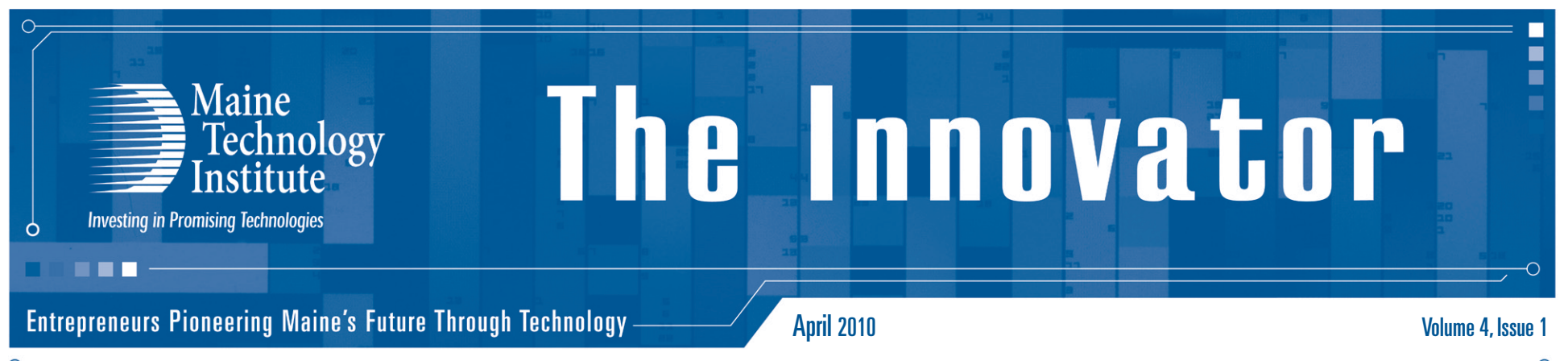


Did You Know...

"Between 1980 and 2005, virtually all net new jobs created in the U.S. were created by firms that were 5 years old or less. That is about 40 million jobs. That means the established firms created no new net jobs during that period."

-Robert Litan, The Kauffman Foundation



From the President: Next Generation Maine Innovators

Recently on MaineBiz Sunday, I was asked "If Maine was a company, would you buy, hold or sell your stock?" As I thought about that question afterwards, it seemed to me that Maine is like a "value" stock – a stock undervalued by the market today that has strong prospects for appreciation in the future.

There are many reasons why here at MTI, we are bullish about Maine's future. MTI invests in innovation for a prosperous Maine, and therefore has a front row seat on the creativity and entrepreneurial energy percolating in all corners of the state.

In *The Innovator*, we often feature companies that are pioneering Maine's future using technologies that build on our traditional industries in agriculture, forestry and

marine sciences and that are spurring the growth in new areas such as the use of composite materials in renewable energy. In this issue, we are featuring another aspect of Maine's economy that gives us much optimism for Maine's future. Every day, we see examples of young people getting involved in technology and being inspired by their experiences to go on to get advanced degrees or to become entrepreneurs themselves.

This issue profiles four young professionals who have worked on MTI-funded research and development projects and gone on to further their careers in research and innovation, or who have taken advantage of MTI's early-stage funding to start and grow their new business. From Betsy Barber, Nebraska native, who was inspired in childhood to study marine life and came to Maine to study and

work at Downeast Institute, to William Sulinski, who developed his love of a game into a mobile software tool for golfers worldwide, Zach Conover, who returned to Maine after receiving his MBA to grow his company in his home state, and Joan Malcolm Albee, whose passion for biomedical engineering was sparked by a summer job at the Jackson Laboratory and while working at the Lab is pursuing her doctoral degree.

These stories show not only how MTI contributes to a vibrant innovation economy, but how our funding and commercialization support opens up opportunities for young Mainers to develop their skills and inspire them to attain advanced degrees that help them to make a good liv-

From the President is continued on page 2.

Young Maine Geneticist Studies Links Between Mice and Men

Joan Malcolm Albee considers herself to be living proof that Maine offers great opportunities for young people in pursuit of careers in research and innovation.

"Innovation can happen by anyone and in practically any situation or field. There are so many businesses in the state of Maine and, from my experience, they all recognize that they could benefit from some kind of innovation; it just takes someone who is motivated and passionate about their career to step in and help them think outside the box," Albee says.

Born in Bangor and raised in Gardiner, this 25 year old is a proud Black Bear from University of Maine with a B.S. in Biological Engineering and is currently enrolled in the University of Maine Graduate School of Biomedical Studies Ph.D. program in Biomedical Sciences with a concentration in Biomedical Engineering.

From the earliest Albee can remember she pictured herself as a doctor working in a hospital. It wasn't until she was a Co-Op student at The Jackson Laboratory in Bar Harbor one summer in college that she realized a greater passion: biomedical engineering research.

Through her summer internship, she went on to tie her thesis work into projects related to the Reproductive Sciences Department with Jackson Labs and when she graduated, she was offered a full-time position. Now a biomedical engineer at Jackson Labs, an independent, nonprofit organization focusing on mammalian genetics research to advance human health, Albee is working to discover the genetic basis for preventing, treating and curing human disease.

"The number and variety of small companies and expertise that this state holds is truly remarkable, and I was blown away in realizing that if you look hard enough, you can find a company with ties to practically every field out there."

-Joan Malcolm Albee

Because the mouse genome is 95 percent identical to the human genome, Jackson Labs uses mice as a research tool. A core responsibility of Albee's job is to assess existing technologies and assist in the development of new bioengineering approaches to monitor and improve ani-

mal health and welfare, improve efficiencies in mouse production (including assisted reproductive technologies), and develop new methods for mouse research.

"When all the pieces of a system finally come together and the "ah ha" moment finally hits me, I am reminded why I love my job," Albee says. "Through my job, I have the opportunity to continuously learn and educate myself."

Albee was co-principal on an MTI seed grant which allowed Jackson Labs to carry out initial research on automating their in vitro fertilization procedure. She has also worked on research funded by a Maine Technology Asset Fund award.

"Working on and being awarded these grants was inspiring as it exposed me to countless other dedicated and driven Maine companies that I previously never knew existed," notes Albee. ■

Nebraskan's Dream of Exploring Maine's Marine Life is Realized



Most eight year olds couldn't accurately predict what career path they'll choose as adults. But when she was only eight or nine, young Betsy Barber read a book by Jacques Cousteau, and became obsessed with learning about marine biology. Growing up in Nebraska didn't afford many opportunities for Barber to see the ocean, but today, a graduate of the University of Maine – Machias with a Bachelor of Science in marine biology, the 23 year old is immersed in the world of marine life research.

“I love that I am able to do different things almost every day as a researcher. The work is never monotonous. I like the challenge involved, and the satisfaction of knowing that an experiment was designed and executed well.”

-Betsy Barber

Barber says that the University of Maine offers many strong scientific programs that place students directly into their field of research and there seems to be an abundance of opportunities for graduated students to find jobs in their field. During college, Barber assisted Dr. Brian Beal at the Down East Institute in Beals, Maine on several projects involving *Mya arenaria* (the soft-shell clam) as a work-study student.



Betsy Barber diving in the Jonesport area to count juvenile urchins.

This MTI funded project (DEI received a Maine Marine Research Fund grant), explored the factors that affected the growth and survival of *Mya arenaria* in the Machias River Estuary. Barber tested the affects of predation, tidal height, time, and site on the growth and survival of juvenile soft-shell clams.

The DEI project solidified her desire to perform research rather than concentrate on another aspect of marine biol-

From the President continued from page 1

ing for them and their families. This is particularly important since Maine lags New England and the nation in advanced degrees in science and technology fields, which we know correlate with higher salaries. Continuing to invest in the technology development and processes that can bring innovative products to market will help ensure that Maine increases the number of young entrepreneurs and researchers choosing to build their careers and their livelihoods here in Maine. We are bullish on Maine. We see the promise of a strong future in its value and continued appreciation for its people and its assets for years to come.

Betsy Barber

ogy. Barber says that her work on the DEI project helped her land a job in her field right after graduating, which provided the necessary experience to be a strong candidate for graduate school. “It allowed me to experience what it would be like to be a researcher and decide whether or not I enjoyed the work. I learned without a doubt that marine biology is what I want to do for the rest of my life thanks to this project,” Barber said. Now headed to graduate school, Barber's experience with DEI has clearly inspired her to pursue a higher degree as well, which will in turn provide more opportunities for her to pursue in Maine.

After attending graduate school, Barber sees herself performing research, most likely in Maine, as she notes that the Maine coast offers a diversity of environments for study. ■

Taking a Swing at a Mobile Golf App



Who can have a private coach join them for every round of golf, use a GPS rangefinder to line up every shot, and receive a digital performance report while walking away from the 18th green? Anyone can thanks to William Sulinski's AccelGolf personalized mobile software for golfers.

Sulinski merged his love for golf, his interest in the Internet, and his entrepreneurial drive to create a fun, game-improving product that can be accessed from any golfer's Web-enabled hand held device. AccelGolf is the first product offered by mCaddie, Inc., the company Sulinski co-founded almost two years ago.

The mobile and Web applications have a database of more than 22,000 courses in 60 countries, allowing golfers to keep a digital scorecard of their round, calculate the distance of shots, and store information about every shot to help lower a score the next time out. The software is currently being used by more than 40,000 golfers throughout the world.

“We are building applications that people are extremely passionate about,” says Sulinski. “Our iPhone and BlackBerry applications were downloaded by almost 100,000 people. The ability to have something that you've built enjoyed by so many is truly satisfying.”

“Building the company has been the most rewarding experience of my life. Without the support of MTI, we wouldn't have had the opportunity to launch our products and raise equity investment.”

-William Sulinski

Sulinski is the CEO of mCaddie, which recently opened its first office in South Portland. Now in his mid-twenties, he grew up in Dedham, Maine, graduated from Brewer High School where he started his first technology company, and completed a degree in financial economics at the University of Maine while he and a partner began a company that aimed to improve the efficiency of heating oil deliveries. mCaddie currently has seven employees, and Sulinski hopes to double that number this year.

Starting up businesses is something that runs in Sulinski's family. “My grandfather built a heating company and my father built a construction and transportation company,” he says. “I started working in the family business at 13.”

Sulinski says that Mainers also have a unique do-it-yourself



William Sulinski (right) with Michael Nelson, co founder of mCaddie, at the Queen's Entrepreneurs Challenge, an international business plan competition at Queen's University, which they won.

spirit; with the right resources, there will always be opportunities for entrepreneurs to innovate here. mCaddie has received two Seed Grants and a Development Award from the Maine Technology Institute. The funding has helped the company create and grow its Web-based applications and bring AccelGolf to the marketplace. ■

Returning to Maine to Advance Navigation and Positioning Technology



Zachariah Conover, president and CEO of CrossRate Technologies, says he basically fell into the field of position, navigation and time. After graduating with a class of 12 students from the Islesboro Central School, he attended the United States Coast Guard Academy where he earned his BS in Electrical Engineering, and then served as an officer in the Coast Guard for five years. His last posting was at the Loran Support Unit as the Configuration Manager for the North American Loran System. LORAN (long range navigation) is a terrestrial radio navigation system using low frequency radio transmitters that determine the location and speed of the receiver.

He then received an Executive MBA from Drexel University in Philadelphia in 2004. “For my last station in the Coast Guard, I was sent to the Loran Support Unit where I was immersed in GPS vulnerabilities, eLoran development, and the government radio navigation world. I decided to combine my degrees in Electrical Engineering and business with my experience in the world of radio navigation. The result was a start-up company working on integrated eLoran/GPS receivers,” he says.

Conover founded CrossRate in 2004 in Philadelphia where it was located in a Drexel incubator until November 2004. Wanting to return home, Conover moved his company to a Maine-based incubator, the Maine Center for Enterprise Development in Portland and enlisted a childhood friend from Maine as his vice president and co-founder. Now based in Windham, the company currently has seven full-time employees and two part-time. CrossRate has developed a patent-pending, integrated GPS/Loran receiver that provides position, navigation and time information. CrossRate's team of engineers has addressed the reliability problems of GPS with a technology advancement that integrates three systems into one.

In 2005, CrossRate received two MTI seed grants and a development award (a conditional loan), enabling the start-up to conduct secondary market research with the Transformative Knowledge Group and to fund a proof of concept prototype. This funding was later followed by a Maine Technology Asset Fund award for equipment enabling joint development with the University of Maine in Orono.

“The support that we have received from MTI, as well as all of the other supportive Maine economic development organizations, has been instrumental in CrossRate developing and launching our product line.”

- Zachariah Conover

Based on his experience, Conover thinks Maine has a good, solid foundation for economic development and needs to continue to build on this foundation. “If we, as a state, can build on our successes and realize that failure is part of the process, then I think Maine will have plenty of opportunities for young people in research and innovation. Small companies don't have a deep bench that they can rely on so we must learn to leverage all of our resources both inside and outside the organization to achieve the goal. I love Maine and I think Maine is a great place to raise a family, so I hope that I am able to stay in state.” ■