### **NEWSLETTER FOR THE BCIT COMMUNITY**



MARCH 27, 1995

VOLUME 2, ISSUE 13

# Special Edition Special Edition Electrical & Electronic Electrical Mology Inside Signing a PEAK agreement

Peak progress is being made with PEAK performance software, which enables athletes and coaches to track athletic performance levels and predict when they peak. The software was developed by Simon Fraser University (SFU) kinesiologist Eric Banister.

BCIT and SFU have recently signed an agreement that combines Banister's model with BCIT's computer technology. The agreement coordinates the transfer of Banister's athletic modelling theory to BCIT's applied research in computer systems (ARCS) laboratory, where it was incorporated into an easy-to-use Windows-based software program.



Left to right: Norman Streat, Technology Centre director; Bruce Clayman, SFU vice-president, research; Teri Lydiard, SFU technology transfer officer; and Eric Banister, SFU kinesiologist. Bert Schendel photo

The program now contains Banister's athletic modelling theory of trimps, or training impulses to provide quantitative feedback on training effect, and BCIT's Windows-based

software, which determines the dose effect of training when a user enters data on heart rate and training durations. SFU's technology transfer office is actively seeking licensing and

business opportunities for the technology. -from Kelly Gervais



David Bond, vice-president of the Hongkong Bank of Canada. Bert Schendel photo

## Workers go underground

On Monday, March 27, a major construction project will begin on campus. The sewer infrastructure upgrade is divided into four areas and the entire project is scheduled to be completed by mid-May. The work being done includes updating sanitary sewers, installing new waterlines and storm sewers.

The second phase involves installing a new storm sewer on the eastern part of English Street. "This will involve basically shutting down English Street from the back end of NE26 all the way to the yard in front of the Steel Trades building (NE12). The exact dates for this have not been confirmed yet with the instructors in that area. This is important because the students work in the yard area," explains Walker.

## **Applied Academics** Conference held at BCIT

The Applied Academics Conference was held March 15 and 16 at BCIT. The conference, sponsored by the Joint Ministry Steering Committee for Applied Academics, attracted about 250 instructors and school administrators from throughout the province.

David Bond, vice-president of the Hongkong Bank of Canada, spoke on the role of business in applied academics partnerships, and Dan Miller, Minister of Skills, Training and Labour offered closing comments.

An enthusiastic audience packed the IBM building's BC Tel theatre to hear keynote speaker Carver Gayton, Boeing's manager of college programs and chair-elect of the National Center for Occupational Research and Development in the U.S.

right direction, and added that educational and work environments must encourage people to pursue college and apprenticeship programs without abandoning the prospect of pursuing a degree.

"I believe that more students will be encouraged by parents and counsellors to more freely enrol in many of our highschool vocational or applied courses, knowing that it will not cause the doors to a baccalaureate degree to slam closed later on," he said.

In addition to these speakers, the conference offered workshop sessions on specific aspects of applied academics, an approach to education that emphasizes learning in a realworld context; creates partnerships among education, business, labour and local community groups; and integrates workplace skills and career development with classroom instruction.

## BCIT events to come

## Monday, March 27 to Friday, March 3 I

Prototype classroom on display in SE6 Rm 210 from 0900 to 1100.

### Wednesday, March 29

- A Lunch and Learn session on back pain will be offered in SW1 Rm 1015 from 1200 to 1300.
- Take Pride, a drop-in group for gays, lesbians, bisexuals and friends in the campus community, will meet at 1130 to 1330. Call Gordon (6922) or Mark (8964) for the location.
- The bookstore will close at 1600 for a twoday closure, due to fiscal year-end stock-taking. Phones and PROFS messages will not be answered during this time. The bookstore reopens on Monday, April 3.

### **Thursday, April 6**

Tony Parsons, longtime broadcaster and anchor of the BCTV news, will speak at the IBM Theatre at 1900. Tickets are \$3, and may be purchased from Lynne Larsson (8767).

The mission of BCIT

is to provide **British Columbians** with world-class, job-ready skills for career success.

### Watch for special editions of Update on the following schools:

School of Health Sciences April 24

School of Engineering Technology May 29

School of Business June 30

"We will do our best to keep any disruptions to a minimum," says Keith Walker, project coordinator. "This includes working closely with Safety and Security, particularly parking."

The first phase involves installing a new water line along Carey Avenue and Goard Way. "The contractor will be taking up seven parking spaces in lot P B1, but we anticipate that this will be completed in two weeks," says Walker.

The next area scheduled for work is the space behind the Administration building, from English Street to Smith Street. "The start date for this area will depend upon the preceding construction, but we know that we will be working in that area for approximately one month," says Walker.

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Garver said that putting more emphasis on skills training in schools is a move toward the



The audience packed the BC Tel theatre.

Bert Schendel photo

### 2 . BCIT Update . March 27, 1995 Future is on-deck at DEC

The BCIT Downtown Education Centre (DEC) is an educational institution for the 21st century. While its educational focus will continue to be driven and enriched by the training needs of downtown Vancouver businesses and residents, program offerings will grow in response to the demands for advanced technology skills, and be shaped by emerging employment opportunities.

The campus will use state-ofthe-art communication technology to bring the world to BCIT and BCIT to the world. Above all, BCIT will forge new, creative partnerships with business and industry in contracted training, applied research and development, seminars, conferences and new exciting ventures yet to be pioneered.

Education, training, seminars, as well as research and development activities will start in January 1997 in the new downtown campus on Seymour Street, a campus providing a state-of-the-art learning and training environment to students, business and staff. Initially, BCIT will have the

same number of classrooms as are available at the current downtown Howe Street location.

A primary campus focus will be to provide a broader and richer range of Part-time Studies courses and programs. These courses and programs are designed for both residents and workers in the downtown community.

As the DEC will be linked electronically to the outside world, it will be a catalyst for knowledge, bringing information, education, and training to BCIT from any part of the world and transmitting information, education and training from BCIT to the world. A focus on alternate methods of delivering of learning and distance education will be a priority.

Another important focus is Industry Training. The new campus will provide space and state-of-the-art facilities to meet the needs of the B.C. economy through:

- Business and performance improvement;
- training systems development;



Artist's rendering of DEC.

- developmental and adjustment training;
- just-in-time training access; and
- assessment and certification of acquired skills.

The Applied Research Centre, part of BCIT's Technology Centre, will be a new downtown activity providing an ideal opportunity for partnerships with business, industry associations and other groups. Revenue to support this centre will be generated through contract applied research and other services. Included in the initial plans are:

- Quality Centre-where quality management best practices and principles are disseminated to quality practitioners in B.C. organizations
- Venture program-offering intensive training to entrepreneurs
- Gerontology Centre-a partnership between BCIT and SFU focusing on developing practical solutions to assist the elderly and disabled
- Financial Management Research Centreproviding advanced training and applied research in accounting

Student Project Centreproviding students with internship experience through investigations of real-world client problems.

Conferences, seminars and workshops will provide an ideal opportunity for BCIT's schools to bring keynote speakers and professioal development activities to the DEC. These activities will strengthen partnerships between business, industry, and professional associations as well as provide new opportunities for programs, students and faculty to gain from these enriched activities. -from Gordon Farrell

### **Continued from page one** Sewer Upgrade

"The area behind the Administration building is a firelane, so no obstruction can be left there at the end of the day. This is going to mean laying steel plates to cover up any holes so that a firetruck would be able to drive through," he says. Parking lot P19 will be closed during this process.

NEW STORM SEWER

BURNABY

CAMPUS

NE 12 STEEL

The last stage is perhaps the most complicated: "We are going to reline the sanitary sewer that runs from the Student Activity Centre all the way to NE 30. We are doing this because of future student growth," explains Walker. "Because the existing sewer is 20-30 feet deep and runs under existing buildings, replacing it is not an option."

P B1

STUDENT

INSTALL NEW WATERLINE

P B2

STUDENT

SE 1

The answer, according to Walker, is to reline the existing sewer to increase the flow capacity. "We have already put a video camera down to make sure that it is in good enough condition to work on. Although the relining process has not been used extensively in B.C., it is quite common in larger, older cities such as New York City or London, England."

The project may cause more disruptions to campus life than just limiting the parking. "Our

RELINE EXISTING SANITARY SEWER

Steep Grade

P/PAY Visitor parking ticket dispensers

knowledge of underground services around campus is not 100 percent complete so there is the possibility that some services may go down."

If you experience any difficulties while the project is underway you can contact Keith Walker directly at extension 8597.

-from Sheila Rees

Access for students in wheelchairs

SW 1 Admission / Registration. Student Services: Information, Counselling, Financial Aid & Awards

P B/C2 STUDENT PARKING

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**Managing Editor:** Carol Dion, 432-8865

### Editor:



Ruth Raymond, 451-6900

#### **Contributors:**

Sheila Rees, Ruth Raymond, Christina Bews, Kelly Gervais, Gordon Farrell, Dave Mitchell, Ron Jones, Jim Hayes, John Schoonover, Ernst Wilmink, Patrick Muldoon

**Design and Desktop:** AdMedia Graphic Communication Inc.

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Cliff Pilkey, executive director of the Electrical Contractors Association.

# Electrical Contractors Association offers continued support

When the School of Electrical and Electronic Technology began 25 years ago, industry support and sponsorship played an important role. Today, encouragement from industry remains a crucial part of future growth and development.

Cliff Pilkey, executive director of the Electrical Contractors Association, represents industry support that has continued over the years. The association was there at the beginning and their most recent \$5,000 contribution to the capital campaign is an example of their continued support.

Another example of the association's support was the donation of 20 computer estimating programs in the late 1980s.

Pilkey describes the close working relationship between the institute and industry as not only beneficial to the student, but also essential to the growth of industry. "We are continually trying to better the industry by working together with BCIT towards a common goal," says Pilkey. "We are aware of the requirements that industry is looking for and this information helps BCIT fill training requirements that will produce job-ready graduates."

In addition to his relationship with BCIT through the Electrical Contractor's Association, Pilkey is also the chair of the institute's Electrical trade advisory committee. "The advisory committee is there for the School to bounce ideas off of with regard to training needs, and we also assist in some financial pursuits," says Pilkey. With regard to training responsibilities, the Electrical Contractor's Association, in conjunction with the International Brotherhood of Electrical Workers Local 213, run a strong apprenticeship and journeyperson upgrading program. "This responsibility for apprenticeship training and upgrading gives me a sound knowledge of the requirements for good apprenticeship graduates," says Pilkey.

"One of my favourite parts of the job is the opportunity to go and speak to graduates of the pre-apprenticeship course. I speak to them about safety and security, not only for themselves, but for their coworkers as well," he says. *—from Sheila Rees* 



Industry makes a \$5000 contribution to capital campaign. From left: Dennis Duffey; Michael Jervis; Jack Funk, Electrical Contractors Association of B.C.; George Ingham, manager, United Power Ltd.

Bert Schendel photos

# Advisory committee chair takes active role

Telecommunications Technician program advisory committee chair Janice Sigfusson is the dealer manager for NEC Canada. With more than 20 years of experience in the telecommunications industry, to recognize that BCIT offers a proactive course," explains Sigfusson. "We tell them that grads have completed a comprehensive voice and data program, and because they're already trained, there's no in manufacturing telecommunications, computer and microprocessor equipment, is in a state of expansion—a good sign for job-ready graduates.



she has valuable input for the advisory committee.

"All efforts with NEC and BCIT move to aid planning the course outlines to ensure the program meets the demands of employers for the next five years," says Sigfusson.

"Our mission is to continue working with BCIT and the students to ensure that the grads meet or exceed the necessary criteria in securing job opportunities in their chosen field," she adds.

Ensuring that those high standards are upheld allows NEC to be confident in recommending BCIT to its dealers. "We educate employers learning curve."

The relationship between BCIT and NEC goes beyond curriculum and student; it extends to equipment and information sharing. "As we develop new software, we upgrade BCIT's equipment so they'll have the latest in information and technology at their finger tips," explains Sigfusson. "It has been a good relationship, and we're really proud of it."

That relationship began in 1991, when NEC helped BCIT establish a course outline to facilitate job opportunities in the Telecommunications Technician program. Sigfusson adds that NEC, a world leader Currently in her first year as advisory committee chair, Sigfusson expects to continue taking an active part in shaping the Telecommunications Technician program. "I intend to stay on the committee for as long as they'll have me, so we can continue to provide BCIT with the best technology and support possible," she says.

-from Ruth Raymond

Janice Sigfussen, Telecommunications Technician program advisory committee chair.

Bert Schendel photo



# Computer Control students excel in final term projects

Student projects have always played an important role in the curriculum of the Computer Control option. Last term was no exception, as student design teams completed 13 technical projects with a high degree of success. Each student design team must have a minimum of two students. Projects are usually selected from a list of suggested topics, however, students may suggest them as well. Students who qualify may also work on industry-sponsored projects. Some examples of the types of projects completed last term are shown on this page. The Computer-controlled Pulse Generator started as an idea,the circuit was designed and tested and a final working unit was constructed—all in six weeks.

The Remote Data Acquisition System, REDMAP, was designed for BCIT's Fisheries and Wildlife department to allow them to recover environmental data for the widely publicized Burnaby Lake project. The overall project included two Computer Control students, who designed the computer interface, and two Instrumentation students, who designed the remote instrumentation to measure water turbidity, temperature, flow and depth. This was an excellent example of different departments working together and sharing resources to achieve a common goal.

The third project displayed here, the Video Test Generator, started out as a request from a company looking for a piece of test equipment to be used on a production line. The circuit was designed, tested and demonstrated as a working prototype in about six weeks and met 100 percent of the original design specifications.

A vital member of each project team is the staff advisor. This is a voluntary duty and requires many hours of working with the students to solve technical problems. Special thanks to the following advisors who helped make last term's projects so successful: Andrew Dunlop, Jim Gascoyne, Ernie Hancock, Mike Inch, Ron Jones, Mark Lane, Rod Randall, Dave Rees-Thomas and Colin Shaw. —from Jim Hayes

Computer Control option students Mike Ayton and Bruce Gray demonstrate their computer controlled pulse generator.

From left: Brent Dingsdale and David McNamara show Bob Gunn their remote data acquisition system.

Bert Schendel photos

Left to right: Paul Scowen and Tomas Lili with their project advisor Rod Randall and the video test generator.





### Cooperation the norm The Computer Control option

## Manufacturing our own lab equipment

These projects have been requested by companies who recognize the benefits of having useful work done by highly capable people.

Design teams working on industry-sponsored projects are assigned permanent bench positions in the Industrial Projects Lab. These students begin their projects by meeting with their sponsors and continue to communicate their progress on a regular basis. Students get valuable real-world experience and industry gets real work done.

"With the advent of the Industrial Projects Lab, our graduating students have proven repeatedly that they are truly job-ready," says Ron Jones, program head of the Computer Control option. "Our results have been so successful, in fact, that we are increasing the number of hours assigned to the projects course."

realised that they needed some assistance in the areas of project management and documentation. In response to this, Ron Wlock of Operations Management wrote a Project Management course and Bill Oaksford, of Technical Communications, altered a component of his communications course to provide instruction on project documentation.

We are already seeing the benefits of this cooperation. Improvements have been noted in student reports, project organization and scheduling. These enhanced skills should serve our graduates well in industry. *—from Ron Jones*  A few terms ago, a 32-channel Logic Analyzer was designed and manufactured as a student project. This equipment is now installed in our labs at every workstation. This saved the department a great deal of money.

Since then, the Computer Control option has developed and manufactured:

- a visual interface board, which is used as a teaching tool for computer control and data acquisition applications. The feedback from students has been very favourable as they can observe an immediate response to their software and hardware designs.
- video freeze-frame equipment used in image measurement and recognition.

This piece of equipment allows our students to cover many more video subject areas than would otherwise be possible. We are currently working on a 68HC11 microcontroller development system. It will have a reasonable price, yet offer enhanced performance, compared to what is commercially available.

The Computer Control option welcomes calls from the BCIT community, and would be happy to offer assistance in the area of computer control. —from Ron Jones

# Computer Control instructor in the 'Cellar'

Computer Control instructor David Rees-Thomas has had two articles published in The Circuit Cellar Inc., also known as The Computer Applications Journal.

The first article, Simulating Microprocessor Instructions in C, appeared in Issue 54, January, 1995. It deals with software that Rees-Thomas created at BCIT to "help students unravel the mysteries of microcontroller-instruction execution." The second piece concerned a project he completed at BCIT using fuzzy logic as a teaching tool, and will appear in the March edition.

The Circuit Cellar is published in the U.S. and is known worldwide for its thorough technical coverage of computeroriented topics. —from Jim Hayes

# Co-operative education aids job-ready training

Co-operative education became part of the Electronic Engineering Technology program in 1984, and has since placed more than 100 students annually in industry on fourmonth work terms. The work experience complements the students' academic studies and lab experience at BCIT and ensures that graduates have jobready skills.

Industry participation in the Electronic Engineering Technology Co-operative Education program was active



in 1994, with 135 students benefiting from their work experience in these paid positions. Of these 35 industry placements, 14 percent were in the public sector and 86 percent in the private sector. Students were placed throughout the province, including Vancouver island, the B.C. interior, and as far north as Norman Wells in the North West Territories.

Co-operative Education also benefits employers, giving them an opportunity to recruit and assess the potential of their future workforce. As an equal partner in education, employers have the satisfaction and public recognition of their contribution to the educational community.

Another benefit to industry is the feedback from Co-op students to BCIT. The institute uses this feedback to keep abreast of market needs for a highly trained workforce. This in turn means that employers can choose from a constantly enriched pool of capable, jobsmart people to fill temporary openings, assist with peak loads, or tackle special projects. *—from Ernst Wilmink* 



## Co-op Education employers include the following companies:

Argus Technologies B.C. Bio-Medical Laboratories B.C. Gas B.C. Hydro Canadian Occidental Petroleum Canadian Standards Association **Canadian Forest Products** Chevron Canada **DBA** Communications **Dees** Communciation Dynapro Systems Epic Data Department of Fisheries & Oceans Gibraltar Mines **Glenayre Electronics** IBM Canada Moli Energy Nexus Engineering Norsat International **Offshore Systems** Pachena Industries Prime Mover Controls Pulp & Paper Research Institute Trionics Technology **VTech Engineering** Western Industrial Programming Westcoast Energy



## Mini open house shows off projects

At the end of last term, the Computer Control option put on a mini open house to display all the projects that were done over the term. We kept the guest list small, as it was a pilot project for us. But the response was so enthusiastic that we have decided to do this every term from now on and will expand our invitation list considerably. Some of our guests were:

# BCIT grads take a bite out of crime

Michael Zecchel and Peter Burleigh, the two instructors of the Security Alarm Installer program, want to send a message to burglars: beware! That's because the next generation of security alarm installers graduating from their program will be more than ready to meet the high-tech challenge presented by today's burglars. "The nature of security work has changed phenomenally in the last decade," says Zecchel. "And our program has made a real effort to stay on top of the changes."

general. For example, last year we bought enough equipment to set up a fully-automated central station, capable of receiving monitored alarm signals from virtually any alarm system currently in use," explains Zecchel.

The computerized station is entirely software-driven, allowing students to test equipment in real-life situations, instead of trying to imagine how it might work.

Another innovation in security training includes the use of a

In many cases, the equipment used in the lab is donated to the program by the distributors and manufacturers of security equipment. "We've actually been able to evaluate some items, donated from a manufacturer in the U.S., before they were available for sale on the West Coast," says Burleigh.

Future trends in the security industry, and therefore in the program, include increased attention to access control and closed circuit television surveillance. "These are interesting areas to study, because we have to deal with not only the hardware, but with the ethical issues arising from surveillance and people's rights to privacy," says Zecchel.

- our industry project sponsors: Prime Mover Controls BC Transit ALI Technologies Vancouver Aquarium Cymbolic Science International Merit Digital Systems
- our advisory committee
- Creo Products Inc.
- Hughes Aircraft
- all E & E students were also welcome.

We have done past projects with many of our sponsors. The Vancouver Aquarium is a good example of this. Two terms ago we did a killer whale tracking project for them and have just completed a personnel tracking system for use in the Aquarium.

-from Ron Jones

The number of students entering the program doubled last year to reduce the overburdened wait list, and public interest in the program remains high. "Although there are many reasons for the popularity of the program, undoubtedly one of them is that people think that security work is exciting and interesting work. And it certainly is," says Burleigh.

Another reason for the program's success is the leading-edge equipment in the program's main lab. "We've made a conscious effort over the last few years to purchase equipment which is in some ways ahead of the industry in small-scale, localized telephone network. This allows students to use computers and modems to operate the remote programming and diagnostic software that is rapidly changing the nature of alarm service.

In addition to classroom study, students participate in installation projects, where they install alarms in donors' houses. Several staff and faculty members have received fullyfeatured alarm systems for less than one-half the normal retail price. "In one case, we were able to help out a staff member who had recently been burglarized. The students found it tremendously satisfying to be able to help her and her family," says Burleigh.

# New program developed

In response to a growing need from industry for electrical workers who possess higher levels of training in electronics, the School of Electrical and Electronic Technology has developed the Electrical Control Service Technician diploma program.

"The program is now in its second year," says chief instructor Electrical Trades, Ron Bushell. "And it is still undergoing technical review and development. Our aim with this particular program is to produce graduates who can enter either the service or the maintenance sector of the electrical trade."

Electrical instructor Dave Stonoga, who developed and now instructs in the program, adds: "It's really a bridge between the trade and the technology. In the past the problem has been a lack of skills in one of these two areas. We now have students learning to combine the trade side with the technology and the result is a more employable graduate."

The program is lab-oriented with a maximum capacity of 16 students. The students must complete a provincially approved Electronics Common Core program before enroling in the program. "The students have a good grounding before they begin because of the prerequisite," explains Bushell. "As a result, their basic training begins at a much higher level. The comments that we are receiving from industry repeatedly ask for someone who can be easily trained in advanced equipment.

> "It's really a bridge between the trade and the technology."

The Electrical Control Service Technician program is designed to fill that niche."

The first class to complete the program has been out of school since September. "The majority of them have a job in either of their two options: going right into the trades or the technology/computer end," says Stonoga.

"For those who have gone directly into the trades, we will not be able to see the benefit until they complete the trade program. What will be measured is future growth rather than immediate effects. Traditionally students completed their apprenticeship and then went back for further training. With the new program we are aiming to give the student a little more training before they begin their apprenticeship. The result should be that they do not have to go back immediately for more training," explains Stonoga.

-from Sheila Rees

# Automation and Instrumentation to host competition

The Automation and Instrumentation option will host the International Society for Measurement and Control (ISA) Division 10 Student Skills competition.

Teams from colleges and universities with two- and fouryear Instrumentation programs are eligible to enter. We expect teams from the Northern Alberta Institute of Technology, Southern Alberta Institute of Technology, University of Alberta and University of Calgary, in addition to a BCIT team.

The event consists of a practical skills competition, where each team is given a practical problem that they must solve in a limited amount of time. This is followed by a college bowl style quiz, similar to the Reach for the Top format. The winner of the Vancouver contest will receive a trip to New Orleans to participate in the international competition. Last year the NAIT team won the Division 10 finals in Edmonton, Alberta, and then went on to win the international competition in Anaheim, California.

-from John Schoonover

## Life-long learning nets life-long success

There won't be any strange faces at the Electrical and Electronics' five-year reunion, thanks to BCIT's commitment to life-long learning.

Students completing the Industrial Instrumentation apprentice program gain valuable hands-on experience through a five-year apprenticeship. And while time spent under the wing of field professionals helps the learning process immeasurably, it is the time back in the classroom that makes this program unique. That's the life-long aspect.

Two months of every apprenticeship year are spent with fellow classmates back at BCIT giving students the chance to learn outside of the pressures of the workplace. This classroom component ensures that students have continuing access to extra knowledge and skills training. By sustaining the learning process in this way, and working closely with industry, the program ensures that both students and course material are kept up to date.

Jim Armstrong is one of the school's past chief instructors, and from experience, he realizes the importance of workplace training while recognizing the benefits of coming back to school. "The two-month periods at school have both in-class and lab elements. The students learn more of the theory of the trade but it is all still very practical and job-oriented," he explains. Ron Bushell, the new chief instructor in Electrical Trades, agrees that the time spent back at school is extremely important for the students. "Whether they are here at the Chevron refinery in Burnaby or on the pipelines in Fort St. John, they make it back for their time at school," he says, adding that the courses are quite demanding. "The standards are very high—they [the students] have to maintain top marks."

Because those expectations are high, industry benefits greatly from the apprentices' return to school. "The mills see this as the most valuable part of training," says Bushell. "The students have a great advantage in that they can learn faster once they are on the job. The time at school is spent on things like maintenance, quality control and troubleshooting. Because they are constantly adding to their knowledge, the students are already familiar with the newest techniques of the trade," he says.

As a result of practical experience combined with consistent classroom support, Bushell says that graduates of the apprenticeship program represent a winning balance. Those who complete the certificate achieve official journeyperson status and are qualified to work in any province in Canada. "Essentially," Bushell concludes, "they can look forward to interesting and secure positions-and the pay is quite good!" -from Christina Bews

## BCIT to co-host symposium

This coming May, the School of Electrical and Electronic Technology will host a threepart symposium for the College Electronics Teachers Association (CETA).

The association is a group of electronics instructors from Canada, the United States and Australia, which works primarily in community colleges and technical institutes. The purpose of the conference is to provide a forum for the instructors to meet on a yearly basis to discuss common concerns resulting from advances in electronics and education.

CETA began in 1990 at the Truckee Meadows Community College in Reno, Nevada. A visiting electronics instructor to the college suggested to the program head that they should have a party and invite other instructors. Approximately 50 instructors attended in the first year and since then it has grown to include approximately 100 CETA instructors each year.

Initially, the symposium was held in Reno because of the low cost of air fares from many points across North America. Last year BCIT co-hosted the symposium in Reno with the Salt Lake Community College, but this year membership suggested BCIT as a change in venue. As a result, BCIT will co-host the 1995 symposium with Truckee Meadows Community College at the BCIT Burnaby campus. BCIT has been involved with CETA since the original conference, where they were represented by the Industrial and Electronics program and the Electronics Technician programs. The symposium is an excellent opportunity for BCIT to expand its reputation throughout the western United States.

-from Patrick Mulldoon

# The schedule for this year's symposium is as follows:

#### May 2:

Electronic Engineering Technology Annual Articulation Meeting

May 3,4:

Electronics Technician Annual Articulation Meeting

May 5,6,7:

**CETA Annual Symposium** 

# Another instructor turns author

When Glenn Hardie left BCIT in 1992 after 25 years of service in the School of Engineering, he had another project in the works. Now, three years later, the project is complete and the result is his latest book, Building Construction: Principles, Practices, and Materials.

"I wrote a couple of books during my time at BCIT," says Hardie. "In fact I took a half year leave to work on this book when I was still here."

Other books he wrote while with the School of Engineering are on Specifications and Contracts in 1981, and Measurement and Pricing in 1987.



Glenn Hardie shows his newest book.

Hardie was teaching part-time at UBC during his last few years at BCIT and when he left the Institute in 1992, he went on to UBC to teach in their School of Architecture. Hardie retired this year and though he has no plans for another technical book, Hardie hints at the possibility of other types of publications in the future.

-from Sheila Rees

Bert Schendel photo

# Input invited for mock classroom

BCIT AV, in cooperation with Computer Resources and Physical Plant, has prepared a mock-up of a classroom designed to facilitate the uses of newer instructional technologies. The classroom is located in the IBM building (SE6), Rm 210. It will be open for comments and evaluation March 27-31 from 0900 to 1100 with an introduction and demonstration each day at 0900.

"The mock-up is an attempt to get staff input on classroom design and technology because we have many new general purpose classrooms coming along in the near future such as the new Downtown Education Centre and the former bookstore space," says Bob Pollard, director, AV Services.

Some of the classroom features in question are screen placement, furnishings, lighting controls, projection equipment and an instructor station. "The possible instructor multi-media work station includes a computer, CD ROM drive, VCR and overhead projector with a LCD panel for clear viewing by the class," explains Pollard. "The work station gives access via the Institute LAN to library resources, Internet, world wide web, the instructor's office and Institute file servers."

BCIT AV are asking everyone who attends the mock-up to complete an evaluation form at the end of their visit. "This input," says Pollard, "will play a large part in determining the final design of this prototype presentation podium. I hope that this project will continue after the preliminary showing in cooperation with interested teaching departments." —from Sheila Rees

# Forster's sponsors BCIT soccer team

BCIT's men's collegiate soccer team are set to play in the exhibition league this spring and thanks to Forster's Classic Catering Company, they'll have brand new shirts on their backs.

Forster's has been involved with the soccer team since last season when they helped out with the team's fund-raising. With barbecues and other events the team was able to fund a weekend visit to Edmonton to watch the Brazilian national team play the Canadian national team.

While in Edmonton, the BCIT team had the opportunity to meet and talk with the Brazilian players who later went on to win World Cup 94. For soccer fans this was truly and experience of a lifetime.

This spring BCIT will compete against exhibition teams from SFU, Douglas College, the Columbus Soccer Club, the Calabria Soccer Club and the National Under-20 team. —from Alan Ross





From left: Bob Coulter, Forster's Catering manager; Alan Ross, Physical Plant; Claude Helm, Forster's director of catering. Mike Gdowski photo

School of Electrical and Electronics instructor Mike Lihou works with a prototype of a possible instructor multi-media workstation.

Bert Schendel photo

# Twin rotor 'copter makes a visit

Students at BCIT's Sea Island campus were treated to a demonstration of a Kaman Kamax, a helicopter with unique twin rotors.

The helicopter is used for medium load lifting in the

forestry, transmission tower and building construction industries. Its twin rotor design eliminates the need for a tail rotor, since the double rotor action produces neutral torque. The demonstration was a sidetrip for the helicopter, which

was on a demonstration trip to Canadian Helicopters, one of the world's largest helicopter operators and a significant industry supporter of BCIT. *—from Dave Mitchell* 



Students at the Sea Island campus pose with the Kaman Kamax helicopter. Mike Gdowski photo



Reprinted with thanks to Ian Percy.



Doug Miluch heads for the finish line. Burnaby News photo

#### **Staff Profile**

# Taking the inside track

explains Miluch.

Finishing fourth in the 1992 B.C. Summer Games road race was the result of a lot of hard work and determination, both of which are a regular part of Data Communications instructor Doug Miluch's life.

track speed skating record for his age category and two for his but due to the intense category in British Columbia. "Short-track speed skating comprises several laps of an indoor hockey rink, which is only 111 metres long. I started skating when I was six years old, but I began to skate competitively four years ago. The skating season lasts from September until March,"

started working right away study schedule that I had maintained while working towards my degree, suddenly I found myself with extra time on my hands."

# Find a pin and pick it up...

It started three years ago, when Gordon Harris, former BCIT pulp and paper engineering instructor, and currently on the executive of the BCIT Pioneers Club, picked up a souvenir pin from the Brisbane Expo in Australia.

Now, Harris' pin collection threatens to take over his home. "I've never actually counted them all, but I know it's in the thousands," he says.

Despite this huge number of pins, the collection is quite specialized. "I specialize in pins from post-secondary institutions, colleges and universities," he explains. "And I decided that I should branch out and do a sub-collection of BCIT pins." Harris also has special collections of television,



Gordon Harris displays his BCIT pin collection. Bert Schendel photo

radio and RCMP pins, in addition to a series of pins from towns across Canada.

Harris, who plans to donate his BCIT pin collection to the institute, is still looking for a few pins to complete the set. "I don't really know how many are missing, but I've heard rumours of three or four," he says.

Anyone who can help complete the BCIT pin collection can contact Harris at 435-1908. -from Ruth Raymond

## Recreation & Athletics

#### **Beginners** golf

Here's your opportunity to take up golf. Whether you're a firsttimer, or just rusty, these beginners golf lessons with golf pro Jack Westover are for you. When: Saturday, April 1 0930 to 1330 Fee: \$44. An additional \$16 covers balls and green fees.

Equipment: Some sets of clubs are available at Rec Services Location: Langley Golf Course

#### Intermediate golf

These intermediate golf clinics will emphasize stroke improvement. When: Saturday, April 8 0930 to 1600 Fee: \$42 plus a \$12 charge to cover balls and green fees.

#### **Co-ed Slo-pitch**

Days: **Division A Monday Division B Tuesday** Division C Wednesday Division D Thursday

Game starts: 5:15 to 5:45 p.m. rain or shine Begins: Monday, March 27 Fee: \$20 per team *Teams:* Minimum of 12 players per team Minimum of four women per team Five teams per division

In addition to teaching in the Electrical Engineering Technology program, Miluch is also working on developing a new program for telecommunications. At the same time he maintains a rigorous training schedule for his extracurricular interests.

His hard work is paying off; Miluch has already made one national short-

Miluch's schedule won't get any lighter when the skating season ends later this month because cycling season will just be starting up. Miluch has been racing bicycles since he graduated from university in 1981. "When I finished my degree I went into culture shock," laughs Miluch. "I

Miluch doesn't seem to have that free time anymore though, especially since he coaches his wife Paulette's hockey team at UBC two nights a week. "Paulette and I are very busy in the winter. So far this season we've been able to get out crosscountry skiing 45 times," says Miluch.

— from Sheila Rees

#### Quintathlon

Start training and get your team together for the Quintathlon on Wednesday, April 26, sponsored by the Chartered Accountants of British Columbia and BCIT Recreation & Athletic Services.

Seven-member, co-ed teams will participate as follows: 1 Team Captain (assists Marshalls) 2 Canoeists 3.0 km 1 Short runner 2.5 km 1 Swimmer 0.5 km 1 Long runner 4.5 km 1 Mountain biker 5.0 km

#### **Blade Runner**

Teams of three will consist of: Runner-two laps around circuit Rollerblade—15 laps around tennis courts Mountain bike-three laps around fitness trail

#### Team fee: \$24 \$100 for first place; \$75 for second place; \$25 for third place.