

TechReach



3rd Quarter 2007

Save the Date

TRDA Business Innovation Center

Thursday, August 16, 2007, 8:30 a.m.

1050 W. NASA Boulevard

Melbourne, Florida



Scheduled speakers include:

U.S. Representative Dave Weldon, M.D., 15th District of Florida

Sandy K. Baruah, Assistant Secretary of Commerce for Economic Development, U.S. Dept. of Commerce

State Senator Mike Haridopolos, Florida Senate, District 26

State Representative Thad Altman, Florida House of Representatives, District 30

Keisha Rice, acting director, Florida Office of Tourism, Trade and Economic Development

Dinah Adkins, President and CEO, National Business Incubation Association

Commissioner Jackie Colon, Chair, Brevard County Commission

Mayor Harry Goode, City of Melbourne

Richard Ennis, Executive Director, Melbourne Airport Authority

Dan Adovasio, Chair, The Technological Research and Development Authority

TRDA...Empowering Innovation through Technology

First Tenants Move Into the Business Innovation Center

Four local technology companies have been selected as the first tenants for the new 30,000-square-foot TRDA Business Innovation Center. The companies began moving into the facility in July.

The start-up and expanding companies selected recently completed the six-week "Roadmap to Success" workshop series, which is designed to boost entrepreneurs' understanding of key aspects of business formation, growth and continuing profitability. The workshop was a pre-requisite to be considered for tenancy.

Company leaders made business presentations and provided supporting documentation to TRDA. All materials were thoroughly reviewed and judged by a panel of local business leaders, including attorneys, bankers, financiers and entrepreneurs.

"Company leaders were evaluated on whether they appeared to have the ability to run a business and offer a dynamic product that has market potential and will be a driver of change," said Chester J. Straub Jr., executive director of the TRDA. "We are pleased to have the opportunity to foster promising technology companies of such high caliber."

Selected companies include the following:

Adapt 4 -- **Adapt 4** developed hardware and software that supports radio communications via licensed radio waves that are not in use in a network area. The cognitive radio technology operates within Federal Communications Commission rules to channel radio signals to unused radio frequencies. It has numerous applications in the military, homeland security, utilities, public safety, and transportation industries. Adapt 4 will occupy 3,000 square feet at the center, including two high bays and office space. Its employment goal is 22 employees within one year.

Audigence -- The company's patented software will allow cochlear implant and hearing aid manufacturers to better tune their devices for clearer speech recognition in hearing-impaired individuals. The company has been testing its patented software in clinical trials since 2003. "People don't want to be able to hear paper rustle more clearly; they want to be able to understand what someone is saying, especially on the phone," said Lee Krause, president and chief executive officer of Audigence, who has a cochlear implant. "The TRDA is assisting us in our noble struggle to help people hear more clearly."

ColorSculpt -- ColorSculpt has created a process to manufacture full-color sculptures of people. The unique technology uses images captured by a series of high-definition 3-D cameras and transforms them into dimensional portraits in sizes up to 14 inches tall. The product is made of a composite material and has a full color matte finish. "This is a tremendously valuable opportunity for our company," said Jeff Baloun, founder and chief operating officer, on being selected as a tenant. "The success rate of TRDA-affiliated companies is outstanding."

Sea-Watch -- While electronic monitoring in the aviation and locomotive industries has become more sophisticated, the marine industry has tended to lag behind. Now Sea-Watch hopes to fill the gap by providing on-line monitoring and control to owners of marine vessels that are 30 feet in length and longer. The company has developed and tested the hardware and software for its integrated system, and is now looking to enter the emerging market. Competitors provide monitoring and control via a third party, while the Sea-Watch system will be owner directed. "The TRDA has been of great assistance in the past, including helping us to obtain SBIR grants," said Loretta Kish, company president. "Moving into the center will provide us with even greater resources."

Tenants in at the TRDA Business Innovation Center will have professional facilities, mentoring and product development support to ensure the best chances for success for their businesses.

The TRDA Business Innovation Center is supported by the U.S. Department of Commerce Economic Development Administration, the city of Melbourne and Brevard County. It is expected to serve 30 to 35 new or expanding companies and create 70 to 100 jobs in the first four years of operation.

SATOP gives thanks to its alliance partners

On May 15, the Space Alliance Technology Outreach Program (SATOP) hosted its 6th annual Alliance Partner Appreciation event, which honored the 55 companies, universities and colleges that volunteer their time and expertise each year to help hundreds of small businesses overcome technical challenges.

Sponsored by the TRDA, which administers SATOP nationally, the event drew more than 180 attendees, including former SATOP clients from around the country.

In addition, several Congressional representatives attended, including Congressman Nick Lampson (TX), Congressman Michael McCaul (TX) and Congressman Al Green (TX). Staff members from the offices of Senator Bill Nelson (FL), Senator Martinez (FL), Congressman Steve Pearce (NM) and Congressman Ted Poe (TX) were also in attendance.

During the event, the TRDA presented eight special awards to companies and universities that have made significant achievements within SATOP.

The following companies were named "Alliance Partner of the Year" in their respective states: United Space Alliance-Kennedy Space Center (Florida); ASR Corporation (New York); New Mexico State University (New Mexico) and The Boeing Company-Johnson Space Center (Texas).

The TRDA also presented awards of excellence to companies that provided outstanding assistance to specific small businesses. Recognized companies included the following:

- The University of Central Florida - UCF helped Dais Analytic Corporation improve the design and overall efficiency of its heating exchange unit for HVAC systems. The assistance helped Dais reduce costs by more than 30 percent, increase profit margins and ultimately sell 1 million square feet of the product last year.
- City University of New York (CUNY) - CUNY worked with WindowTherm to simplify the design of the company's window insulating product while retaining maximum structural integrity.
- New Mexico State University - The University assisted Momentum Interactive in selecting optimum material, as well as performing a finite element analysis, for the company's aviation light. In one year, Momentum went from a start-up company to a true "product-in-the-box" company that sold 6,000 units. Furthermore, three aviators that had electrical failures were able to use Momentum Interactive's light to safely land their aircraft.
- MEI Technologies, Inc. - MEI helped HydroMAX, which manufactures hydration systems worn on football shoulder pads. MEI made improvements to the product's bite valve and tubing system. The product is now being used by players on the Dallas Cowboys and San Diego Chargers, as well as Texas A&M University.

A highlight of the event occurred when Chester Straub, executive director of the TRDA, unveiled the results of a recent independent study that measures the ongoing economic impact of the program. The study revealed that SATOP's alliance partners helped create and/or retain 327 jobs and infused more than \$165 million into the U.S. economy in the last year.

"It's wonderful the total amount of money you're putting into the U.S. economy, and the jobs that are being created," said Congressman Nick Lampson (TX), upon hearing the results of the study. "Congratulations on another great year."

Other Congressional representatives echoed similar sentiments.

"On behalf of the United States Congress, I want to thank you for what you do for the space program, as well as for small businesses," said Congressman Michael McCaul (TX). "To help small businesses advance in technology is important because technology is the future."

"I am so honored that the SATOP has developed programs to assist small businesses," said Congressman Al Green (TX). "Small businesses in my area alone are benefiting greatly from what you do."

In addition to the special awards, SATOP also paid tribute to all of its other Alliance Partners, including the following Florida-based companies: AJT & Associates; ASRC Aerospace Corporation; The Boeing Company - KSC; C & H Merrill, Inc.; Florida Institute of Technology; Micro Aerospace Solutions, Inc.; Pratt and Whitney Rocketdyne; The Raytheon Company; SAIC Cape Canaveral; SAIC Melbourne; The Shapes Group; Space Gateway Support, LLC; and SPACEHAB, Inc.

SATOP joins the half-a-billion-dollar club

An independent study just released has made the Space Alliance Technology Outreach Program (SATOP) a member of a new organization - the half-a-billion-dollar club! Since 2002, SATOP has pumped more than \$571 million into the national economy.

Five years ago, SATOP began measuring economic impact data on an annual basis. The 2006 study, which was released in June revealed that SATOP's economic impact exceeded \$165 million in fiscal year 2006, pushing the cumulative total beyond the \$500 million mark.

"I was adding up the year-to-year numbers, and it hit me," stated Paul Secor, TRDA's director of technology transfer, who oversees the national operation of SATOP. "It made everyone involved feel like we were now a part of a special club."

Economic & Policy Resources (EPR), located in Williston, Vt., conducted the program's 2006 economic impact study. EPR calculated the quantifiable impact based on information that SATOP requestors provided directly to the Behavior Research Center (BRC), an independent, third-party firm.

"SATOP uses the Behavior Research Center to contact each of the small businesses that used SATOP during the last year," said Chris Gilfriche, director of SATOP-Florida. "We know exactly how we helped businesses solve their technical challenges, but the BRC allows us to learn how our solutions impacted a business' bottom line."

Researchers at the BRC ask questions designed to quantify the impact created from SATOP's assistance. Questions focus on topics such as recognized cost savings, increased sales, increased capital investment in the business, added and retained jobs and more. The culmination of this data is then sent to EPR to determine the total nationwide results.

In 2006, SATOP solved 402 requests. In addition to the \$165 million in economic impact, EPR determined that this assistance also resulted in the creation and retention of 327 jobs. These numbers represent an increase over last year's results.

"The mission of the SATOP is to transfer the knowledge and technology of the U.S. space program to small businesses," Secor said. "Thanks to these annual studies, we know that once we transfer that knowledge and technology, there is a tremendous return not only for small businesses, but also for our entire country."

Hendry County schools get an agricultural technology boost

High school science classrooms in Florida's Hendry County were buzzing with technology during the 2006-2007 school year, thanks to a grant from the Florida Department of Education.

In July 2006, the TRDA helped Hendry County secure a \$861,000 Enhancing Education Through Technology grant to incorporate technology into agricultural classrooms at both of the county's high schools. Hendry County is a rural, ethnically diverse, agricultural community in southern Florida. It is home to growing citrus and sugar industries.

"Many students in Hendry County pursue careers in the agricultural industry," said Gary Breakfield, Hendry County's administrator for exceptional student education, who also wrote the grant and supervised the technology integration program. "Our goal was to tie science and agriculture together in order to better prepare our students for getting a good job when they graduate or to have the technological background to succeed in college."

The grant provided laptop computers, digital cameras, weather-monitoring devices, digital microscopes, GPS mapping systems and data-collection probes. In addition, grant funds were used to provide ongoing professional teacher development workshops that trained all of the teachers on how to use the new equipment.

"We wanted to make sure this technology reached every single one of our students, including special education and non-native students," Breakfield said.

Following training, the teachers integrated the technology into their classrooms in unique ways.

In one classroom, students learned how local sugar farmers are using satellite technology to monitor soil in large fields and to determine when various plots of land need nutrients, water, fertilizer or pesticide spray. Using GPS systems and data probes, the students performed similar soil monitoring tests on an acre of land.

Teacher Mike Kemp, who was named Southwest Florida Environmental Educator of the Year, used GPS technology to teach his marine biology students how to test water quality. Kemp took his students on a field trip to a test site off of the Caloosahatchee River where they took GPS readings. He then arranged for his students to provide their data to South Florida Water Management, which performed the actual water quality testing on a regular basis. The students tracked the water quality throughout the year, learning how various factors such as dry and rainy seasons affected water quality.

"This program boosted student interest in science, which is a growing problem throughout the nation," Breakfield said. "It definitely enhanced both the students and the teachers' technological abilities. Students had more energy and found their studies to be more interesting."

Diane Matthews, director of The Endeavour Academy, the TRDA's education division, believes the program was an eye-opener in terms of the opportunities available within Hendry County.

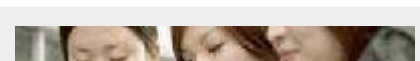
"Many people in the state think they have to go to Miami, Orlando or Ft. Lauderdale to have a technologically challenging, agricultural career," said Diane Matthews, director of The Endeavour Academy, TRDA's education department. "This grant allowed us to show these students that Hendry County is not just cows and plows, but that actual cutting-edge technology is hard at work in the county's agricultural industry."

While the program was a success, Breakfield said he wished it could have been stretched out over two to three years, thereby allowing the teachers to really become proficient with the technology.

"We are trying to find funding to cover additional teacher professional development workshops," Breakfield said. "In the meantime, we are attending education conferences to learn more about these technologies and share our experiences so other schools can learn from us."

2007 Teacher Quest program expands into new markets

The 2007 Teacher Quest Scholarship Program is bigger and better than ever! This year, the teacher professional development program



expanded into more Florida counties and drew a record number of employer participants.

Sponsored by the TRDA, Teacher Quest is a seven-week, paid summer professional development program in which K-12 teachers go to work at select science- and technology-based businesses in Florida. Teachers gain valuable industry knowledge and take it back to the classroom to make math, science and technology studies more exciting and challenging for students.

A total of 85 teachers from around Florida signed up for the program. They hail from 14 Florida counties: Brevard, Broward, Orange, Leon, Pinellas, Seminole, Polk, Sarasota, Lee, Hillsborough, Osceola, Miami-Dade, Duval and Volusia Counties. In 2006, the program drew teachers from 11 counties.

"Teacher Quest has grown geographically over the last year and we are reaching more rural areas of the state," said Diane Matthews, director of The Endeavour Academy, the TRDA's education department. "We have several returning teachers, but the majority of them are new participants, which is also very exciting."

In addition, Matthews said the program recruited more employer participants this year. The 2007 program features 24 companies and institutions that employ the teachers during the summer. This is almost a 20 percent increase in employer participation in one year.

"We have always had science centers and university research facilities as employer participants in Teacher Quest," Matthews said. "However, this year, we've added some more diverse employers, such as high-tech manufacturing companies and a medical technology company."

The 2007 list of employers includes: American Systems, Corp.; Brevard Zoo; Challenger Learning Center; ConMed Linvatec; .Decimal, Inc.; Delaware North; Florida Institute of Phosphate Research; Florida State University High Magnetic Field Laboratory; Imaginarium; Lowry Park Zoo; Marie Selby Botanical Gardens; Mercury Marine; Miami Metropolitan Zoo (Zoological Society of Florida); Miami Museum of Science & Planetarium; Museum of Science and Industry; Museum of Science and History; Ocean Design, Inc.; Progress Energy; SIFT; Sun Hydraulics Corp.; Tallahassee Museum of History and Natural Science; The Florida Aquarium; Volusia Soil & Water Conservation District; and Zero Gravity Corp.

Employers receive partial reimbursement to cover their assigned teachers' salaries. The reimbursement funds are generated from sales of The Space Plate (formerly known as the Challenger/Columbia license plate).

The teachers began their seven-week employment assignments during mid-June. Their assignments will end in latter July. On Aug. 3, the TRDA will host a "recognition event" at the University of Central Florida in Orlando to honor the participating teachers and employers of the 2007 program.

The Florida Department of Education launched Teacher Quest in 1989 to address the growing shortage of middle- and high-school teachers in math, science and technology. TRDA partnered with the Department of Education in 1997 to administer the program. Since this time, the program has invested more than \$250,000 in statewide teacher professional development. Nearly 1,000 math, science and technology teachers selected from across the state have participated in the Teacher Quest program since 1997. Most participants report a more in-depth knowledge of constantly evolving technologies and feel better equipped to instruct their students.

For more information on participating in next summer's Teacher Quest program, either as a teacher or an employer, visit <http://www.theendeavouracademy.com/> or call 866-263-9564.

Clean-energy start-ups find capital at NREL Industry Growth Forum

Accessing capital is a vital component to the success of a start-up company. For clean-energy, start-up companies, the place to potentially find those critical funds is at the 20th NREL Industry Growth Forum.

The Industry Growth Forum is the largest venture event focused



solely on companies developing clean-energy products. It is sponsored by the National Renewable Energy Laboratory (NREL) and the Clean Energy Alliance, a nationwide network of clean-energy incubators, of which TRDA is a founding member.

At the Forum, a select group of start-ups vie for the chance to present their ideas, receive feedback and engage in dialogue with some of the nation's leading, most aggressive clean-energy investors. All attendees get a preview of promising early-stage businesses in renewables, clean energy, and energy efficiency. In addition, the Forum format attracts a large array of clean-energy professionals, which creates a rich information-sharing and networking environment positioned to foster clean-energy economic development.

"The impact of the Industry Growth Forum is evident in the numbers," said David Kershaw, TRDA's deputy director. "Since 2002, 135 companies have collectively raised \$560 million by participating in the event."

Participation in the formal presentation portion of the Industry Growth Forum is limited to 35 clean-energy start-ups. Interested companies complete an application and submit a \$250 fee. A committee of leading clean-energy investors selected by NREL reviews, scores and provides feedback on all applications. Companies selected for Forum presentations receive valuable mentoring on their business case presentation prior to the event.

Applications to participate in the 20th Industry Growth Forum in Denver are now being accepted through July 31. Applications can be downloaded at www.cleanenergyforum.com/apply.php.

"Our job is to recruit businesses developing clean-energy products and services to come forth and share their ideas," Kershaw said. "There are great ideas, patents and inventions out there, but the biggest roadblock is getting that capital investment in order to move to the next step. This Forum helps alleviate that obstacle and takes the product to the next level."

In 2006, TRDA helped seven clean-energy start-up companies complete applications, including Citrus Energy, LLC out of Boca Raton, Fla. A selected presenter, Citrus Energy, LLC demonstrated its ability to convert citrus waste into ethanol and ethanol co-products.

"Even if a company is not selected to formally present, we still encourage the business owners to attend the Forum because the application fee covers registration costs," Kershaw said. "It is extremely beneficial to watch the presenters, hear the feedback and learn what companies did to get selected. Furthermore, it's a chance to rub elbows with investors who have already cut their teeth on clean-energy projects and who are also very astute about energy efficiency, renewable energy and clean energy practices."

The 20th NREL Industry Growth Forum takes place Nov. 6-8 in Denver. For more information, visit <http://www.cleanenergyforum.com/> or for application assistance call Dave Kershaw at (321) 872-1050, ext. 102.

Technological Research and Development Authority
1050 W. NASA Blvd., Melbourne, FL 32901

321-872-1050
fax 321-872-1051
admin@trda.org