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SEPTEMBER
2003

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The Only Government-wide Forum for Technology Transfer

T² EVENTS

FLC Northeast/Midwest
Joint Reg. Meeting
New York, N.Y.
Oct. 1-3, 2003

Society of Petroleum
Engineers Conference
Denver, Colo.
Oct. 5-8, 2003

International Biotech &
Infotech Summit East
Washington, D.C.
Oct. 20-21, 2003

NASA Tech Briefs
Nanotech 2003
Boston, Mass.
Oct. 23-24, 2003

2003
NASVF Conference
Baltimore, Md.
Nov. 2-5, 2003

CMMI
Technology Conference
Denver, Colo.
Nov. 17-20, 2003

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T² FACT

In the 1970's a team of
Agriculture Research
Service biochemists
attached a synthetic
polymer to starch
molecules and discovered
"Super Slurper."
New products devel-
oped out of this dis-
covery include seed
coatings, bandages,
fuel filters, disposable
diapers, and "packing
peanuts."

INSIDE

2 FED LABS FLASH
2 LAB WORK
3 TECH WATCH
3 PROVEN TO WORK
5 FLC A WEALTH OF
T² TOOLS

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NETL, INDUSTRY PARTNER FOR INNOVATIVE ENERGY

DEDICATION CEREMONY MARKS TEST OF WORLD'S LARGEST COAL-POWERED FUEL CELL

The U.S. Department of Energy and the nation's electric power industry took a major step toward the goal of linking a super-efficient fuel cell to a clean coal technology power plant.

In West Terre Haute, Ind., about 100 government and industry personnel gathered to signify the final stages of construction and equipment installation for the world's first clean coal-fuel cell demonstration power plant.

FuelCell Energy, Inc., of Danbury, Conn.,



The 2-MW Direct FuelCell® is due to be installed at the Wabash River clean coal technology plant this fall.

intends to install its 2-MW fuel cell system at the Wabash River Energy, Ltd., coal gasification combined-cycle power plant.

Developed under the DOE's fossil energy program, the molten carbonate fuel cell system will demonstrate an advanced, highly efficient, pollution-free electricity production system when startup testing begins at the end of the year.

The project is expected to produce enough electricity to power about 2,000 homes.

"The fuel cell is an innovative technology that generates electricity from coal without combustion," said Steve Eschbach, director of Investor Relations and Communications at FuelCell Energy, "and it does so with significantly lower emissions than the traditional combustion-based power plant."

SEE INNOVATIVE ENERGY, PAGE 4

NIST PHOTON DETECTOR CONQUERS DARK SIDE

TECHNOLOGY MAY BE A QUANTUM LEAP FOR COMMUNICATIONS

Researchers from the National Institute of Standards and Technology (NIST) and Boston University have demonstrated a detector that counts single pulses of light while simultaneously reducing false or "dark counts" to virtually zero.

Reported in the July 28, 2003, issue of *Applied Physics Letters*, the advance provides a key technology needed for future development of secure quantum communications and cryptography.

Quantum communications and cryptography are a codemaker's Holy Grail. The idea is to use a rapid series of light pulses (photons) in one of two different states to transmit information in an unbreakable code.

The photon detector project is part of a multidisciplinary NIST effort to develop the sophisticated measurement methods needed to make quantum communication and cryptography possible. Funding was provided by the Defense Advanced Research



NIST's photon detector will advance communications by allowing for transmissions through unbreakable codes.

Projects Agency (DARPA) and NIST's Advanced Technology Program (ATP).

Most current photon detectors operate best with visible light, cannot reliably detect single photons, and suffer from high dark counts due to random electronic noise.

The new device operates with the wavelength of near-infrared light used for fiber optic communications and produces negligible dark counts. Instead of using light-sensitive materials, the NIST device uses a tungsten film coupled to a fiber optic communication line.

The film is chilled to 120 milliKelvin at its transition temperature between normal conductivity and superconductivity.

When the fiber optic line delivers a photon to the tungsten film, the SEE PHOTON DETECTOR, PAGE 4

DC DISPATCH

by Dave Appler
FLC Washington, DC Representative

The FY2004 appropriation bills are starting to gain traction and enough progress has been made to make some speculative conclusions—speculative because until these bills are the law of the land, a lot can happen. For those of you who want to follow a particular funding bill, let me direct you to <<http://thomas.loc.gov/home/approp/app04.html>>.



Dave Appler

This web address from the Library of Congress provides the status of each FY2004 appropriation bill. In addition, it provides hot links to the text of each bill. For those of you who are not interested in all of the details, I would suggest that you click on the "CRS Summary"

SEE DC DISPATCH, PAGE 5

LAB IN THE LIMELIGHT

EVERYONE TALKS ABOUT THE WEATHER, BUT...

Located in Boulder, Colo., the Environmental Technology Laboratory (ETL) supports the strategic goals of the National Oceanic and Atmospheric Administration (NOAA) through regionally specific research efforts in weather, climate, and air quality that exploit the laboratory's unique expertise in remote sensing of the geophysical environment.

ETL researchers focus on four areas: microwave systems development; optical remote sensing; clouds, radiation, and surface processes; and regional weather and climate applications.

Microwave Systems Development

The Microwave Systems Development Division consists of approximately 30 scientists, engineers, and support staff who focus on new radar, microwave radiometry, and infrasound instrumentation as applied to the observation and prediction of oceanic and atmospheric processes. The division also supports a world-class cadre of scientists formulating advanced theories of wave propagation and scattering (both electromagnetic and acoustic waves), hydrodynamics, radiative transfer, and microphysical hydro-

SEE LAB IN LIMELIGHT, PAGE 4



FED LABS FLASH

TECHNOLOGY TRANSFER NOTES FROM WITHIN THE FEDERAL LABORATORY COMMUNITY

HEART, LUNG, AND BLOOD INSTITUTE LOOKING FOR CRADA PARTNER

The **National Heart, Lung, and Blood Institute** (NHLBI) of the **National Institutes of Health** (NIH) announces the opportunity for Cooperative Research and Development Agreements (CRADAs) to develop novel



mechanical and biological treatments in interventional cardiovascular medicine using x-ray fluoroscopy and real-time magnetic resonance imaging.

The NHLBI seeks potential collaborators wishing to provide expertise in 1) novel biological

treatments for cardiovascular disease, including adult-derived stem cell and cardiovascular progenitor cells, 2) novel agents for therapeutic angiogenesis for myocardial or peripheral artery applications, 3) novel mechanisms of drug, gene, or cell delivery to the myocardium or skeletal muscle to treat manifestations of coronary or peripheral artery atherosclerosis, and 4) intravascular devices for real-time magnetic resonance imaging-guided treatments, including but not limited to angioplasty balloons, recanalization systems, percutaneous cardiac valves, stents, endografts, and bypass grafts.

The NHLBI seeks capability statements from parties interested in entering into a potential CRADA to manufacture, prototype, and test the above-specified agents or devices leading to

early clinical testing and development. Collaborator applicants developing capability statements may also include proposals to provide funding for possible commercial uses of interest to the collaborator.

SMALL BUSINESS T² ON THE RISE

by Neil MacDonald
Technology Commercialization

More federal agencies are expected to operate Small Business Technology Transfer (STTR) programs, according to a top Small Business Administration official.

These additions could boost the program's annual budget to over \$2 billion in FY04.

SBA Assistant Administrator for Technology Maurice Swinton told *Technology Commercialization* that the Department of Housing & Urban Development, the General Services Administration, the Department of Veterans Affairs, and the Department of Homeland Security could start SBIR and/or STTR programs during the next 12 months.

The SBIR program is presently awarding about \$1.5 billion a year and the STTR program about \$95 million annually, Swinton said. Reauthorization of STTR will increase the agencies' set aside to 0.30% from 0.15% with effect from October 1, 2003, and double the annual amount for the program to over \$200 million for FY04.

BROWN PIONEERS RADAR

The Aerospace and Electronics Systems Society of the Institute of Electronics and Electrical Engineers recently awarded the 2003 Pioneer Award to **Dr. William Brown, Air Force Research Laboratory**, Chief Scientist,

Sensors Directorate, for technical contributions and leadership roles in establishing fine resolution synthetic aperture radar (SAR).

Brown has 50 years of experience in research, teaching and management, and administration. Apart from his 24 years as director and president of Willow Run Laboratories and the Environmental Research Institute of Michigan (ERIM) in Ann Arbor, Brown has worked in universities, complemented by work in industry and government-related organizations and programs. His research and teaching experience in sensor systems analysis and information theory is extensive.

SCHAEFER TO LEAD BNL DIVISION

Charles W. Schaefer has been named manager of the Radiological Control Division at the U.S. Department of Energy's **Brookhaven National Laboratory (BNL)**. Schaefer is a certified health physicist with 17 years of experience in health physics-related fields.

BNL formed the Radiological Control Division in 1999 to improve and raise the prominence of the laboratory's radiological control programs.

Said Schaefer, "Brookhaven is internationally recognized as a center of scientific excellence, and we need to insure that we maintain that same level of quality in all of our operations. While we continue to meet the required standards, I will work hard to make Brookhaven a model of excellence in the area of radiological protection."



Charles W. Schaefer

LAB WORK

AFRL INFO DIRECTORATE TRANSFERS TO SYMANTEC

Scientists and engineers from the **Air Force Research Laboratory's Information Directorate**, Rome N.Y., have developed the CyberWolf security tool, which significantly reduces the amount of data a network administrator has to analyze. This tool also provides the administrator with better situational awareness of the network's security health status.

CyberWolf is commercially produced by MountainWave, Inc., with significant collaboration from the AFRL Information Directorate Defensive Information Warfare Laboratory. This security event management technology provides an automated mechanism to detect security incidents by correlating events from intrusion detection sensors and network management systems.

CyberWolf is a versatile, scaleable, and extensible enterprise security management and computer network defense tool that employs advanced communications, reasoning, and expert system rule-based correlation and analytical processes.

Under the Defensive Information Warfare Research Program, AFRL initiated an effort to assess the integration of intrusion detection and network events associated with cyber warfare and defense.

This led to an AFRL-funded Phase I Small Business Innovative Research (SBIR) effort with Mountain Wave, Inc. Phase II was awarded to exploit the correlation potential of bringing IDS and network management information together for enhanced network situational awareness.

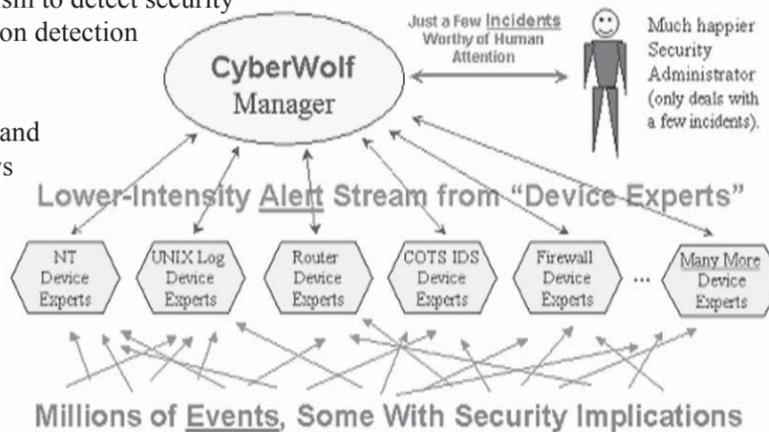
The addition of SBIR Phase II enhancement monies created a more robust product that was operationally evaluated at the Federal Emergency Management Agency, the U.S. Joint Forces Command Joint Battle Center, the Air Force Information Warfare Center, the Air Force Education and Training Command, and the United States Space Command, among others.

Recently, Symantec Corp. completed the acquisition of MountainWave, Inc. This acquisition brings to Symantec the CyberWolf technology designed to automate the detection of security incidents by the intelligent analysis of security events and alerts in real time.

Information Technology departments struggle with how to manage and respond to the wealth of information being generated by the various security applications deployed across the network.

The CyberWolf technology addresses those issues by reducing, correlating, and prioritizing security events and alerts, giving enterprises the ability to respond and stop attacks in real time.

More info: Frank Hoke, Office of Research and Technology Applications, AFRL/IF, 315-330-3470



FLC NewsLINK

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TECH WATCH: FEDERAL LABORATORY TECHNOLOGIES READY FOR TRANSFER

SENSORS

ARGONNE TECH SENSES CHEMICALS

Argonne National Laboratory (ANL) researchers have developed the Standoff Millimeter-Wave Chemical Sensor to measure airborne chemicals.

Standoff detection of chemicals is attractive because it is nonintrusive and obviates the need for extractive sampling. In the past, attempts to use microwave spectroscopy in open-path monitoring have been hampered by pressure broadening of spectral lines. In this work, the pressure-broadening problem is mitigated by using high-frequency millimeter wave (mm-wave) sources with wide sweep-width capability.

The heart of the open-path system is a Russian-made backward-wave oscillator (BWO) tube, with which ANL built a mm-wave sweeper that provides over 10-mW power and sweeps a frequency range of 220-315 GHz in 10 milliseconds. Higher power allows a longer detection range, and the wider and faster tuning improves the selectivity and sensitivity of molecular detection.

The open-path system is primarily a monostatic swept-frequency radar by which the mm-wave radiation is transmitted through a chemical plume; a corner-cube placed behind the plume returns the radiation back to a bolometer detector.

The system was field-tested at the DOE **Nevada Test Site**, where well-characterized chemical plumes were released with the use of a wind tunnel. Polar chemicals such as methyl chloride were detected down to a concentration of 12 parts per million (ppm) from a standoff distance of 60 meters. A linear fit was obtained between the estimated and actual release concentrations.

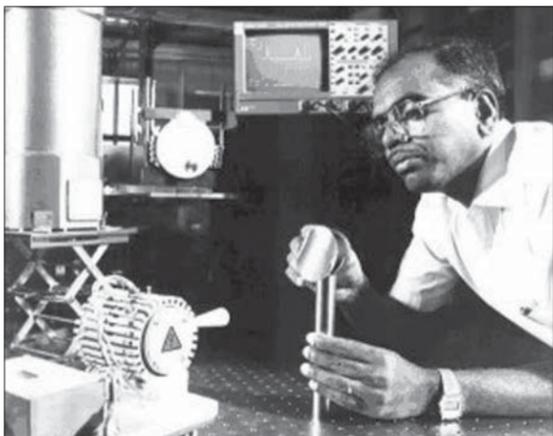
The sensor was originally developed for remote detection of airborne chemicals associated with chemical and nuclear proliferation and arms control treaty verification. The

sensor can measure a suite of airborne chemicals at 1 to 100 ppm-m levels in real time with minimal interference from common atmospheric chemicals; it can operate under all weather conditions, day or night.

The sensor is finding dual use in industrial applications such as stack emissions monitoring and leak detection of pressurized components. For example, ANL has shown the feasibility of detecting 10^{-5} scc/s leak in a standoff mode.

ANL also developed a fast-scan gas analyzer for sensitive analysis of environmental pollutants with near 100% specificity.

More info: Argonne's Office of Technology Transfer, 800-627-2596, <partners@anl.gov>



An Argonne researcher works with the Standoff Millimeter-Wave Chemical Sensor.

NIST'S NANO SENSOR

A sensitive and selective chemical sensor with nanostructured surfaces developed by **Andrew Pipino** of the **National Institute of Standards and Technology** is now available.

The patented chemical contains an optical resonator, including a nanostructured surface comprising a plurality of nanoparticles bound to one or more surfaces of the resonator.

The nanoparticles provide optical absorption and the sensor further comprises a detector for detecting the optical absorption of the nanoparticles or their environment.

In particular, a selective chemical interaction is provided, which modifies the optical absorption of the nanoparticles or their environment, and an analyte is detected based on the modified optical absorption.

A light pulse is generated which enters the resonator to interrogate the modified optical absorption and the exiting light pulse is detected by the detector.

More info: Laura Ost, (301) 975-4034, laura.ost@nist.gov

PUT THE TECHNOLOGY LOCATOR TO WORK FOR YOU!

CONTACT SAM SAMUELIAN AT 856-667-7727 OR VISIT SAM ON THE WEB AT WWW.FEDERALLABS.ORG



PROVEN TO WORK BERKELEY LAB TECHNOLOGY IS PICTURE PERFECT

Robert Nordmeyer, Robert Glaeser, and colleagues at **Lawrence Berkeley National Laboratory (LBNL)** have invented a robot that automatically scans standard electron microscope film and stores the scanned data into a database. All the user has to do to is load up to 750 photographic films into the robot and start the process. Manual loading, currently the only available alternative for scanning film, requires the operator to load a new film approximately every ten minutes. The LBNL robot eliminates over 120 hours of manual operating time per 750 scans.

Because scanning photographic film is highly labor intensive, digital cameras using charge coupled device (CCD) technology are gaining appeal in electron microscopy labs.

The LBNL robot automates the scanning process, eliminating the need to convert to digital imaging.

In addition, even the newest digital cameras are built with only 4,000 x 4,000 pixels. Due to poor scintillator performance for high-energy electrons, such cameras deliver significantly fewer pixels per image than are included in the CCD hardware itself. Photographic images, on

the other hand, can be scanned at 10,000 x 13,000 pixels. Eight or more shots would have to be taken on a high-end CCD camera to cover the same area at the same resolution achieved in a single photographic image.

Another disadvantage of digital cameras is that the electron beam illuminates and destroys a significantly larger area of the sample than is imaged. The necessity to take multiple shots of new areas with the CCD camera is not only time-consuming but multiplies this effect.

The scanning robot consists of an "unscanned film" supply stack, a "scanned film" storage stack, a motorized stage for transporting the film from the supply stack to the scanner film cartridge and returning the film to the storage stack, and a custom-designed plate for holding the film in a flat plane without creating optical fringes.

The robot is run by LBNL proprietary software that characterizes and corrects the linearity, MTF, geometric distortions, and signal-to-noise ratio. The laboratory's robot is designed to work with a Nikon Super Coolscan 8000 ED scanner.

In the application of automatically loading and scanning electron microscope film, this technology provides the following advantages:



The scanning robot picks up a film and shakes it to ensure that multiple films are not stuck together.

- Eliminates the need for dedicated labor and delays associated with film scanning in electron microscopy
- Can scan up to 750 images without reloading
- Eliminates the need to convert to a digital camera with limited imaging capabilities
- Photographic film collects more than 8 times as much data per micrograph as a digital camera at the same resolution
- Photographic film meets high performance specifications at higher electron energies while digital cameras do not
- Unique film-holder keeps all areas sharply in focus without risk of Newton's interference-fringes.

A patent is pending on the technology, which is available for licensing or collaborative research.

More info: www.lbl.gov.tt



Inventor Robert Nordmeyer using the electron microscopy film scanner.

INNOVATIVE ENERGY FROM PAGE 1

The project uses the Direct FuelCell® technology developed by FuelCell Energy through a research partnership that began more than 25 years ago with the DOE's **National Energy Technology Laboratory**.

FuelCell Energy's Direct FuelCell® uses an electrochemical reaction between fuel and oxygen from the air to produce electric power. Since no fuel is burned, there are none of the pollutants commonly associated with the combustion of fossil fuels. In fact, many states have classified fuel cells as the environmental equivalent of wind and solar energy.

PSI Energy's Wabash River integrated gasification combined-cycle plant—a very clean system that converts coal into a synthetic gas—will supply the feed gas for the fuel cell. The Wabash River plant was supported through DOE's Clean Coal Technology Demonstration Program.

Most fuel cells entering commercial markets today are designed to use natural gas or methane gas produced from municipal waste treatment plants.

The fuel cell planned for the Wabash River plant will be the largest ever to be fueled by gas made from coal.

"One truly remarkable aspect of this technology is its ability to produce hydrogen from coal," said **Carl Michael Smith**, DOE Assistant Secretary of Fossil Energy.

Because the fuel cell operates at high temperatures that allow fuel reformation to occur, the system can internally generate hydrogen from fossil fuels, as well as renewable sources such as wastewater treatment digester gas. "We expect the results gleaned from this demonstration will be translated into the President's FutureGen power plant initiative," said Smith.

The FutureGen plant will serve as the test bed for demonstrating the best coal-based technologies the world has to offer.

The plant will be based on coal gasification to produce hydrogen for use in turbines, fuel cells or hybrid combinations of these technologies.

The mechanical balance-of-plant equipment for the FuelCell Energy fuel cell—including all pre-

and post-fuel cell processes, such as fuel processing, water-treatment systems and thermal management—has been assembled.

More info: <www.netl.gov>

PHOTON DETECTOR FROM PAGE 1

temperature rises and the apparatus detects it as an increase in electrical resistance. The device detects about 20,000 photons per second and works with an efficiency of about 20 percent.

With planned improvements, the research team hopes to increase efficiencies to greater than 80 percent.

More info: Fred McGehan, 303-497-3246

FEDERAL LABORATORY CONSORTIUM
FLC
FOR TECHNOLOGY TRANSFER

LAB IN THE LIMELIGHT FROM PAGE 1

meteorological processes. The combination of focused instrument development and advanced wave theory enables the division to maintain an internationally recognized lead in airborne, shipborne, and ground-based long-wave remote sensing technology.

The division leads in the development of advanced microwave radiometry, radar, and acoustic measurement technology for applications in surveillance and environmental monitoring and prediction. Members of the division support NOAA's general mission of environmental stewardship and prediction, along with the related missions of several NOAA and non-NOAA agencies, as well as several international organizations, including NATO.

Optical Remote Sensing

The Optical Remote Sensing Division (formerly the Advanced Technique Development Division) of ETL develops and applies new atmospheric remote sensing technology and techniques that will enhance NOAA's operational and research missions.

The division strives to demonstrate the applicability and benefits of new observations for current and envisioned NOAA core areas, including short-term and medium-range weather forecasting, regional air quality prediction, marine fisheries, and climate and global change research. It is composed of five research groups oriented toward both new technique development, as well as demonstration and application of the novel remote-sensing methodologies developed within the division. The blending of instrumentalists and scientists is critical to success, ensuring that state-

of-the-art observing systems are applied to relevant and important problems.

Clouds, Radiation and Surface Processes

The Clouds, Radiation and Surface Processes (CRSP) Division develops measurement systems and techniques, and applies them to various NOAA research missions. Our research

emphasis is on atmospheric boundary layer (ABL) physical processes and associated interactions with the surface (ocean, land, ice) and the free troposphere where we seek fundamental understanding to promote the development of

parameterizations useful for numerical models and diagnostic studies. Our measurement system emphasis is in remote sensors on NOAA satellites or surface-based sensors developed at ETL, mixed with complex integrated systems of in situ sensors for studies of surface interactions. The division supports other NOAA

research and operational missions through development of NOAA satellite algorithms and mentoring atmospheric measurement systems on the NOAA ship *Ronald H. Brown*.

Regional Weather and Climate Applications

The Regional Weather and Climate Applications Division combines an extensive suite of sensors with expertise on basic physical processes affecting weather and climate, observing system capabilities and deployment, numerical modeling, and forecasting techniques. This team of 30 people, including 13 scientists

and 9 engineers, conducts research focused on improving the understanding and prediction of a variety of phenomena that span the interface of weather and climate and that are of particular importance to NOAA and to society, e.g., precipitation processes and forecasting, the relationship between short-term climate variability and significant weather events, and meteorological influences on air quality.

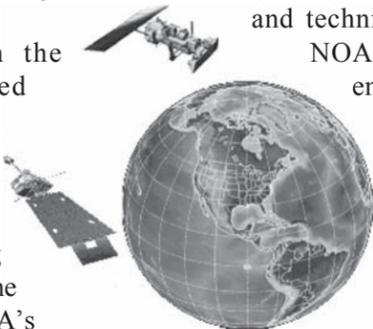
The group has extensive experience with design and use of regional networks of ground-based and airborne remote sensors, conventional in-situ observations, and satellite data. The division maintains and deploys many instruments,

including 15 wind profilers with RASS and surface stations, several sodars, two vertically pointing S-band radars, two scanning radars (X and K-bands), flux and soil moisture systems, ceilometers, a tethered sonde, GPS sounding systems, and other equipment.

Engineering advances focus on adapting equipment for use in extreme environments and improving automation and reliability. The division explores basic physical processes to document the capabilities and limitations of

existing and candidate new observing systems, and to develop new forecasting techniques for a variety of applications. Key applications include improving predictions of coastal weather; developing tools to assist air quality, water, and energy resource managers; and resolving tropical and polar processes affecting weather.

More info: www.etl.noaa.gov



The satellite group uses a suite of geostationary and polar orbiting satellite data from NOAA and NASA environmental satellites to gain a fundamental understanding of the atmosphere and air-sea interface.

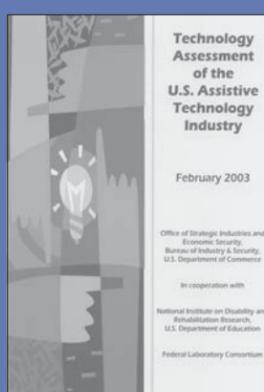


ETL researchers study the Arctic for signs of climate change.

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WORLD'S BEST TECHS

Researchers and scientists seeking seed capital or corporate licensing partners are strongly encouraged to participate in the next

wbt 04

World's Best Technologies Showcase, slated for March 22-23, 2004, in Arlington, Tex.

Up to 75 technologists will be selected for the WBT04. All accepted technologists receive free exhibit space and the opportunity to make a brief presentation. Prospective exhibitors are encouraged to apply online beginning September 1, 2003.

The WBT04 is a national competition designed to support the movement of world-class technologies from leading laboratories,



Former FLC Chair Ann Rydalch discusses technology transfer with exhibitors during World's Best Technology 2003 in Pittsburgh, Pa.

universities, and federally funded research facilities into the marketplace. The event is produced in cooperation with the FLC and the

National Association of Seed and Venture Funds. The Arlington Chamber of Commerce and U.S. Department of Commerce will be hosting the WBT04. Additional committed sponsors include Procter & Gamble, University of Texas System, Texas Department of Economic Development, and the U.S. Department of Energy.

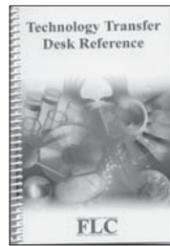
The inaugural WBT02 showcased 37 technologies and attracted approximately 200 attendees, including 60 seed investors and corporate licensors. In just 10 months, WBT02 exhibitors have since attracted over \$24 million in venture capital and R&D funding.

For more information, visit the WBT website at <www.wbt04.com> or contact the event producer, Paul Huleatt, at 602-795-8825.

FLC A WEALTH OF TOOLS FOR T² PROS

Technology transfer (T²) professionals can look to the FLC as their first stop in finding the tools and services needed to sharpen their skills.

From learning T² basics to staying up-to-date on T² policy, FLC members have at their disposal publications, electronic communications, workshops, and networking events to ensure that technology advances not only in the laboratory, but also to the marketplace.



Below are descriptions of just a few of these tools.

The *FLC Technology Transfer Desk Reference* provides a comprehensive introduction to technology transfer and the background, concepts, and practical knowledge required for technology transfer practitioners, whether in government or industry, to facilitate the transfer of federally funded technologies from the laboratory to the marketplace. The reference includes a T² overview, including T² procedures, history, strategies, organizations, and mechanisms; the role of the FLC; Cooperative Research and Development Agreements (CRADAs); intellectual property issues; and marketing.

Federal Technology Transfer Legislation and Policy (the Green Book) provides the principal statutory and presidential executive order policies that constitute the framework of the federal technology transfer program. This third edition of the Green Book is intended to assist policy makers and technology transfer practitioners in the government by serving as a legal reference resource. It is also intended to help those outside the government acquire a fundamental understanding of the legal framework for technology transfer.

To obtain a printed copy of the above publications, contact the FLC Management Support Office at 856-667-7727. FLC members are entitled to one free copy of each. Additional

copies or copies for non-FLC members can be purchased for \$5 each.

For industry and other technology seekers, the *FLC Technology Locator* serves as a point of entry to federal laboratory expertise and technology. In meeting this need, the network also handles requests from other organizations working with the private sector, including NASA's Regional Technology Transfer Centers, the National Technology Transfer Center, and state-funded economic development centers.

Through its network of representatives, the FLC puts a potential partner in contact with a federal laboratory with expertise and capability in a specific area of interest. Once the FLC identifies the contact, the arrangements for the technical exchange are between the user and the laboratory.

The FLC National Advisory Council offers the *Commercialization Assistance Mentoring Program* (CAMP) to help federal laboratories and federally funded research and development programs that request assistance in commercializing their technologies. The goal of this program is to facilitate the transfer of federal technologies to industry, state and local governments, and academia. By offering commercialization and mentoring assistance, CAMP not only encourages T² but provides additional resources that can be used by federal laboratories and federally funded research and development programs, resulting in more successful commercial transfers.

To learn more about CAMP and the Technology Locator service, contact FLC Technology Locator Sam Samuelian at 856-667-7727, or at <ssamuelian@utrsmail.com>.

Details on these services, and more, can be viewed at the FLC web site, <www.federallabs.org>.

The web site includes contact information for the FLC, laboratory information, technology highlights, a list of upcoming T² events, and patent listings.



DC DISPATCH FROM PAGE 1

prepared by the Congressional Research Service. This summary provides a set of brief highlights about the contents of the bill.

In looking at the bills so far, let me provide some very brief highlights. The EPA S&T budget is currently projected to receive about a 6% increase; NASA looks on target to receive about a 3-4% increase, but there is a strong feeling in the House and Senate that the completion of the Columbia shuttle investigation will have a major impact on any final bill.

In Commerce, portions of the R&D budget are in serious trouble. Of particular note is the elimination of funding for the Advanced Technology Program, a 60% cut in funding for the Manufacturing Extension Program, and a 15% decrease in NOAA research and development funding. Some of these programs receive strong support, so I would not be surprised to see changes before the bill is finalized. The NSF budget would go up more than 6% to reflect a commitment in Congress to promote a multi-year major increase in funding for the physical sciences. DOE would appear to be on track for a 5-6% increase. DOD S&T may be looking at an increase of over 12%.

In the case of the DOD, you have to keep in mind that a large part of its S&T budget is focused on development versus research. In reflection of that, the basic and applied research portions would grow 1%-2%, respectively.

For the new agency that many are interested in, the Department of Homeland Security (DHS), it is evident that R&D will be a significant part of its mission. The appropriation bills reflect an

increase of 50-60%, with a budget of \$1 billion for FY2004. For DHS, you have to keep in mind that this is an agency that is still getting organized, staffed, and implemented. As a result, I do not think anyone knows how the R&D budget will evolve over the next couple of years, but they are certainly going to promote R&D in a number of areas that have not received much R&D focus in the past. Therefore, some really new programs with a fairly sizeable amount of new money are on the horizon.

In health-related areas, the growth in budget at NIH slows considerably. After a five-year effort that doubled the NIH budget, growth for FY2004 would be in the range of 3-4%. CDC could grow by a little over 2%, and the FDA appears on target for a 13.1% increase. For Agriculture, it appears that a modest 1-1.5% increase is the target, although the Forest Service component may grow 6%. The total R&D number looks like a cut when compared to FY2003 because of major funding for security upgrades at several Agriculture R&D activities this fiscal year.

There would be some slight growth in R&D at the Department of the Interior due to both the House and Senate reversing reductions in the FY2004 proposed budget.

Now for a few brief notes on some other legislative initiatives. Several people have asked me about what is happening in transportation R&D. The answer is not much yet.

A large part of this program is included in a multi-year authorization referred to as the Transportation Equity Act for the 21st Century

(TEA-21). The House Transportation Committee would like to include a small increase in gas taxes to fund new or increased initiatives in this area. There is political pressure to resist doing this so soon after the tax cut that Congress enacted in the spring; so, while there may be a lot of things being drafted by congressional staff behind the scenes, nothing has been released yet. The House and Senate have passed their competing versions of the Omnibus Energy Bill again this year, but there is still a lot of political talk as to whether a compromise bill can be worked out and actually pass the House and Senate in final form.

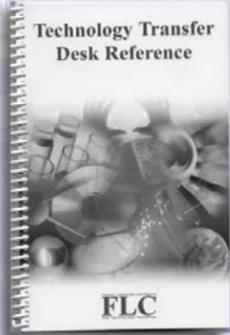
On a different front, Congressman Sabo of Minnesota recently introduced the Public Access to Science Act (H.R. 2613). This proposes to prohibit government-funded contractors and grantees from copyrighting their R&D. The premise is to get around the cost of scientific journals by not allowing copyright and thereby making it free to the general public. One of the potential impacts is the ability to protect intellectual property, thereby making it difficult to commercialize some technology. One thing that can certainly be a negative impact in the failure to protect intellectual property is the fact that people will not invest in the further development of scientific breakthroughs if they cannot preclude that investment from being infringed on by others.

You can contact Dave Appler at dappler@flcdc.cnhost.com.

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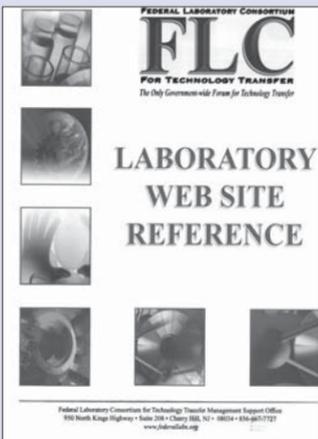
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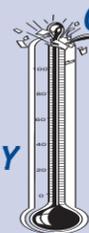
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