

Cronus Technologies wins technology excellence award

Software developer Cronus Technologies Inc., headquartered at Innovation Place, was the recent recipient of a Human Resource Technology Excellence Award, presented at a conference in Chicago.

Award winners were selected by HRevents, an organization which recognizes innovation in human resources.

Cronus won the prestigious award for the development of "cfactor," a web-based portal software program.

The software program has been deployed by the Saskatchewan Association of Health Organizations (SAHO) for use by various agencies within the province's health regions, to produce management and fiscal accountability reports in a secure web environment.

Approximately 32,000 employees are employed by hospitals and long-term care facilities in SAHO's 12 health regions. The cfactor program is used to track payroll and other fiscal expenses.

Cronus is a privately-held company founded by brothers Rod, Cary and Shawn Schuler. In addition to headquarters at Innovation Place, Cronus Technologies also has offices in Calgary and Geneva, Switzerland.

Innovation Award celebrates research excellence

On May 13, the second annual Innovation Place/ UST Award of Innovation was presented at the "Celebrate Success! Gala," an event sponsored by the Saskatoon and District Chamber of Commerce and Women Entrepreneurs of Saskatchewan Inc.

The award honours researchers who have brought new and commercially viable technologies to University of Saskatchewan Technologies (UST) Inc. for development into marketable products.

The Innovation Award winner received a \$2,500 cash prize, a personal trophy and photo recognition on the "Award of Innovation" wall in Kirk Hall on the U of S campus.

Four finalists were considered for the 2003 Award of Innovation, with **Dr. Kailash Prasad** selected as the award recipient. Physiology professor Kailash Prasad has identified anti-oxidant activity in a flaxseed-derived compound that reduces plaque buildup in the lining of arteries. In animal studies, the compound called SDG decreases cholesterol and hardening of the arteries due to high cholesterol levels, lowers blood pressure and may help prevent or delay the onset of diabetes in adults. Archer Daniels Midland (ADM) is moving ahead in the commercialization of this technology.

Bryan Harvey, University of Saskatchewan Acting Vice-President of Research and chair of the UST board, says, "This year's nominees have carried out research that has the potential to have a significant impact on both human health and the global economy."

Three other U of S researchers were nominated for the Innovation Award, including:

- **John Gordon**, veterinary microbiologist, and **Fang Li**, former veterinary microbiologist and current head of immunology at Dalian Medical University in China, have developed a treatment for inflammatory disorders such as respiratory distress, arthritis and inflammatory bowel disease. This treatment would also target transplant-associated inflammation. Preliminary interest has been expressed by venture capitalists.

- Physiology professor **Rui Wang**, research assistant **Yaoge Huang** and former research assistant **Weiman Zhao** have discovered two plant extracts: an effective treatment for erectile dysfunction that has the potential to be more potent and less expensive than Viagra; and an edible mushroom extract that improves cardiovascular health and lowers high blood pressure. The discovery has led to the creation of a spin-off company to develop and market these products in the pharmaceutical

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Award honours research excellence

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industry, BioNatCom Technologies.

• **Bernhard Juurlink**, head of anatomy and cell biology, and his team, which includes nutrition professor **Phyllis Paterson**, neurosurgeon **Dr. Robert Griebel** and obstetrics and gynecology resident **Dr. Huse Kamancic**, have developed a new drug, OTC, with the potential to reduce the devastating effects of spinal cord and brain injury. Animal studies have shown the drug can prevent paraplegia and associated long-term damage following spinal cord injury. A U.S. patent was obtained last July for the technology. UST has completed

negotiations with the Western Life Sciences Venture Fund to license the technology to a new start-up company, Triage Therapeutics Inc.

The winner of the Innovation Award was determined by a selection committee which included representatives from the U of S, UST and Innovation Place.

"The U of S, which conducts about half of all research in the province, is proud to play a leading role as a catalyst for innovation and is committed to boosting technology transfer in co-operation with Innovation Place and other partners," says Harvey.

SED Systems awarded contract for deep space antenna system

The European Space Agency has recently awarded a \$33-million contract to SED Systems following an international competition.

SED has been contracted to provide the agency with a 35-metre deep space antenna system to be installed in Spain. The system will enable X-band transmit and receive, and Ka-band receive capability, with the possibility of future upgrade to Ka-band transmission. The antenna will be one of the largest in the world used for deep space communications.

The European Space Agency operates and maintains a network of ground stations in support of satellite operations. The network is being augmented by adding deep space antenna systems to support such programs as Rosetta, Mars Express, Bepi Columbo and Gaia. Under a previous contract, SED provided the first of these large antenna systems in Western Australia.

As prime contractor, SED will bring together the skills and equipment

from subcontractors and suppliers in many European countries. The ESA's European Space Operations Centre is based in Darmstadt, Germany.

"We are extremely pleased to have been selected by ESA to provide this second antenna system," says Ray Basler, President of SED Systems. "I believe this success is a direct result of our performance on the first deep space antenna and our emphasis on working closely with our customers and our subcontractors to successfully implement large custom developments."

The contract was made possible by the Canada-ESA Cooperation Program, managed by the Canadian Space Agency. The program enables Canadian companies to bid for and obtain technology development contracts from ESA and to participate in major European space projects.

SED Systems is a division of Calian Ltd., a company wholly-owned by Calian Technology Ltd. (TXS:CTY).

Innovation Saskatchewan Conference

On June 5 and 6, the University of Saskatchewan and Saskatchewan Agrivision Corporation Inc. invite you to attend the second annual Innovation Saskatchewan Conference.

Following up on the success of last year's event, this year's conference focuses on the theme: *"Innovation Saskatchewan: Double the Population."*

The two-day conference is all about maximizing Saskatchewan's rich resources – in agriculture, science, technology, entrepreneurship, product development, business intelligence, investment capital – to attract business, create jobs, stimulate economic growth, advance social development and attract a larger population.

The roster of outstanding speakers includes Dr. Graham F. Parsons, Organization for Western Economic Co-operation, who will discuss the topic *"Double the Population"*; Dr. Murray McLaughlin, President and CEO of Foragen Technologies Management, who will discuss *"Agriculture: The Currency of the 21st Century – Capturing the Value"*; Susan Miller, President & CEO of Inno-centre, who will present *"Attracting Investment Capital for Growth"*; Al Kirkpatrick, Past President of Atomic Energy of Canada Ltd., discussing *"Energy: Saskatchewan as North America's Leading Energy Supplier."*

The keynote address on June 5, *"Bringing Business to Saskatchewan: Challenges and Opportunities"* will be given by Brian Nilsson, co-CEO of Nilsson Bros. in Edmonton and President of XL Meats in Moose Jaw. The luncheon address on June 6, *"Making it Happen"* will be presented by Brian Johnson, President and CEO of Crown Life.

Conference activities will be centered at Place Riel Theatre (Arts 241). For more information or to register online, visit the website at www.agrivision.sk.ca/innovation2003.htm.

International Test Centre for Carbon Dioxide Capture unique to Canada

With concerns rising over greenhouse gases and the implications of the Kyoto Protocol, the International Test Centre for Carbon Dioxide Capture is focused on one of the biggest issues facing the world.

Located at Regina Research Park, on the University of Regina campus, the centre is home to eight professors, 15 Masters and Doctoral students, and three engineers. There is no other centre like it in Canada and the only other facilities of a similar nature are located in Japan and Norway.

Centre Director Dr. Paitoon Tontiwachwuthikul (known by his colleagues as Dr. Paitoon) says its mandate is to explore and develop new cost-effective technologies for carbon dioxide (CO₂) capture. Its team is researching ways to reduce the cost of CO₂ capture in the short-to-medium term and to find novel approaches that can significantly reduce the cost in the long term.

"CO₂ is released from fossil fuel production," he says. "In Western Canada, we are especially interested in this issue because Saskatchewan and Alberta produce about 80 per cent of Canada's oil. We have the opportunity to inject the CO₂ back into the ground where it came from, which will benefit our oil production as well as reduce emissions to the atmosphere. With CO₂ capture, we will bring the cost down to a reasonable level and then other organizations can use this technique."

The centre has its origins in the late 1970s when the university began researching the CO₂ issue, but the program ended in 1985. Shortly after Dr. Paitoon arrived in 1991, he began working on CO₂ capture, but it wasn't until greenhouse gases became a larger issue in the mid-1990s that his

work began attracting widespread attention.

"Until recently the emphasis was more on the production of CO₂ and not its capture," says Dr. Paitoon. "However, it has been a hot topic since the Kyoto Protocol. We now receive financial support from the Western Economic Partnership Agreement, the Natural Science and Research Council and the Canadian Foundation for Innovation."

The centre brings together stakeholders from the academic community, government, oil and gas sector, coal producers, power generators, engineers, and procurement and construction personnel. Representatives of all the participating institutions and industries are members of the Technical Advisory Committee, which directs research activities.

The centre has invested over \$16 million in infrastructure. It contains a bench-scale CO₂ separation unit and a multi-purpose technology development pilot plant project at Regina Research Park and a sub-commercial technology demonstration unit at the Boundary Dam Power Plant at Estevan.

The bench-scale unit is used for a variety of functions including low temperature separation, corrosion control, and heat duty for solvent regeneration. At Boundary Dam, the capture unit has been renovated and modernized and is used for technology demonstrations as well as for conducting tests that lead to commercial applications. Recent retrofits include modifying the fly-ash controls and corrosion control equipment and providing new instrumentation and data acquisition systems. The pilot plant explores new technologies and seeks to optimize

their use prior to final testing at Boundary Dam.

Dr. Paitoon says the centre's research program is divided into two components: innovative research and development (IRD) and technology development and demonstration (TDD). IRD focuses on fundamental research and laboratory scale studies on high efficiency CO₂ capture technologies from industrial gas streams at low pressure (such as fossil-fired combustion flue gases) and high pressure (such as oxygen-carbon dioxide recycle combustion processes). TDD consists of pilot plant testing for technology development and industrial development demonstrations in collaboration with industrial partners.

"We are involved in a wide variety of projects," explains Dr. Paitoon. "One of the areas where we are in the very early stages of development is hydrogen production. Along with that, we are looking at CO₂ capture and production from fundamental research to design and operation. We are also looking at CO₂ capture from different sources. For example, we are looking at bio-fuels - a combination of ethanol and vegetable oil formulated for car engines instead of gas."

Being situated at the research park allows the centre's personnel to work in close proximity with university staff as well as those from the Petroleum Technology Research Centre. Dr. Paitoon is confident that the research currently underway will reap benefits for Western Canada.

"To reach the Kyoto commitments, everyone must play a role, but we can provide a major piece, especially in Western Canada. No other area has this type of facility."

updates

Who's new to Saskatchewan's research parks?

Please welcome the following new companies to the Innovation Place community:

- **Davey Tree Expert Company** has opened at 105J - 111 Research Drive. Contact Bob Orr at (306) 652-8733. Website: www.davey.com.
- **Shane Resources** has located at 105G - 111 Research Drive. Contact Rick Walker at (306) 664-3828. Website: www.shaneresources.com.
- *Effective June 1, the Saskatoon Police Service (Canine Unit)* has located at 104A - 110 Research Drive. Contact Dan Wiks at (306) 975-8300.
- *Effective June 1, the offices of Furman and Kallio* have opened at 106 - 15 Innovation Boulevard. Contact Robert Kallio at (306) 931-4410. Website: www.furman-kallio.com.

Changes of address

Please note the following changes of address for these Innovation Place companies:

- **Bio-ID Diagnostic Inc.** has relocated to Lab 1 and 2 at 410 Downey Road.

Changes of address or other updates can be directed to: Wonda Kirychuk, Innovation Place, 114 -15 Innovation Boulevard, Saskatoon, Saskatchewan, S7N 2X8, or call (306) 933-6581. Email: wkirychuk@innovationplace.com.

The Innovation Place Newsletter is published monthly for Saskatchewan's research parks by the Armstrong Creative Group. For information, call Jeannie Armstrong at (306) 249-2459, or email: armstrongcreative@shaw.ca

Critical Telecom and 3M partner to deliver broadband solutions

Critical Telecom, a leading developer of broadband solutions in the outside plant located at Innovation Place, has announced a joint partnership with U.S. diversified technology giant, 3M.

The integrated solution delivers broadband services in the outside plant to subscribers who are beyond the reach of the central office. Critical Telecom's rugged products in the outside plant, combined with 3M's cross connect expansion cabinets, provide broadband service to almost 200 subscribers from a telephone company's existing footprint in the outside plant. The solution has been designed so that carriers can grow an existing service area based on expected take rates while minimizing the upfront fixed costs associated with deploying electronics in the outside plant. This eliminates the need for new environmental cabinets, concrete pads, rights of ways from the municipality, and trenching of power.

The expanded cabinet has been designed to facilitate easy access to the FiberLINK equipment for both fiber and copper drops. As an added benefit, the FiberLINK outside plant multiplexers can be remotely powered from the central office over existing copper pairs.

"The Critical Telecom and 3M solution enables TELUS to utilize existing outside plant infrastructure to economically deliver next generation broadband services to our subscribers. Savings are realized in the outside plant by eliminating the cost of new environmental enclosures, concrete pads, and trenching of power," says Dino Corazza, Manager, Broadband Access Strategy, TELUS Communications, the largest telecommunications company in Western Canada.

"3M's ability to quickly provide cross connect expansion solutions gives both Critical Telecom and our customers the ability to overcome a number of major bottlenecks in the outside plant for deploying broadband services," says Dan Byron, Vice President, Business Development, Critical Telecom.

"Critical Telecom's FiberLINK technology has been built for the outside plant environment and, unlike a remote digital subscriber line access multiplexer (DSLAM), can be exposed to the temperature and other environmental extremes typically found in outdoor enclosures used by the telephone companies and other utilities," says Simon Alexander, Business Development Manager, 3M Telecom Systems.

For more information about Critical Telecom Corp., visit the website at www.criticaltelecom.com.

The 6th International Multimedia in Your Home Conference "Jazz Up Your Life!" June 23-25, 2003 Delta Bessborough Hotel Saskatoon

TRLabs and SaskTel are pleased to present the 6th International Multimedia in Your Home Conference. The theme for this year's conference – "Jazz Up Your Life!" – focuses on our personal interactions with multimedia.

Conference sessions will explore new and future developments and opportunities in the area of multimedia services and applications to home environments, discuss different perspectives of producing, delivering and managing multimedia services and applications, and how they fit in with and enhance peoples' lifestyle choices.

Consumers of or anyone involved in the regulation, creation, production, distribution, delivery or management of multimedia type services and applications should attend.

For more detailed information, or to register online, visit www.mith.ca.