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TRDA Offers "Roadmap to Success" Workshop Series

Do you need assistance navigating through the complexities of new business ownership? If so, the TRDA's "Roadmap to Success" workshop series will point you in the right direction.

Designed to assist new and developing companies, the "Roadmap to Success" series provides owners with strategies for growth and profitability. The series will be held at the new TRDA Business Innovation Center in Melbourne, Fla., and is slated to begin on Wednesday, May 16.



"Our goal is to assist entrepreneurs with valuable resources, a nurturing environment and hands-on assistance to grow their small technology businesses into mature companies," said Chester J. Straub, Jr., executive director of the TRDA. "One way we do this is to provide an opportunity for networking and developing strategic partnerships through this upcoming workshop series."

The workshop series will be conducted by Richard Fox and Scott Faris of the Astralis Group, LLC. Fox has more than 20 years of experience in creating new defense and technology companies. Throughout his career, he has worked with new and existing corporations to identify core competencies, market opportunities and potential spin-out opportunities. Fox has also served on the Florida Seed Capital Board and has been a member of several task forces for the state of Florida on venture and seed capital investing. He is currently a member of the board of the National Association of Seed and Venture Funds. Faris has been involved in the start-up of over 20 technology companies and brings together a background of finance, technology commercialization and operating experience to emerging growth technology companies. Scott was the Founder and CEO of Enterprise Corporation, a technology accelerator organization that raised more than \$50 million in capital for new and existing technology firms through a private investment forum. Faris was also the Director of the State Venture Capital Fund in Florida, and the Director of Technology Commercialization at the Center for Microelectronics Research. He began his career as an Associate with Zero Stage Capital.



The series is comprised of six, two-hour workshops held within a six-week period. Each class will focus on a particular area:

- Session 1: Goals - Peer-to-peer workshop designed to develop succinct definitions of each entrepreneur's business. Specific visions, missions and exit strategies are developed.
- Session 2: Focus - Participants use a set of planning tools to determine company direction and ideas. During this session, many participants rethink their basic concepts and tactics to fit new strategies.
- Session 3: Marketing and Competition - In this session, owners develop their company's position with respect to their competitors and their potential customers.
- Session 4: Financial Considerations - This session builds on decisions and assumptions developed in prior sessions. Participants begin drafting a five-year financial plan.
- Session 5: Bringing It All Together - Participants assemble their key strategies into a presentation of their business offering.
- Session 6: Presentations to the Emerging Business Network - Each participant presents their business concept and accompanying plan to an audience of experts.

Entrepreneurs wishing to apply to become clients of the TRDA Business Innovation Center must complete the "Roadmap to Success" workshop prior to being considered for program admission.

The joint workshop and Innovation Center application fee is \$450. The fee for the workshop only is \$300. The workshop is limited to 20 participants. All sessions will be held from 7-9 p.m. at the TRDA Business Innovation Center, located at 1050 West NASA Blvd in Melbourne, Fla. The TRDA will host a preview of the workshop series on Wednesday, May 9 at 7 p.m. for interested applicants and local support organizations.

To reserve a space at the workshop preview call Brenda McMillan at 321-269-6330, or use the [Roadmap to Success online application](#).

Energy "A Peel"

"Alternative energy" is the buzz word for 2007, with many companies working together to develop new, clean-energy sources. The TRDA is no exception. The agency recently partnered with EnerFuel, The Florida Turnpike Enterprise, and Progress Energy to develop a power plant whose fuel source is derived from by-products of Florida's citrus industry. This power plant, which is currently in development, will utilize a hydrogen fuel cell to partially power a rest area along the Florida Turnpike.



Approximately 70 percent of the United States' citrus production is based in Florida. The state produces approximately 8 million tons of citrus waste each year, most of which is processed into cattle feed or ends up in landfills. However, some of the citrus waste is being used to create methanol, a hydrogen-based fuel source.

EnerFuel, a wholly-owned subsidiary of Ener1, Inc. (ENEI), received a \$550,000 contract award from the non-profit, Florida Hydrogen Initiative through the U.S. Department of Energy to build a 10 kilowatt power plant that will use methanol to power a hydrogen fuel cell system at the Turkey Lake Service Plaza on the Florida Turnpike. This fuel cell system will provide power for a portion of on-site utilities at the plaza.

As guests stop at this rest area, they will be able to see the fuel cell power generator first-hand. A kiosk will accompany the fuel cell project, educating the public on the uses of methanol, as well as explaining the benefits of producing and using clean-energy, self-sustaining fuel sources.

"Fuel cell technology is not always an easy concept for the public to understand," said Ramesh Krishnaier, executive vice president of EnerFuel. "A fuel cell that runs off of citrus waste is a concept that grabs people's interest and is easy for them to understand."

Progress Energy will be using their expertise to connect the power plant to an existing electrical panel, thus harnessing the energy derived from the fuel cell project.

"Participating in this demonstration has given Progress Energy a balance in our approach and research as we look at viable energy alternatives," said John Masiello, manager of demand side management and alternative energy strategy for Progress Energy. "This is our first opportunity to take a look at methanol as an alternative energy source."

The TRDA is currently serving as a consultant to EnerFuel for this endeavor and will provide assistance with permitting, environmental oversight, public awareness and assist with other critical groundwork at the Turkey Lake Service Plaza on Florida's Turnpike.

"The TRDA supports the state of Florida in its mission to encourage the development of new and alternative clean energy technologies," said James Culp, energy program manager of the TRDA. "This is an excellent example of a private-public partnership that is working together to educate the public on the uses of these new energy technologies."

The Turkey Lake Service Plaza methanol fuel cell and kiosk is scheduled to open in 2008.

Teacher's Summer Job Leads to Student Success at Science Fair

What do teachers do during their summer hiatus from school? Some vacation. Some relax. Others invest in their careers.

Dr. Karen Ford opted for the latter and chose to further develop her teaching skills by participating in Teacher Quest, one of the TRDA's signature education programs. Thanks to her hard work, and the curriculum she brought back to her classroom, one of Ford's students is on her way to the state science fair.

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.



Ford, a high school biology teacher at Pedro Menendez High School in St. Augustine, spent her summer as an intern at the Guana-Tolomato-Matanzas National Estuarine Research Reserve (GTMNERR), run by the University of Florida Whitney Labs. While at GTMNERR, she participated in numerous research projects and worked with scientists from several environmental monitoring agencies. Her experiences included collecting and identifying oyster bed crabs for a non-indigenous species monitoring program, as well as assisting with a sea turtle nesting project.

Upon returning to school, Ford used her summer experiences to develop an advanced, water-quality study module to implement in her classroom. Using GTMNERR data, students created graphs, evaluated statistics and developed theories about how changes in water quality impact organisms living in the water.

In addition, Ford requires that her advanced placement students participate in the annual science fair.

"I have a student who won the regional science fair competition based on an experiment I learned through my Teacher Quest experience," Ford said. "She did a statistical analysis on crab species abundance, and is now going on to the state competition. GTMNERR was very helpful with this student, assisting her with data collection and helping to make her project a winning one."

Diane Matthews, director of The Endeavour Academy, TRDA's education department, believes the Teacher Quest program is a tremendous continuing education program for teachers.

"The Teacher Quest program allows teachers to learn about technologies and programs that can be outside of their field of expertise," Matthews said. "This program helps them gain knowledge on content matter that they can then develop and use in their classroom. Enriched with these new discoveries, our teachers feel more confident and are energizing their classroom curriculum."

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. In the past seven years, 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.

Applications for the 2007 Teacher Quest are currently being accepted. For more information on participating, either as a teacher or an employer, visit www.theendeavouracademy.com/TeacherQuest or call 1-866-263-9564.

SATOP Helps Company Fine-Tune Promising New Energy-Saving Device

Conserving energy and lowering its costs within buildings is fast becoming a priority for many companies. Dais Analytic Corporation (Dais) in Odessa, Fla. is one company that understands this need. And with recent guidance from experts with the TRDA's Space Alliance Technology Outreach Program (SATOP), the company's energy-saving device has taken a giant leap forward and may soon be on the market.

Dais manufactures high-performance nanotechnology polymers. Its leading commercial product, ConsERV, is an energy-recovery ventilation exchanger that saves money on HVAC cooling, while improving air quality in large commercial and residential buildings.

ConsERV works by using a membrane to transfer both heat and moisture from a hot, humid fresh air stream entering a building to the cool, dehumidified exhaust air leaving the building. Because the fresh intake air is cooled and dehumidified before reaching the air handler, a significantly smaller air handler can be installed.

Not only is the capital cost of this unit lower, it also does not have to work as hard, thereby saving from 35 percent to 50 percent of the energy normally required. The energy recovery ventilator works equally well in winter conditions, where the exhaust air heats and humidifies the incoming cold air.

However, one component in the ConsERV exchanger needed updating to improve its efficiency. The existing design had already required costly and time-consuming iterations, so Dais sought top-notch engineering help to streamline efforts. Scott Ehrenberg, chief technical officer for Dais, learned about SATOP from the Pasco County Economic Development Council. He visited SATOP's web site and submitted a Request for Technical Assistance (RTA).

SATOP Senior Program Engineer Ryan Greenough knew the RTA would require a complex analysis and assigned it to Dr. Alain Kassab, a professor in the mechanical, materials and aerospace engineering department at the University of Central Florida. Dr. Kassab possesses an extensive background in fluid thermodynamics with emphasis on numerical heat transfer and fluid flow.

"The analysis of the ConsERV airflow exchange turned out to be very difficult due to the geometry and complexity of the parts being analyzed," said Dr. Kassab.

After Dr. Kassab and Ehrenberg reviewed the graphical output from the analysis, they came to the conclusion that further optimization of the design would not yield the desired benefit.

Dr. Kassab's analysis prevented Dais from continuing with the current design and pointed the company toward a completely different design that would achieve the desired goals.

"The new design will be easier and less costly to produce and will make our ventilator core more efficient," said Ehrenberg. "We can also implement automated manufacturing equipment that will increase capacity and further lower costs."

To learn more about SATOP and the services it offers, visit www.spacetechnsolutions.com.

Get Your Small Business Grant Proposal Noticed!

As a small business owner, securing funding can be a challenge. The TRDA's Florida/NASA Business Incubation Center (FNBIC) hopes to ease that burden.

The FNBIC is one of 22 partner organizations participating in the Phase O grant program. Organized by Enterprise Florida, the Phase O program is designed to help Florida entrepreneurs increase their chances of securing funding through two federal sources: the Small Business Innovation Research (SBIR) program and the Small Business Technology Transfer (STTR) program.

The Phase O program awards grants up to \$3,000 to help Florida business owners develop SBIR or STTR proposals that are competitive.

While participation in Phase O is primarily limited to Florida technology business owners who have not received an SBIR or STTR Phase 1 award in the last five years, a non-technology company with the capacity

to develop a technology that meets federal needs would also be eligible.

For more information on applying for a Phase O grant, contact Bonnie O'Regan, manager of the FNBIC, at (321) 267-5601 or via e-mail at boregan@trda.org.

Incubator Graduate Helping to Keep U.S. Borders Secure

Command and Control Technologies Corporation (CCT), a former Florida-NASA Business Incubation (FNBIC) client, is doing its part to keep the nation's borders safe.

The technology company was recently awarded a contract by Global Technical Solutions, Inc. of Fla. to deploy a CCT software system specifically adapted for border security operations.

Specifically, the CCT system will be utilized to monitor maritime traffic on Lake Erie along the United States-Canadian border.

This award follows a successful deployment of the border surveillance system in Douglas County Arizona, where it is monitoring 40 square miles near the United States-Mexico border in support of Arizona Border Patrol operations.



"Providing significantly enhanced automation of border security functions is a key objective for the Department of Homeland Security," said Peter Simons, president of CCT. "Our software toolset adds critical surveillance functions that can be applied to maritime situational awareness and port security."

The system is based on CCT's Command and Control Toolkit™ (CCTK) product line. It acquires and fuses data from tracking radar, seismic, infrared and proximity sensors, as well as border patrol agents in the field, to produce an integrated, real-time situation awareness picture.

In addition, the system autonomously prioritizes and tracks targets with remote-control cameras and facilitates automatic assignment, dispatch and intercept of border patrol agents in the field.

"Furthermore, it is designed specifically for configuration flexibility and extension that can evolve with the rapidly expanding border patrol needs," Simons said.

Simons explained that this system will support local border patrol and Coast Guard operations in and around Lake Erie. It is expected to be in place before the onset of the busy summer boating season.

It will also be used along land-border crossing points.

Based in Titusville, Fla., CCT provides high-tech computer products and system development services to the aerospace industry. It specializes in mission-critical, automation systems and software tools that enable decision-focused, situation awareness.

CCT joined the FNBIC in 1997. In 1999, it won the NASA-KSC Small Business Contractor of the Year Award and received a NASA technology license to begin selling its CCTK. CCT graduated from the FNBIC in 2001 and was recognized as one of the top five technology companies on the Space Coast by *Florida Trend* magazine.

For more information, visit www.cctcorp.com.

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