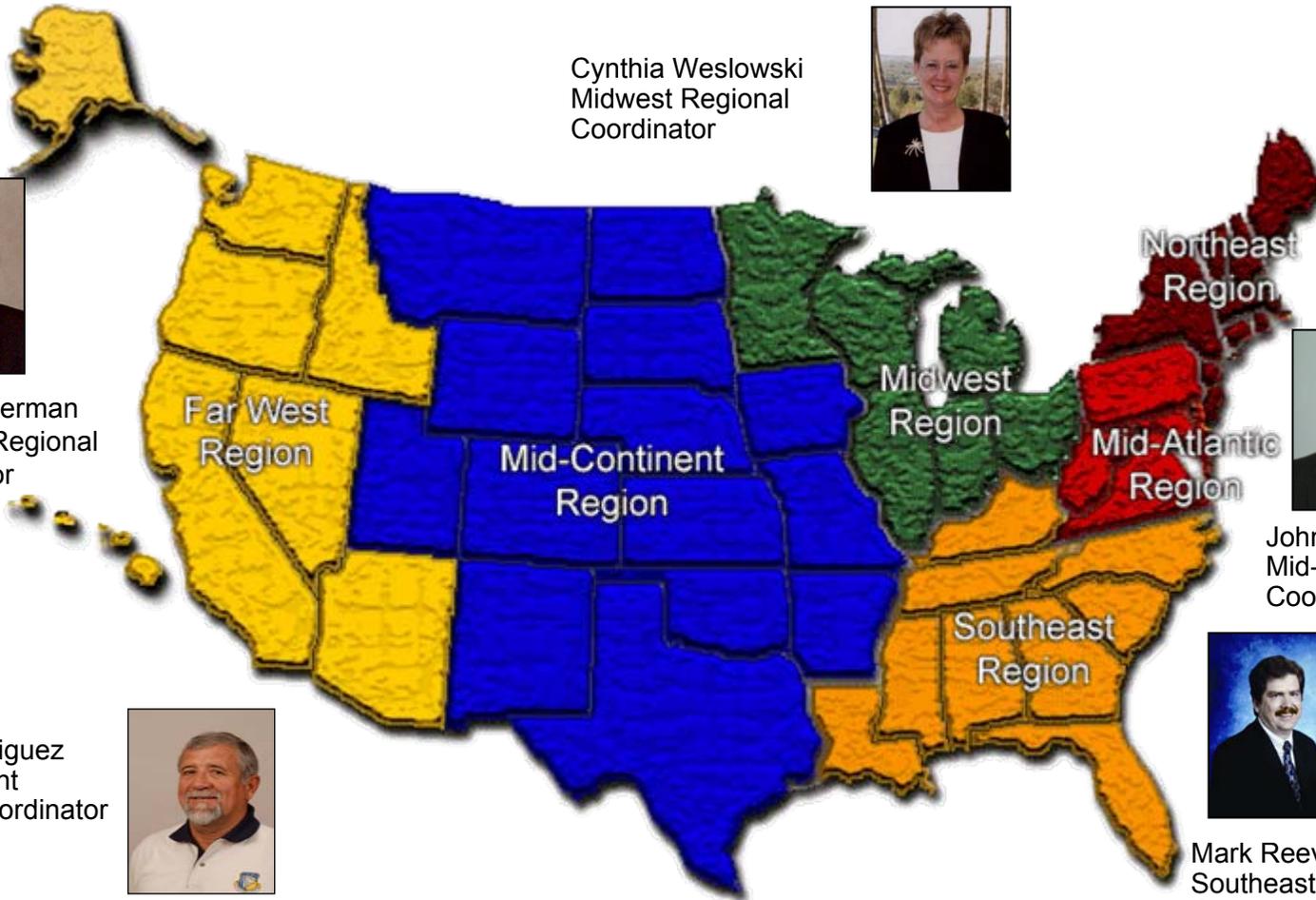


FLC STRUCTURE





FLC REGIONS



Steve Lieberman
 Far West Regional
 Coordinator



Patrick Rodriguez
 Mid-Centroid
 Regional Coordinator

Cynthia Weslowski
 Midwest Regional
 Coordinator



Dr. Theresa Baus
 Northeast Regional
 Coordinator



John Emond
 Mid-Atlantic Regional
 Coordinator



Mark Reeves
 Southeast Regional
 Coordinator



FLC COMMITTEES

- Financial Management (Chair: Beth Thomas)
- Planning and Policy (Chair: Susan Sprake)
- Standing Committees
 - Awards (Chair: Tara Weaver-Missick)
 - Education and Training (Chair: Lynn Murray)
 - Legal Issues (Chair: Robert Charles)
 - Communications (Chair: Al Jordan)
 - Program (Chair: Sharon Borland)
 - State and Local Government (Chair: jennelle Derrickson)
- Special Committees – as necessary (e.g., elections, etc.)



FLC PRIMARY ACTIVITIES

- Education and Training
- Sharing Best Practices/Networking
 - National and Regional Meetings and Conferences
- Professional Recognition
- Communications and Coordination
- Technology Clearinghouse



PRIMARY ACTIVITIES: EDUCATION & TRAINING

- **Basic, Intermediate, Advanced**
- **Customers**
 - ORTA managers and staff
 - Laboratory scientists and engineers
 - Laboratory management
 - External customers
- **How Accomplished**
 - National and regional meetings (fundamentals, intermediate, advanced)
 - Video training
 - Site-specific (labs, conferences, etc.)
 - Publications (T² Desk Reference, ORTA Handbook, “Green Book,” T² Mechanisms Matrix, *FLC NewsLink*)



PRIMARY ACTIVITIES: BEST PRACTICES - NETWORKING

- Annual national membership meeting (spring)
- Regional meetings (fall)

Northeast

New London, CT
September 2007

Mid-Continent and Far West

San Diego, CA
September 2007

Mid-Atlantic

St. Michaels, MD
October 2007

Midwest and Southeast

Cincinnati, OH
August/September 2007



PRIMARY ACTIVITIES: PROFESSIONAL RECOGNITION *(Regional and National Awards)*

- Excellence in Tech Transfer
- Inter-Agency Partnership
- Outstanding Tech Transfer Professional
- Laboratory Directors
- Service Awards
 - Harold Metcalf
 - Lab Representative of the Year
 - Outstanding Service





PRIMARY ACTIVITIES: COMMUNICATIONS



Major Products

- Web site: www.federallabs.org
- Technology Locator — Centralized service for reviewing/routing requests from potential partners to appropriate federal resource
- *FLC NewsLink* — Monthly newsletter focusing on T² and federal research
- Roundtables — Approximately 30 electronic groups
- Exhibits — Major trade shows and conferences
- Media Support — Publications, brochures, etc.





FLC HOME PAGE

(www.federallabs.org)

Federal Laboratory Consortium for Technology Transfer - Mozilla Firefox

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FLC <http://www.federallabs.org/news/> Go

FEDERAL LABORATORY CONSORTIUM
FLC
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NewsLink

Today's Date: Monday, February 5, 2007

SEARCH: Search

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 T² Legislation & Policy
 T² Education & Training
 FLC Laboratories
 Technology Locator
 FLC Committees
 FLC Regions
 Awards Program
 FLC National Meeting

FLC Home > **News & Events**

News & Events

TOP STORIES:

NASA Bridges Safety Gap NEW
 A little more than three years ago, the technology transfer office at NASA Goddard Space Flight Center developed an agreement that granted the Federal Highway Administration's Turner-Fairbank Highway Research Center (TFHRC) access to the Hilbert-Huang Transform (HHT) technology and expert advice from the inventor, Norden Huang (retired).

Top Stories [View all](#)

- Urgent Call Relaunches Wood Propellers NEW
- NASA Bridges Safety Gap NEW
- NSWC's Deter Wins Linstead Award NEW
- SRNL, UTEK License RadRope™ NEW
- Edwards Wins ATCA NEW
- NIST to Preserve America's "Birth Certificate" NEW
- Aragonne's Coin Cell NMR/MRI Imager
- Los Alamos, CIYA Partner to Stop Avian Flu

T² Events [View all](#)

- 01/20 - 01/25 - SPIE Photonics West, San Jose, CA
- 01/22 - 01/24 - Coastal Inlets Research Program - 8th Annual CIRP Technology Transfer Workshop, Fort Lauderdale, FL
- 02/07 - 02/08 - SAE Hybrid Vehicle Technologies Symposium - 2007, San Diego, CA
- 02/13 - 02/15 - PLASTECH West 2007, Anaheim, CA

Lab Classifieds [View all](#)

- Crush and Spray for 15% More Weed Control NEW
- Clinical Manufacturing NEW

DC on T² [View all](#)

- Tech Transfer Awaits 110th Congress NEW
- Worldwide Patent Applications Increase

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FLC NEWSLINK

Monthly

T² INSIDE



Vitamin D
Deficiency
page 2



Pollution
Control
page 3



Ensuring
Clean Water
page 6

T² EVENTS

FLC Mid-Continent/Far West
Regional Meeting
Colorado Springs, Colo.
August 29-31, 2006

NASVF 2006
Annual Conference
Rochester, N.Y.
September 20-22, 2006

FLC Midwest/Southeast
Regional Meeting
Nashville, Tenn.
October 25-27, 2006

Partners in Environmental
Technology Technical
Symposium
Washington, D.C.
November 28-30, 2006

FLC National Meeting
Arlington, Texas
May 15-18, 2007

T² FACT

Invented in 1871, the first "ordinary" bicycle was invented by British engineer James Starley. Known as the Penny Farthing, it was the first really efficient bicycle, consisting of a small rear wheel and large front wheel pivoting on a simple tubular frame with tires of rubber.

Mary Bellis, About.com

FLC NEWSLINK

August 2006

ARGONNE TESTS VALVES FOR DIESEL, GAS ENGINES

Advanced ceramics are the leading candidates for high-temperature engine applications — offering improved engine performance and reduced emissions. One type of ceramic, silicon nitrides, is being evaluated for use in valve train materials for diesel and natural gas engines.

Because they operate in high-stress, high-temperature, corrosive environments, these materials must be highly durable and reliable. Accurate and efficient surface and subsurface characterization methods are essential to identify damage caused by machining and to ensure the reliability of the valves.

A group of researchers at Argonne National Laboratory (ANL), led by J.G. Sun, have been investigating nondestructive evaluation (NDE) methods to detect surface and subsurface defects caused by abrasive machining processes. Such defects — which include microstructural discontinuities such as spalls, cracks, and voids — are typically within 200 µm of the material's surface and can significantly degrade the fracture strength and fatigue resistance of silicon nitride ceramics. Because these ceramics are partially translucent in light, a laser-scattering method based on the detection of optical scat-

See Argonne Engine Valves, page 8

SANDIA'S TUFFOAM™ CHURNS UP WAVES OF INDUSTRY INTEREST

by Nancy Garcia, LANL

When surfboard material manufacturer Clark Foam closed shop last year, the nation's \$200-million surfboard manufacturing market appeared headed for a wipeout.

Hearing the news, Sandia National Laboratories' (SNL) LeRoy Whinnery, who describes himself as "a warm-water surfer" (as opposed to his wife, whom he says "will surf anywhere"), believed he just might have a solution — a foam initially developed to protect sensitive equipment from harsh mechanical environments, known as TuffFoam™.

Now two licensees are evaluating the SNL-developed foam for this use, and scores of inquiries are being explored about this field and other uses, including insulation and structural core applications.

The material is a water-blown, close-cell, rigid polyurethane foam that features formulations with densities as low as 2 pounds per cubic foot.

News of TuffFoam being considered as a potential replacement for surfboard manufacturing has spread rapidly through news agencies, television, magazines, newspapers, and trade journals since the licensing opportunity was announced in February.

"It can be used for thermal and electrical insulation, and potentially as a core material

See Sandia Surfboard, page 4



Originally created for the National Nuclear Security Administration to protect sensitive electronic and mechanical structures from harsh environments, LANL's foam may be ideally suited for surfboard blanks, car bumpers, and airplane wings.

DC ON T²: R&D LABOR FORCE

by Gary Jones, FLC Washington, DC Representative



Greetings from (sweltering) D.C. A great deal has been written over the past year about the U.S. R&D labor force and its ability to continue attracting and developing the quality science and engineering (S&E) workforce necessary to compete globally in technology-intensive industries (see the April/May DC on T²).

Several new National Science Foundation (NSF) statistical reports (tabularized data) and an article in a prominent S&T policy journal provide more "grist for the mill" on this general discussion, which I thought might be of interest

See DC on T², page 5

NASA KENNEDY REDUCES GROUNDWATER CONTAMINATION

A groundwater treatment technology developed at Kennedy Space Center (KSC) has won NASA's Government Invention of the Year and Commercial Invention of the Year awards for 2005.

The emulsified zero-valent iron (EZVI) technology was developed by a team of researchers from NASA and the University of Central Florida.

NASA inventors include Dr. Jacqueline Quinn, an environmental engineer in the Applied Sciences Division of the Kennedy Applied Technology Directorate, and Kathleen Brooks, an analytical chemist in the center's Materials Science Laboratory of the Center

See Groundwater Contamination, page 4



FLC TECHNOLOGY LOCATOR SERVICE



- Provides centralized point of contact and service for processing technology transfer requests originating in the private sector or federal laboratories.
- Technology Locator POC
Frank S. Koos
Phone: (856) 667-7727
Fax: (856) 667-8009
E-mail: fkoos@utrs.com



TECH TRANSFER WORKS: SELECTED TECHNOLOGY TRANSFER SUCCESS STORIES



PowerFactoRE

PowerFactoRE Leverages *Easy To Use Tools* in a *Complete Methodology*



- PowerFactoRE is a commercial manufacturing supply chain software solution utilized by Procter & Gamble (P&G) for its diaper production line. It enables manufacturers to predict, prevent, and reduce reliability losses, equipment failures, and repair downtime
- P&G approached Los Alamos National Laboratory (LANL) to cooperatively research and develop the technology behind PowerFactoRE

- A CRADA between LANL and P&G was utilized to transfer the technology as well as additional commercial licensing
- PowerFactoRE has saved over \$1 billion in operating costs; increased plant productivity up to 44%; cut controllable costs by 33%; improved equipment reliability between 30% and 40%; reduced line changeover time; and achieved 60% to 70% faster new-product startups
- In 2003, *R&D Magazine* selected PowerFactoRE as one of the world's 100 scientific and technological advances to show the greatest commercial potential. In 2004, PowerFactoRE received a Council for Chemical Research Award for Government/Industry collaboration
- Primary point of contact:
 Dr. Harry Martz, DOE, LANL
 Phone: (505) 667-2687
 E-mail: hfm@lanl.gov



KEPIVANCE®



- Kepivance® treatment for mucositis, a common complication of chemotherapy in cancer patients, was discovered, developed, and patented by HHS, NIH, National Cancer Institute

- Patents and patent licensing were used to transfer the technology
- Patent licensed to Amgen and technology commercially marketed as Kepivance®
- Currently this drug benefits approximately 11,000 adult Americans with hematologic malignancies who undergo bone marrow transplantation each year
- Primary point of contact:
Dr. Jeffrey S. Rubin, HHS, NIH,
National Cancer Institute
Phone: (301) 496-4265
e-mail: RubinJ@mail.nih.gov



HIGH-STRENGTH, WEAR-RESISTANT ALUMINUM ALLOY



- High-strength, wear-resistant aluminum alloy offers dramatic increase in tensile strength at elevated temperatures, a low-cost alternative for producing lighter engines that emit more power with fewer pollutants
- This novel alloy was developed by NASA and further advanced by a team at Marshall Space Flight Center in response to automotive legislation

- Technology transfer and commercialization accomplished through a commercialization agreement between NASA and Bombardier Recreational Products (BRP)
- BRP commercialized and marketed a successful direct-injected two-stroke outboard engine with world-class emissions levels as part of its Evinrude line
- The BRP engine design led to the NASA alloy winning first place in the 2005 Environmental Excellence in Transportation (E2T) Awards, sponsored by the Society of Automotive Engineering (SAE), recognizing significant innovations in reducing environmental impacts caused by the transportation industry
- Primary point of contact:
Jonathan A. Lee
NASA-Marshall Space Flight Center
E-mail: jonathan.a.lee@nasa.gov



NICKEL PLUS™ FERTILIZER FOR ALLEVIATION OF NICKEL DEFICIENCIES

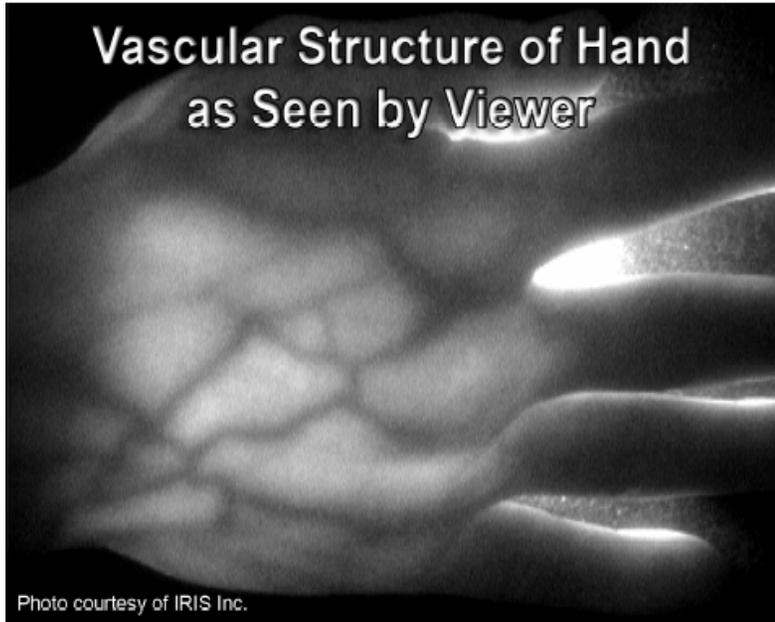


- Nickel Plus™ fertilizer technology treats the symptoms of nickel deficiencies in soil for farming and agricultural purposes

- Identification of symptoms of nickel deficiencies were researched and discovered by USDA, ARS. Nickel Plus™ technology was jointly developed and patented by USDA, ARS, and NIPAN, LLC
- Technology was transferred by a cooperative interaction initiated between USDA, ARS and NIPAN, LLC
- Nickel Plus™ technology is now used in eight states, has cured mouse-ear and little-leaf disorders in pecan and river birch, and is conferring disease resistance in day lilies, with a beneficial impact of millions of dollars
- Primary point of contact:
Dr. Bruce W. Wood - USDA
Phone: (478) 956-6421
e-mail: bwwood@saa.ars.usda.gov



VASCULAR VIEWER™



- Vascular Viewer™ reveals blood vessels in the body under a broad range of lighting conditions, allowing medical personnel to access blood vessels more quickly and accurately, even in extreme conditions such as on the battlefield or during trauma care, and in patients with difficult-to-access blood vessels, such as the elderly and small children

- A team from the Air Force Research Laboratory's Materials and Manufacturing Directorate (AFRL/ML) developed and patented the unique imaging technology for Vascular Viewer™
- The Air Force awarded an exclusive license to a spinoff company, InfraRed Imaging Systems (IRIS) of Columbus, Ohio, to develop and market the technology
- Two IRIS-developed Vascular Viewer™ prototypes are currently being tested by U.S. military medic units in Afghanistan and Iraq
- Primary point of contact:
Walter E. Johnson, AFRL/ML
Phone: (937) 255-3808 x3170
E-mail: Walter.Johnson@wpafb.af.mil



FLC AND TECH TRANSFER BENEFITS

- U.S. government - economy
- State & local governments
- Academia
- Industry
- Federal agencies/labs/inventors



FLC WASHINGTON, D.C. OFFICE ***FARRAGUT SQUARE***



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