Endowment to Benefit the UNB Faculty of Computer Science

On his last day as President of UNB, John McLaughlin travelled to Florenceville, New Brunswick to announce a gift of $3.1 million from the late Eldon (BSc'49, MSc'50) and Maxine Clair.

Born and raised in Carleton County, the Clairs were graduates of Bristol High School. Although Eldon's career as a forensic scientist with the RCMP and Ontario Provincial Police took them to Ontario, where he served as deputy director of the Centre of Forensic Sciences in the Solicitor General's office, the couple remained loyal to their small-town New Brunswick roots.

"We wanted to return to their home town to celebrate their lives and announce their support for the young people of this community and for UNB," said Dr. McLaughlin. "Maxine and Eldon's success is a terrific example of what New Brunswickers can and do achieve. That the Clairs decided to give back to their province is a source of great pride for all of us at UNB."

The gift will endow both the Eldon and Maxine Clair Scholarship and the Eldon and Maxine Clair UNB Computer Science Fund. The new UNB Computer Science Fund accounts for $2.5 million of the $3.1 million endowment. This fund will provide scholarships for students in the Faculty of Computer Science, support the purchase of equipment, provide funding for research within the Faculty, and afford the opportunity to hire experts to teach and conduct research.

Although Eldon did not study this field, he understood the importance of offering top-quality computer science education and its potential benefits to both UNB and the province.

"It means a great deal to us that Mr. and Mrs. Clair appreciated the applications of Computer Science in our daily lives," said Ali Ghorbani, Dean of the Faculty of Computer Science. "The fund will help us advance our research and maintain the highest possible level of academic proficiency in computer science."

Annual Awards Dinner

The accomplishments of undergraduate & graduate students were celebrated at the annual Faculty of Computer Science Awards Dinner in November. Over $170,000 in awards & scholarships were recognized at this event.

2009-2010: A Successful Year for the UNB CSA

This has been a banner year for the UNB Computer Science Association. The CSA Executive, Ash Furrow (President), Aaron Moss (VP-Internal), Mat Roscoe (VP-External), and Paddy O'Brien (Treasurer), have worked tirelessly to serve the students of our Faculty.

During Orientation, the CSA organized a photo scavenger hunt for new students and their peer mentors; this event concluded with pizza & prizes in the CSA lounge. Other fun events followed over the course of the fall term.

In addition to providing students with opportunities to have fun and socialize, the CSA has also sought out ways that they can help students grow as professionals. For instance, they organized a new series of "CS Talks" this year, with the help of financial support from the UNB Student Union. These talks were billed as "a chance for all of the students at UNB to come out and see what you can do outside of the classroom in the field of computer science." Topics included things such as: iPhone application development, diverse job opportunities in CS, etc.

Elections for the 2010-2011 CSA Executive will take place in March, and we will introduce you to the new team in our next issue.

A few upcoming CSA events:

- March 14: Curling
	(No experience necessary!)
- March 18: Pancake Breakfast
	(Proceeds to support relief efforts in Haiti.)
-March 19: Pub Crawl
	(Joint event with the Geology Society.)

For more information on these events, check out:
http://www.facebook.com/UNBCSA

Did you know?
At least 2 UNB CS students have developed apps for the iPhone:
Jason Brennan("Keener") & Ash Furrow ("Coffee Timer 2.3").
Look for these in the AppStore.

Prof. John Dedourek Named Professor Emeritus

We are very pleased to announce that Prof. John Dedourek received the honorary rank of Professor Emeritus in the fall of 2009. Prof. Dedourek's nomination was approved by UNB's Board of Governors upon recommendation of the Senate and the President.

The Professor Emeritus distinction is awarded only to retired faculty members. Criteria for this honorary rank include teaching performance of exceptional merit, extensive research and publication of unusually high quality, creative contributions to the administration and development of the university, and a record of professional conduct that indicates fair and ethical treatment of students and other members of the academic community.

John DeDourek was raised in Cleveland, Ohio, where he attended Case Institute of Technology for undergraduate and graduate studies. At the urging of John Paul Tremblay, who was doing graduate work at Case, he applied to UNB and joined the Department of Computer Science in September of 1970. At the time, Dana Wasson was Head of the Department, which was attached to the Faculty of Engineering. Prof. Dedourek was promoted to the rank of Full Professor on July 1, 1983.

Throughout his career at UNB, Prof. Dedourek taught approximately 24 different courses, most of them multiple times, covering much of the computer science discipline. He has supervised almost 150 undergraduate theses and reports, and approximately 40 graduate theses and reports.

Prof. Dedourek retired from his full-time faculty position in July, 2008. Since then he has taught one course and is currently serving as the Director of the UNB Information Technology Centre, the Faculty's outreach to industry.

At the Computer Science Awards Dinner in 2007, students presented Prof. Dedourek with a special award to recognize his years of exceptional service.

Looking Back

By Dr. Ali Ghorbani

In our last issue we mentioned that our Co-operative Education program started in May 1982. The number of Coop students quickly rose from 20 students in 1982 to 155 students in 1990, an increase of about 780%. The following graph shows the number of Coop students from 1982 to 1990:

Number of Coop Students 1982-1990
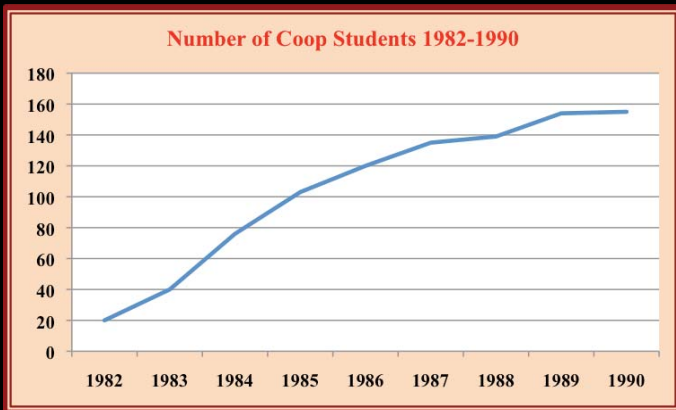
In 1984, a committee was struck to consider the matter of faculty status for the School of Computer Science. That Committee, while acknowledging that "the School of Computer Science is a legitimate candidate for Faculty status", concluded that the School has not reached a point of maturity and stability where it might be expected to cope effectively with the external and internal pressures which independence as a Faculty demands and recommended against faculty status. The Committee recommended that the issue should be reviewed in five years time.

In June 1987, the School's Council passed the following motion: "The School of Computer Science requests that its Director explore the possibility of converting the School into an independent Faculty." This motion was conveyed to UNB President Downey. He responded that "it would be reasonable to reexamine the question of Faculty status for the School in the fall term of 1988-89", and proposed "to strike a Committee to be chaired by the Vice-President (Academic) to re-evaluate the issue and bring forward a recommendation in time for implementation, should it be positive, by July 1, 1989."

In the fall of 1988 a committee was established. The Committee met with representatives of the School to discuss the matters they should address. In preparing its submission, the Committee obtained, examined and considered information/documents such as 1) Formal proposal from the School of Computer Science for Faculty Status; 2) Organizational placement of Computer Science programs in other Canadian universities; 3) Criteria at other Canadian universities for the Establishing of Faculties; 4) Criteria and status of Schools at UNB; and, 5) Opinion from the Dean of Engineering concerning the possible granting of Faculty status to the School of Computer Science.

The Committee submitted its final report in January 1989. (To be continued in our next issue …)

* Source: Notes and documents from the Faculty of Computer Science Archive.

COBOL and Scorpions and Spurs, Oh My!
By Dr. Andrew McAllister

Have you ever wondered how you might put that Compiler Construction course to good use? Well I found out first-hand over the last couple of years while I was on leave in San Antonio, Texas working with a legacy system modernization company called Trinity Millennium Group.

I met the President and CEO of Trinity three years ago when he was in New Brunswick chasing an opportunity with our Provincial Government. We talked about the research I had done in system modeling and reverse engineering, and before you could say "jalapeno" I found myself in Texas for my sabbatical.

My role during that first year was to help with their R&D, and there was plenty to do. Legacy modernization applies to custom software applications based on older technologies such as COBOL, PowerBuilder, Assembler, or Natural / ADABAS. Retiring developers, loss of vendor support, and brittle code are just a few of the reasons why organizations need to replace their older applications with newer Java or .NET implementations.

Unfortunately, simply converting COBOL "if" statements to Java "if" statements doesn't get the job done. New applications must be properly organized into classes, mapped into an n-tier architecture, and hooked up with a properly designed relational database ... even though object-oriented and normalization may not have been part of the vocabulary of the original developers.

The task boils down to teasing out the meaning of every aspect of a legacy application. This must be done from an application-specific point of view, not just understanding the semantics of the programming language. Then all those aspects must be mapped into a specific code organization desired by the system owner. This amounts to writing a customized compiler for every application, and doing so quickly, cost-effectively, while utilizing basic programmer skills. That's quite a research challenge!

I was fortunate enough for UNB to approve a second year in Texas as a leave of absence, so my role was expanded to include business development and client services. Bring on those Frequent Flyer Miles. I found myself in corporate boardrooms all over North America learning how strategic IT decisions are made, and how the technologies developed by computer scientists have a direct impact on those decisions.

As you might expect, my research at UNB now focuses on application modernization, especially around the tougher problems such as automated support for extracting business rules from legacy source code.

CS Happenings...

69 educators from across New Brunswick attended the ICT Career Pathways Workshop on September 2, 2009. Other attendees included the Director General of NRC-IIT, a keynote speaker from IBM Ottawa, 3 industry representatives, NRC staff, and a number of UNB CS coop students and faculty members.

A new book by Ali Ghorbani, Wei Lu and Majbod Tavallaee was published in October 2009. The book is entitled "Intrusion Detection and Prevention: Concepts and Techniques". (Published by Springer).

An NSERC Strategic Grant has recently been awarded to the Botnet Detection, Visualization and Mitigation project. The Principal investigator for this project is Dr. Ali Ghorbani. Partners include the RCMP and Q1Labs Inc.

During the current academic year, our BCS and BScSWE programs have been undergoing an accreditation review by the Candian Information Processing Society (CIPS). Reviewers visited UNB in November and met with faculty, staff & students.

The UNB Faculty of Computer Science signed two new student exchange MOUs through the Canada/European Union Cooperation Programme in Higher Education and Training. The first MOU is with York University, Dalhousie University, University of Crete, Fachhochschule Bonn-Rhein-Sieg, and Warsaw University. The second is with Universite de Montreal, Tecnological Educational Institute of Crete, Universite de La Rochelle, and University of Glamorgan. These MOUs allow students from European universities to spend time at UNB, and also provide our students with opportunities to study in Europe.

For the first time in 29 years, football returned to UNB in the fall of 2009. The UNB Fredericton Red Bombers club team won the first Atlantic Football League (AFL) championship. Second-year BCS student John E. Benson was a member of the winning team. John is no newcomer to this sport; he previously sereved at team captain for Leo Hayes High School.

A new centre is being established at UNB for joint research and development with IBM. A multi-million dollar grant from ACOA will support the planned R&D work of this centre. Dr. Ken Kent is the Principal Investigator for this project. Other faculty members involved with this project include: Dr. Gerhard Dueck, Dr. Eric Aubanel, Dr. Weichang Du and Dr. David Bremner. More information on this centre will be included in our next issue.

As of January 2010, a co-op option is now available to students in the Master of Computer Science program.

The Faculty of Computer Science is on Facebook:
http://www.facebook.com/UNBCS
Become a fan today!

Editor & Graphic Artist:
Natalie Webber

Contributors:
Ali Ghorbani
Andrew McAllister
Natasha St. Pierre

Story ideas? Contact us:
fcs@unb.ca - (506)453-4566