MINNESOTA

Breakthrough Ideas

At the heart of the Minnesota Cup competition is the belief that, somewhere in Minnesota, the next 3M, Cargill, or Medtronic is waiting to be born—and that Minnesota's grand tradition of entrepreneurism will go on.

Inside:

- Breaking New Ground Founders Scott Litman and Dan Mallin help to carry on Minnesota's entrepreneurial tradition
- Building a Better Mousetrap From more than 600 entries, Minnesota Cup judges whittled contestants down to five finalists. Meet them inside.

From left: Lief Larson, John Berger, Deborah Yungner, Steve Germundson, Tim Werner, David Emmons, Carol Smith, Paul Kozlicki, Doug Powell, Lisa Powell.

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University of Minnesota

Breaking New Ground

By Arthur F. Diggins

or every Medtronic or HighJump Software—products of one or more Minnesotan's ingenuity—there are hundreds, even thousands, of great ideas that never make it to market. Enter the inaugural year of the Minnesota Cup competition.

The Minnesota Cup provides aspiring entrepreneurs the opportunity to present to a panel of judges their innovative ideas that have yet to "break through" to success. Business plan submissions are judged and entrants stand to win cash and advisory services to be used in executing their plans.

"It's difficult to take a great idea and get if off the

Entrepreneurism is Alive and Well at the University of Minnesota

The University of Minnesota has long been known as an engine for economic development and cultural enrichment in Minnesota, particularly by creating jobs. In fact, according to an internal 2005 study, the University's Institute of Technology graduates have created 2,600 active Minnesota companies employing some 175,000, with annual revenues of \$46 billion.

It's no wonder, then, that the university would be a major supporter of the Minnesota Cup competition.

"The Minnesota Cup is a great opportunity to encourage development outside the university environment," says Vice President for Research, R. Tim Mulcahey. "There are a lot of very clever and bright creative people in the state of Minnesota who, without avenues such as the Minnesota Cup, would not have an opportunity to develop some of these key ideas."

The competition is one that is closely aligned with the mission of the University's Carlson School of

Minnesota Cup founders Dan Mallin (left) and Scott Litman

ground," Minnesota Cup co-founder Scott Litman says. "Yet entrepreneurs are the fuel for our economy. Their very success creates jobs, creates opportunities, and creates a robust business environment in the state of Minnesota."

Co-founder Dan Mallin agrees. "A high percentage of businesses don't succeed. You need every advantage you can get. I know from talking to some of these contestants that they appreciate the opportunity to change the odds."

In the 2005 contest, the panel judged 607 entries from all over the state. This number was pared to 30 semi-finalists, and then five, until a single winner emerged.

Litman and Mallin say the Minnesota Cup program is their way of giving back to the local business community that has nurtured their own business success. "There are so many people who have helped. I don't want to single out any key person," says Litman. But since contacts he made through a 1987 competition hosted by Apple Computer helped foster his early career, it made sense that launching

Management's entrepreneurial studies program, according to John Stavig, the Entrepreneurial Center's director. (The School's namesake, Curt Carlson, started the Gold Bond Stamp company, along with ventures in marketing, travel, hospitality and other businesses.)

"We see ourselves as having a great history in terms of the role we've had in generating new business in Minnesota," says Stavig.

Mulcahey says that there is an increasing call for state institutions, and particularly state research institutions, to show their relevance beyond the confines of their own interests, or face diminished funding.

"That's a pressure that is felt by state universities all across the nation," Mulcahey said. To this end, he said, the university has developed "unprecedentedly good" relations with the Minnesota business community.

The bottom line, Mulcahey says, is that the University of Minnesota recognizes the role it has to play in terms of economic development in the state and is working with corporate and civic partners to try to do "everything we can to augment the state's economy."

-A.D.

something similar would be a good way to "pay it forward" and help discover the next round of Minnesota entrepreneurs.

Giving back is not as easy as it may sound, however. The pair wanted to create a true benefit for Minnesota entrepreneurs. After letting the idea gestate for some time, Litman had a middle-of-the-night revelation—an 'a-ha!' moment that made it clear to him what such a contest would mean for the people who could get behind it. From this kernel of inspiration, the Minnesota Cup was born.

The prize for winning the Minnesota Cup is substantial: \$25,000 toward the development of the winning proposal and the advisory services of a Wells Fargo team to help with financial, legal, and accounting issues. (Runners-up receive seed money of \$5,000 for second, and \$2,500 for third place.)

To get the competition started, Mallin and Litman approached the University of Minnesota, through the Carlson School of Management, with their concept in December 2004, receiving enthusiastic support for their concept. University contacts advised the pair to apply for a piece of a million-dollar endowment, formed by Riverside Bank founder David Cleveland, and his wife, Carolyn. The Cleveland's established the endowment to promote entrepreneurism in the state. Litman and Mallin's idea was warmly received by the Clevelands.

Governor Tim Pawlenty also responded positively and advocated for the program across the state. When Wells Fargo—the largest Small Business Administration lender in the country—got behind the idea, the Minnesota Cup had support from a major educational institution, business, and state government.

Planning Better Businesses

A s a longtime Minnesota banker, David Cleveland has seen his share of business plans. Many of them, frankly, could have used some work. So Cleveland and his wife, Carolyn, decided to do something eminently practical about it: create an endowment at the Carlson School of Management that would encourage business students to improve their business plans—helping the plans to succeed—and thereby benefit the state's economy. The Clevelands' endowment was a natural vehicle to fund the University of Minnesota's contribution to the Minnesota Cup program. The prize money for the Cup winner, runnerup, and third-place contestant will come from it.

Now retired, David Cleveland's career in banking spanned 43 years, from his first banking position with what is today U.S. Bank to the formation of Riverside Bank, in 1973, located near the university at Riverside and Cedar Avenues. During Riverside Bank's long tenure in that location, (it was sold to Associated Bank in 1999) Cleveland became acquainted with a number of business professors at the university, even guest lecturing to busiThe diversity of Cup entrants is as impressive as the support it has received, notes Litman. The original 607 came from 48 Minnesota counties, and the 30 semifinalists represent 11 counties. The ideas behind the entries were similarly diverse, addressing industries as varied as health care, entertainment, and agriculture. To fairly assess the range of projects, Litman and Mallin developed three criteria by which entrants ideas were to be judged: Innovation, viability, and presentation.

Litman notes that, as the finalists presented their ideas to the Cup's review board, they came into contact with

"Entrepreneurs are the fuel for our economy. Their very success creates jobs, creates opportunities, and creates a robust business environment in the state of Minnesota." —Scott Litman

such prominent Minnesota businesspeople as Tom Gegax, (TiresPlus); trend expert Robyn Waters (RW Trend); marketing professional Skip Gage (Gage Marketing); public relations professional, Fred Haberman; and such venture capitalists as Michael Gorman, (Split Rock Partners), and Sima Griffith (Aethlon Capital).

"I hope that five years from now, we will be able to look at our alumni and take great pride in the number of ideas that became viable businesses," says Litman. "The kind of businesses that create jobs by creating products and services that benefit society."

ness students in the 1970s. Riverside Bank became known as the predominant bank for entrepreneurs and small businesses.

"Practically our sole purpose was dealing with entrepreneurs and small businesses—including minorities and women," Cleveland says.

Cleveland is pleased that the Minnesota Cup's founders are augmenting his original vision for the endowment, which was focused on improving business plans.

"The program has grown beyond [that], he says, "because winners are being encouraged and assisted in taking their plans off the drawing board and into operation. I'm really pleased to see it happen. While that wasn't the original idea [of the endowment], that is my aim; my aim is to have more businesses in the state of Minnesota."

Ultimately, Cleveland would like to see hundreds though he'd be overjoyed with just a dozen—of new businesses originate in Minnesota, employ Minnesotans, and "grow to be strong companies like 3M and Control Data. After all," he says, "[those companies' founders] started out just like the people who are submitting these plans." —A.D.

The Minnesota Cup competition was sponsored by:



Ideas, Perseverance, Focus Minnesota state government salutes contestants with breakthrough ideas

By Commissioner Matt Kramer, Minnesota Department of Employment and Economic Development



ore than 150 years ago, Victor Hugo said, "There is nothing more powerful than an idea whose time has come." I couldn't agree more. In economic terms, the power of ideas is an irresistible and dynamic force, one that overcomes even the most recalcitrant forces of an inertia-bound culture.

Here in Minnesota, we enjoy a proud heritage of innovation that is fueled by entrepreneurial energy and built on the constant discovery, nurture, and renewal of creative, trend-setting enterprises. More than half of our economic growth today comes from industries that barely existed a decade ago and were built on ideas that no one ever anticipated. The search for great ideas—the discovery of the next big thing—is central to our continued success.

That's why we're constantly seeking out and encouraging innovative new ideas. And that's why Governor Tim Pawlenty helped launch the Minnesota Cup competition last March. Its promise is to connect budding entrepreneurs with a support network of state resources, investors, and seasoned observers. We fully expect this competition to coax Minnesotans into sharing their great ideas in a way that can help develop them into viable, commercial enterprises.

At the center of this universe is the University of Minnesota, which continues to develop the great young minds that keep our economy vibrant and robust. But it takes more than raw talent; it takes perseverance and focus to bring even the best idea to market.

When Thomas Edison finally succeeded in getting a filament into a light bulb, it is said that his success came only after thousands of failed attempts. What many people don't know is that a man named Joseph Swan was working on a similar invention. But he never succeeded in commercializing his patent for the incandescent light bulb, and his name has faded into the mists of history. You might say we want to help the Joseph Swans of Minnesota.

Minnesota has a fantastic record of innovation, and we expect that the ideas showcased through this competition will take their places on the grand continuum that includes the economic giants of our state: Cargill, 3M, Medtronic, and others.

I hope that all Minnesotans will join us in saluting these homegrown visionaries and supporting their efforts to capture and harness the irresistible power of new ideas.

Wells Fargo Provides Expertise for Minnesota Cup Winner

With a 150 year tradition of serving businesses, Wells Fargo is proud to be a major sponsor of the Minnesota Cup. Small business is big business for Wells Fargo. Of about 20 million small businesses nationwide more than one million are Wells Fargo customers.

It's the entrepreneurs who are creating new value in the economy," says Steve Bianchi, business banking manager for Wells Fargo's metro Minnesota region. "Small businesses represent more than 99 percent of all employers and create more than 50 percent of the GDP—that makes them the primary growth engine in the economy."

Wells Fargo digs into the details to truly understand the business goals and objectives of small business owners. "Our business bankers have the responsibility to understand the needs of their customers and recommend financial solutions that will help them succeed financially," Bianchi notes.

In keeping with that corporate philosophy and expertise, Wells Fargo wanted to do something uniquely beneficial for the winner of the Minnesota Cup. Generous cash prizes are awarded to the Cup winner and finalists through David and Carolyn Cleveland's endowment to the Carlson School of Business. Wells Fargo is adding a year's worth of intellectual capital—monthly consulting sessions for the winner with business bankers, representatives from Private Client Services, an accountant, and an attorney.

In addition to monetary capital, business owners can benefit from this intellectual capital," says Bianchi. "All successful business people have received good advice; those that are most successful oftentimes reach out and solicit the expertise of other specialists that can help them grow the business and ensure success. This combination of financial, accounting, and legal advice will really help the business owners put their ideas into practice and bring their product to market."

With nearly 19 years in the industry, Bianchi is familiar with the financial advice that entrepreneurs need during the startup phase of their business. Questions that entrepreneurs ask include: What kind of capital do I need? What's the appropriate financing structure for this business? What financial tools are available? "We have products that match well with all sizes of businesses and the bankers who can advise them on the best fit for financial success," Bianchi notes.

"The creation of new businesses will remain the primary driver in our economy, and we've had a long history of supporting all businesses," Bianchi said. "The Minnesota Cup is another example of how we can help small businesses grow, become successful, and create value in the economy."

John Berger, David Emmons

ArcSwitch, Inc.



ohn Berger and David Emmons are excited about something most techies would rather forget: the mid-'90s dot-com bust that left the market with a supply-side surplus of thousands of unused miles of fiber-optic cable. The aftershocks of that bust have calmed, they believe, and there is increasing interest in potential uses for those cables. Which means the time is right to dust off a product they conceived of during those boom years—the optical switch and attenuator—and seek to give it new life.

"Fiber-optic lines are the size of a human hair, and they carry data signals that are transmitted by laser light," Berger explains. "Currently, most of these signals are switched by turning them into electricity, then switching them, then turning them back into light. Our optical switch moves light from one fiber directly to another fiber. It's smaller and less expensive than current technology."

In fact, Berger says that clients who are currently paying \$20,000 for a switch could pay as little as \$1,000 for their product, and have better signal quality throughout the switching process.

Berger and Emmons started working on their switch in the late 1990s, and completed most of the development in 2001, at which time the pair began attending trade shows. At that point,

"Our optical switch moves light from one fiber directly to another fiber. It's smaller and less expensive than current technology."

-John Berger

the market for optical switches collapsed. "When the dot-coms went under, everything related to telecommunications hit a brick wall and died," Berger says matter-of-factly.

The partners have been waiting for the fiber-optic market to rebound, and Berger believes it has done so. "There's much more interest in these types of devices, and excess inventory of them has been burned up," Berger says. "There's fiber-optic cable all over the world, more than was needed for a while; now, the demand is starting to catch up."

Berger has extensive experience managing operations; Emmons has experience bringing products to market and was itching to work on another start-up. But science is more than just business for these partners. It is the continuation of a friendship that began in seventh grade and has spanned decades, as the two attended the same schools, got their mechanical engineering degrees together at the University of Minnesota, and act as godparents to each other's children.

Berger and Emmons have patented their device, created three generations of prototypes, and have demonstrated the device to a number of potential customers. They are now seeking \$2 million to \$3 million in venture capital to bring their idea to the commercial product stage, something that could be accomplished within a year if funding became available, Berger says.

But a lack of funds isn't the only hurdle these inventors face. JDS Uniphase is the leader in the optical switch field Emmons and Berger wish to enter, and that company has held sway for many years. Yet Emmons and Berger claim their product offers several technical and cost advantages. "They have owned the market for a long time, but we feel that we have demonstrated that we have a superior product," Berger says.

Berger looks forward to continued growth in the optical-switch market.

The current market for optical switches is estimated at about \$500 million, and Emmons says it's projected to reach \$2 billion within five years—easily a double-digit growth rate, says Berger. At a mere 2 to 5 percent of the market share, the company would reach profitability.

"There was a lot of interest in this product when the bust came," he says. "Now we're looking for the water level to return to where it should be, and for it to rise at its expected rate."

Paul Kozlicki PICC STAT



here is a crisis in health care," says Paul Kozlicki, "and PICC STAT is one solution." Kozlicki, CEO of PICC STAT, believes the company will improve outcomes for patients who need long-term intravenous therapy by providing an alternative delivery method for IV service—one that will save time, money, and improve results.

In 1994, Kozlicki was pinned between two cars and narrowly escaped the amputation of his leg. He had 15 surgeries over the course of a year, and extensive use of IV therapy via a PICC, a catheter that is threaded through a vein in the arm and ends just above the patient's heart. Medicine is injected into the catheter for a period as short a week or as long as a year. Installing such a catheter is a specialty.

"Because the nurse was not able to do the PICC at bedside, I ended up going to radiology to have it done, where the procedure, rather than costing about \$300, cost over \$1,200."

Around the same time, Kozlicki's

brother-in-law, registered nurse Tim Werner, launched a specialized nursing services firm. Where Werner had medical expertise, Kozlicki had sales, marketing, and management experience. In 2001, Werner asked Kozlicki to join him in the start-up, focusing on PICC inserts.

Specially trained nurses can insert the PICC STAT catheter at bedside. Patients can often be discharged earlier as a result, and the procedure costs about one-third the cost of conventional methods of placement," says Kozlicki. "We provide great patient care at a significant savings. It's a new delivery model for doing PICC IVs." "What I enjoy about the company is that we fill an existing need. So we can bring a business model to them, and we can do [PICC insertions] at about a third the price. We create what we call a win-win-win situation: the hospital wins, the patient wins, and the company can keep growing."

"We have been building the business model in the Twin Cities and have proven it can be successful, so the [Minnesota Cup] competition was

Third Place Lisa and Doug Powell Type 1 Tools



hen Doug and Lisa Powell's daughter was diagnosed with type 1 diabetes, they searched for information on lifestyle approachable, easy-to-understand way. They found none. So, armed with years of experience in advertising and graphic design, the couple developed their own. What emerged—Type 1 Tools and Healthwise Diabetes Tools—were a set of educational and life-management tools for families and children struggling with either type 1 or type 2 diabetes. The Powells say these tools simplify the complexities of diabetes, and empower children and their families to be confident managers of the disease.

Among the group of six products is a deck of flashcards—called "Flash Carbs"—that teach children and their families dietary management in an interactive, visual way that utilizes bright colors and photographs to communicate complex information simply. The information on the cards is also sold as a set of refrigerator magnets that Lisa believes encourages children to start understanding how to plan meals.

A meal calculation worksheet simplifies often complex equations that are required to determine how portion size, carbohydrate count, and insulin dose are related. Another product, the checkbook-sized log book, helps parents to track nutritional information for a day or longer to identify trends. Care Plan Worksheets provide information to day care centers, schools, and parents of friends, to both ensure the safety of the child, and to remove some of the fear caregivers may feel in dealing with diabetic children.

"With all of these products, we hope to help the diabetic child and his or her family get from the crisis of diagnosis back to living a 'normal' life, quickly, easily, and comfortably," Doug says.

The diabetes management tools Lisa and Doug have created enjoy, "a huge market," says Lisa. "More importantly, this business is not just profitable. It's the right thing to do."

Semi-Finalists

Finalist **Deborah Yungner** ERBUS, Inc.



'm putting the soul behind the steel," says ERBUS, Inc. founder and CEO Deborah Yungner. ERBUS (Emergency Response Backup Utility System) is the first scalable, self-contained shelter with a fully integrated mobile utility infrastructure system. Simply put, ERBUS can do all that is needed to sustain life in an emergency situation, including power generation, potable water purification, filtering and environmental control



his recording will self-destruct in five, four, three...." Well, perhaps not that quickly, but that's the general idea behind a new disposable DVD technology developed by Valhalla Worldwide, owner of Consumable Media. The product, OnVideo, allows viewers to watch a DVD for a limited number of times before the disk

(hot and cold), and emergency communications.

But it's not just a pile of parts. Yungner said she has trademarked ERBUS as "humanitarian technology" that has saving lives as its central mission and purpose. Its development, she says, is an extension of her own belief in the sanctity of human life.

"I have a love for people and a love for life," says Yungner. "I see ERBUS as being a vehicle, a tool, for promoting strong values."

And it's seen some success already, including having taken the U.S. and International title of Best Technology of 2005 at the June 2005 International Trade Show of Inventors in Pittsburgh, besting 1,000 other entries.

"I'd like to see ERBUS change what we value and how we treat each other," Yungner says. "ERBUS can be an agent for peace. It can be a goodwill ambassador.It is a product that delivers value to society, and brings return back to shareholders and stakeholders-and we are all stakeholders."

becomes inoperable and can be discarded, according to Valhalla CEO, Lief Larson.

The product represents a new distribution channel for consumers who "want to view the movie once or twice and have no ongoing commitment beyond that," says Larson. Currently, there are two options in the market: video stores and Internet-based movie services, each with drawbacks-late fees, subscription charges, the hassles of shipping titles back to the companythat Larson would avoid with this new model of delivery. He likens OnVideo to a "consumable product," such as a bag of peanut M&Ms, that can be used then thrown away.

"That's what we're trying to do with this business. We allow consumers to buy a DVD at or below the cost of standard rental on a per-unit, per-cost basis."

"More than anything, I'd like to dig out our own little niche within the DVD distribution area," he says. "I'd like to become recognized as a great alterna-

Team: Michael S. March D.D.S. Idea: Dental Vacuum Backflow Prevention Sleeve

City: Long Prairie Team: Kevin Unterreiner, Jason Hudoba Idea: Nationwide Golf Tournaments for Average Golfers Company: GolfConnect.com City: Eden Prairie

Team: Mary Grant, Tom Grant Idea: Event RSVP Service Company: The Guest Register City: Bloomington

Team: Timothy W. Vadnais Idea: Orthopedic Medical Device Company: Celerity Medical City: Victoria

Team: Tracy Witham Idea: RowAhead 10,000 City: Sauk Rapids Team: Holly Kastner, Dustin Behr, Kathie Winter

Idea: Minnesota Frost Company: Hamline University City: Bloomington

Team: Dal Sirany Idea: On-The-Car RotorResurfacer Company: Brake Tru, Inc. City: Minnetonka

Team: Barbara Parks Idea: Quill/cross-stitch patterns from customer photographs Company: Photo and Stitch, LLC City: Burnsville Team: Cheryl Fundingsland Idea: Portable Dental Operatory and Supply Kits Company: Dental Kits To Go, LLC City: Minneapolis

Team: Joseph R. Serrano Idea: Apparel Care - Italian Style Company: The Serrano Collection, Inc., D.B.A. Vantagio City: Sartell

Team: Tim Herzer Idea: Remote-controlled blimp advertising Company: Minnesota Blimps, LLC City: Edina Team: Marie Pervenanze, Mary Pervenanze-Welsch

Idea: Port Wears City: Buhl

Team: Amir Naqwi, Chris Fandrey, Gerry Kauma Idea: Advanced Process Control Instrumentation Company: Powerscope Incorporated **City: Minneapolis**

Team: Chris Skarie, Carl Skarie Idea: Child Guarde with Dual Sensor Technology Company: Judge Intellectual Property, LLC City: Detroit Lakes

Team: David Shupe, Jennifer Lundblad, Laura Lewis, Dave Bussier Idea: eLumen Collaborative

Company: Cytera Systems City: St. Paul

Team: Gary Heyer Idea: Real estate sales system Company: Neighborhood Network of Minnesota, Inc. City: Chanhassen

Team: Chris Dunn, Lisa Dunn Idea: Alpenstock Handcycles City: Duluth

Team: Mark Kuhl Idea: Real estate agent online marketing Company: u.r.thebrand City: St. Cloud

Team: George Reese, Tom Ellingson, Morgan Catlin Idea: The Valtira Marketing Dashboard Company: Valtira Corporation City: Minneapolis