



Everything you wanted to know (and then some) about the new Co-op Building p.4-5



PCP: Small companies or Large? p.12



From the other side of the world p.13

The One-Stop Shop for Technology Talk - CUTC

James Schofield
1B Computer

Every year, hundreds of technology enthusiasts gather in Toronto for the Canadian Undergraduate Technology Conference. Started in 2000 by a group of UW students, the conference now attracts some of the brightest undergraduates from across the country. This year, CUTC was held at the Regal Constellation Hotel in Toronto from January 16 to January 18.

CUTC provides an excellent opportunity for students to meet with influential leaders in the technology industry, and preview some new products and technologies. Networking opportunities are also abundant, and many students come armed with résumés in hopes of landing a job or a co-op placement. Some of the more notable events and speakers of this year's conference include:

Helen Armitage – VP Technology, IBM. Ms. Armitage opened the conference by discussing the future of computing. She sees biology playing a great role in IT, and discussed how the behaviour of small organisms is being applied to computing. Eventually, she foresees the Internet

becoming a utility just like hydro or water, and the processing power matching that of the human brain by 2015. Her company's support for Linux and open source software resonated well with the audience; however, some students questioned the ethics and potential problems in building machines with such immense processing power.

Intellectual Property TechPanel. Four panellists, including a patent agent, a jazz musician, lawyer, and an open-source advocate, discussed varying aspects of Intellectual Property, from the Digital Millennium Copyright Act to peer-to-peer file sharing. Several cases were discussed, such as the recent Disney trial in which copyright protection was extended. As a result of this decision, it was pointed out that it is now illegal to sing "Happy Birthday" in public in the US, since copyright on this song extends until 2016. Some of the more heated debate centred around file sharing, with many panellists severely criticizing the Recording Industry for failing to embrace this new technology, and others arguing for the rights of artists to receive compensation for their work.

Continued on page 15. See Canadian Undergraduate Technology Conference

“..it was pointed out that it is now illegal to sing “Happy Birthday” in public in the US, since copyright on this song extends until 2016.”



How you doin'? How you doin'?



Awwwwwwwwwwww.....

Engineers + POETS = BOT of Success



We certainly love our fooze!



Jonathan Ng

4B Computer

Once again, we start the term off with another spectacular Beginning of Term Party. BOT, as it is affectionately called, is a great chance to talk to old friends or meet new ones. I was surprised to see the amount of first years showing up!

Despite the fact that our attendance was very closely monitored (see Dave Clegg's Executive Report on page 6 for the full details) we still were able to enjoy our-

selves. For example, I met two English exchange students that live in my building! (Eby Hall has quite a few exchange and international students living there)

Besides talking to people you've met, talking to people you haven't met, and consumption of frothy beverages, there are also other forms of entertainment you can obtain at BOT, such as the activity shown on the right, otherwise known as "foosball". There was also an opportunity to see the 60 inches of steel that represents us, as Waterloo Engineers.

If you were there, great! If you weren't able to make it, there are two - count 'em, two - more Term Parties this term, and the next one is around a month and a bit away!

More pictures on page 8.

Letter from the Editor

Jonathan Ng

4B Computer

Editor-in-Chief



It has been a crazy term; it will only get crazier as the term moves on. But that is alright.

As you can see, many changes have been made on this campus since you were gone. There is a new co-op building, and certain businesses have been shuffled around, to say the least. My class was banned from my fourth-year room (see the article to the right of this one), we have a new Dean, and for now the online fees issue is back in committee.

It is often whispered that apathy runs thick in these halls, and to a certain extent, it is true. It is fairly hard to convince most people here that something that does not affect them now matters to them. But that lack of foresight might come back to haunt them, as it did with the increased co-op fee used to pay for the new CEC building.

Why does the mantra "Knowledge is Power" not stick in people's heads?

Now I am going to present what is going on in my mind, grouped in a semi-organized order.

1) Fourth-year Stuff

Wow, I am a fourth year. I am going to be graduating.

No, it is still not believable. When I first started school here, graduation was just a distant thought in my head, something that is heard about but never contemplated. But here it is. Never mind graduate school, it is the same but different – your days get even longer. I think the first years here feel the same way I did. (If any first-year student wants to write about their current experiences, you are more than welcome.)

In the five years that I have been here, I have met many friends, shared many memories (and pictures), and done many, many things, some of which I would have never imagined. But like all good things, it is about to end.

There is a never-ending cycle of frosh week to Iron Ring Ceremony and back again that makes you feel special. The younger ones yearn to be in third or fourth year, where things get exciting and interesting; the older ones either want out, or want to be back in first year again. And so the cycle starts anew, with the younger ones replacing the older, and new people placing in the more junior spots.

You never really feel that you are in the right place, at the right time.

My department's fourth-year projects will be finished by the time you read this paper. I felt really proud, standing in front of a working prototype and saying "I helped make this happen." I think every discipline should have something similar in scope. Results of the symposium will be reported in the next issue.

2) Perfect Components, Imperfect Machine

Some people strive to be successful. And some people are successful.

I am still not sure which category I fit in.

Everybody tells me that I am good, very good; yet I feel that there is always one more bit of tweaking that could be done, one more thing that I can accomplish that I could not before. I tend to be really rough on myself; part of it comes from the fact that I have been told all my life that I have great potential. So when I stumble (and people are not perfect), I hit the ground pretty hard.

The best way to deal with it is to pick yourself up and continue the good fight.

3) University Life

I am living in Eby Hall right now. UW Place is a very interesting place; it is almost a self-contained community. I live with many exchange students, all of whom come from different places. The stories about other countries you get from them are very interesting, especially if you are like me and have not been outside Ontario for about five years. It makes for a nice experience.

University is a very odd atmosphere when you compare it to anything else; you are in

close proximity with a large number of people your age. You simply do not get that kind of large group in a real world situation. It incidentally makes looking for dates much easier (if anybody in co-op would like to prove me wrong, please email me.) You lose that sense of community when you are out in the real world, and it makes you feel rather lonely. Sure, there are your workmates (who may or may not be 10 years older than you are) and other smaller community situations, but none of them feel quite like the University atmosphere.

Am I saying that we should never leave University? No. Finding a job, advancing, obtaining money are all wonderful things. But there is a need to recognize that the real world is very different than the little sheltered life we call life in Engineering.

4) This Paper

It is a new year, and more improvements to the paper are being made. I have a strong staff this term (but people are always more than welcome to contribute or to write); I hope to have some pet projects implemented in the coming issues. Minor things like improving the arts section, to major things like having more controversial articles. One thing I would really like in this paper is more humour - people like humour.

We will still cover things like Engineering Society events, especially since EngSoc is expanding to accommodate more people. For example, the engineering play is extremely popular and takes in a different set of people than you would normally expect for a typical EngSoc event.

I also hope to be able to cover more events, and quicker. Things like the Bomber and Fed shutting down, things like the CUTC, these are major events in the University and will be covered as soon as possible.

5) Farewell.

And with this paragraph, I will sign off. I hope the term has been enjoyable so far and that you have not had to endure as much bad luck as I have.

the IRON WARRIOR

The Newspaper of the University of Waterloo Engineering Society

Editor-in-Chief
Jonathan Ng

Assistant Editor
Vacant

Photo Editor
Cindy Zheng-Ming Bao
Sung Hon Wu

Layout Editor
Hiu Lam Yau

Technical Editor
Vacant

Webmaster
James Schofield

Distribution Manager
Naoreen Hasan

Business Manager
Vacant

Staff
Ryan Bayne
Kiran Dhaliwal
Joseph Fung
Jason Griese
Janna Hickson
Laura Jones
Sandra Lê
Andrew Lin
Jay Liu
Christine McCullough
John Olaveson

Contributors
Dave Clegg
Matthew Harper
Michele Heng
Josh Levitz
Lisa Mack
Stephanie Purnell
Dan Robinson
Kareem Shehata

Questions? Comments?

We welcome letters and feedback from all our readers. Please email us at:

iwarrior@engmail.uwaterloo.ca

.....
The Iron Warrior is a forum for thought provoking and informative articles published by the Engineering Society. Views expressed in **The Iron Warrior** are those of the authors and do not necessarily reflect the opinions of the Engineering Society.

The Iron Warrior encourages submissions from students, faculty and members of the university community. Submissions should reflect the concerns and intellectual standards of the university in general. The author's name and phone number should be included. All submissions, unless otherwise stated, become the property of **The Iron Warrior**, which reserves the right to refuse publication of material which it deems unsuitable. **The Iron Warrior** also reserves the right to edit grammar, spelling and text that do not meet university standards. Authors will be notified of any major changes that may be required.

Mail should be addressed to **The Iron Warrior**, Engineering Society, CPH 1327, University of Waterloo, Waterloo, Ontario, N2L 3G1. Our phone number is (519) 888-4567 x2693. Our fax number is (519) 725-4872. E-mail can be sent to iwarrior@engmail.uwaterloo.ca

the iron warrior magazine

Created by...

Read by...

Written by...

YOU!

If you want to contribute ANYTHING AT ALL,

drop by our office (opposite the Orifice) or e-mail us at iwarrior@engmail

Fourth Year Room Woes

Kareem Shehata
4B Electrical

Funny how the smallest of actions can carry great consequences. On the first Thursday of the term, someone in 4B Elec or Comp left a window up in the Fourth Year Study Room. No big deal, right? Some money is lost in heating expenses, and the room is cold for whoever gets in first the next morning, right? The University will just take back whatever was lost in tuition, so who cares?

Well, the A.V. department on the first floor certainly cared when they arrived in the morning to 10cm of liquid under their desks. Overnight, the pipes in the heat exchanger under the window burst, leaking coolant for about the next six hours until it was discovered. In that time, coolant found its way into the furniture in the study room, down one floor to Roger Sanderson's office, an ECE lab technologist, then down one more floor to the A.V. department. Some people were even telling me about a small stream of the stuff running down the hall to the elevator shaft 10m away. On its way the coolant destroyed papers, books, furniture, and a good day's work for many people.

Ordinarily, I would grumble something about the university knowing better than to leave students with a window they shouldn't open, except that there's something more important here. The ECE Department had made a rare show of trust. The combination to the room had been changed the day before, so only fourth

year students would be allowed in the room, and we'd been told before not to leave the windows open. The department had trusted us as the most senior of their students to keep a small portion of potential lab space for our own use. All of that was dashed in a moment of carelessness that resulted in many thousands of dollars of damage.

The reaction from Bill Ott, the ECE lab director, was simple, swift, and unsurprising. The door to E2-3352 is locked to this day, and a notice has been posted stating very plainly that the room can be put to better use if undergrads don't particularly want it.

The following discussions on the class email list were fierce, complete with name calling and swearing, as any discussion of importance on that list tends to contain. I think it's here that we'll find the ultimate consequence of that initial action: the discovery of the true spirit of ECE Class of 2003. Some people felt as I did that something had to be done to regain the trust we had previously. We can throw blame in any direction we like, but it's not going to get the room back.

What surprised me more than anything else was the number of people vocal in their disagreement. I'd expected that I would get a reply from the few people who cared, and as usual the majority of the

class would be silent in their apathy for anything not directly related to exams. I had also expected a discussion of who's fault it really is, but what eventually came out totally floored me. Not only did some people actively voice how much they didn't care about the room and didn't feel it was worth any effort whatsoever, some actually sent an email to Bill Ott stating that they felt he should turn it into something more productive.

“Many people will actively protest anything that involves co-operating with admin. What's worse, it's contagious.”

This all begs the question: What's the point of a study room for fourth year students anyway? Well, if my bias isn't obvious by now, I think the fourth year room is about the only element outside of lectures that actually brought the class together. You want proof? Let's have a look at last spring as the elec class went from 3B to 4A. I had asked for access to another room to work on the Fourth Year Design Project, and found out that we also had this Fourth Year Study Room. I thought, "Hey cool, something new to explore", and checked it out. What I found was more than a few couches, a fridge, some PCs, and a foosball table. Within weeks, I found myself hanging out there, talking with new friends, and yes playing the odd game of foosball.

That's what I feel the fourth year room is all about: giving the class a common point for connecting. There are plenty of places on campus to "study", but this was the only place for our class to get together. It was a place where we could have group meet-

ings, check email, and de-stress after long hours of work. We even had a class party to inaugurate the room and sign our class mural - something that's never happened in the four previous years we'd been together as a class. This was OUR space.

So what happened to destroy this spirit of co-operation? It certainly isn't one-sided. Trust has disappeared on both sides to the point that neither admin nor students is willing to do anything to support the other beyond the minimum to get to graduation. It's a circular problem that can be stated both ways: Admin doesn't trust the student body because the students don't care, and the students don't care because admin doesn't trust them with anything.

The task now is to rebuild that trust. I've come up with a number of ideas but they all require full participation to be successful. I'd thought the biggest obstacle would be apathy, but I've discovered a much deeper problem. Many people will actively protest anything that involves co-operating with admin. What's worse, it's contagious. This downtrodden attitude discourages others from taking part, and pulls numbers from the apathetically silent to active dissent.

I'm a great believer in freedom of speech, and as such I don't wish these views hadn't come out - on the contrary I'm glad they did, I just wish that they'd been voiced earlier. Maybe something could have been worked out a little earlier. I can only hope future classes will fare better than we have, but I fear that our legacy to them will be one of selfish destruction.

About these textbooks that I cannot afford...



Sandra Lê

4B Systems

When someone asks me how much it costs to go to Waterloo, I usually reply: "About \$3800 for the tuition and school fees, and \$600 of textbooks." Indeed, this term, had I bought all my textbooks new from the Bookstore, as most of us do, it would have cost me a little bit more than \$600 with taxes for 4 textbooks. An average of \$150 per textbook! If I could have found all of them at the Used Bookstore, where they sell the books at 80% of their retail value no matter if it is the first or third time that the book comes around, it would have been just a little bit less than \$500. Still a very high price I find for about 10kg of paper and ink!

I really respect all authors and the great work they put into creating and writing comprehensive and thorough textbooks, but the price is very high for my student budget. Assuming that I will be using each textbook about 100 hours each or less, depending on their relevance (5 hours per week, 13 weeks of lectures, plus 3 complete days of review for the midterm and final), it is only about \$1.50/hour for the intensive use of a textbook, more if I only use it to get the assignment problems and don't really bother reading the material ahead or if my professor's class notes are complete enough.

This term, as most of my fellow classmates and friends, I am tight on money and once the tuition and the rent is paid for the term, textbooks represent the third biggest expense on my budget. Just the price of a single textbook is worth 2 months of groceries for me! I could go further with comparative analysis of the cost my textbooks, but I think you get the point, you probably have done the same calculation many times already!

So this term, I cannot really afford many textbooks, and seeing the use that I have been making of them in the past (and the inability that I have to sell them back in the Used Bookstore a few years later because the prof now requires a newer edition or a different textbook), I refuse to buy my textbooks this term. And what will I do when I need to complete the material seen in class and get the assignment problems? Three solutions are offered to me: borrowing the book from a classmate and use it once in a while, borrowing the book from a classmate and photocopy the material that I need, and borrowing the book from the library.

The first solution involves a lot of co-ordination to not disturb neither my classmate's or my study pattern. It is feasible, but can be tricky in "cram periods" such as before an assignment deadline and before

an exam. The second solution requires a bit less co-ordination, a little capital investment, a bigger effort if the prof is an intensive textbook user and hundreds of pages have to be copied (photocopying 300 pages only costs \$15 in the Orifice, but it takes more than 2 hours to complete the job!) and, of course, the quality of the learning material might be degraded (for example, photocopies do not pick up all the colours and details of the plots). This is also not quite totally legal and I don't want to have any bad conscience about it.

“...I refuse to buy my textbooks this term.”

The only solution to my problem then, if I don't want to buy the textbook, is to borrow it from the library when I need it. This sounds like a great idea, but I was not expecting that the library would

carry only one copy of a textbook used by more than 100 students this term on campus! Indeed, for my ECE 380 / SYDE 352 Controls class, there are only 2 copies of the textbook available through the library, one in DC and the other one in Guelph, both on loan, and more than 146 students use it this term! It doesn't beat my ECON 231 course, where there is no copy of the new edition of the International Economic textbook available in the library, needed by more than 250 students this term! Luckily (but is it really luck at this point?), the old edition - bought at the Used Bookstore 2 years ago - sits in Dana Porter Library on a 1-day reserve. For my other engineering textbooks, there is usu-

ally only one copy available in Waterloo, already on loan.

I was very naïve when I thought that the university library would have a copy of the textbook available for me. What was I expecting? Probably that at least one copy of each textbook used each term on campus would be sitting in reserve, available to the students for a short consultation (1-hour to 3-days). The Bookstore carries a copy of all the textbooks used for all courses every term, so why can't the library do the same and have a special section where all the textbooks would be available "for reference only". This way, I could go and gather what I need from the book without having to bring my bank account to a negative value.

Is it asking for too much? Of course, it requires quite a big investment from the library every term because of the constant new editions published and the changes of textbook when a different prof teaches the same course. It is my understanding that the UW library should at least to provide the students with a copy of their primary learning material! For a few days, I started to believe that I could use the library this term for something more than its quiet study environment. I don't think it will happen this term.

And just what about these recommended textbooks that I need for my courses but still cannot afford? Well, I just hope my classmates will be generous when I ask them nicely, "can I borrow your textbook?"

Your Campus

Important Co-op Dates for Winter Term 2003

Co-operative Education and
Career Services

Date	Event
27-Jan-03	Co-op Job Posting #5 available by 12 Noon
28-Jan-03	Co-op Job Posting #5 expires 8PM CAREER SERVICES WORKSHOPS: Interview Skills: Selling Your Skills – Don't stop at the fundamentals; you must also prove your skills in the interview. Are you ready? 4:30-6:30PM. Please email John Cullen to register at jcullen@uwaterloo.ca Enrollment limited to 15 participants. Own Business: Next Steps – This workshop offers a more in-depth discussion on start-up issues: strategy and operational tactics, marketing, finance, human resources, R&D. 4:30-5:30 PM Please email John Cullen to register at jcullen@uwaterloo.ca Enrollment limited to 15 participants.
29-Jan-03	Co-op Employer Interviews Begin
30-Jan-03	CAREER SERVICES WORKSHOP: Make the Job Fair Work for You – Learn the “do’s” and “don’ts” of this excellent networking and work search opportunity. 2:30-3:30 PM Register online at www.careerservices.uwaterloo.ca
3-Feb-03	CAREER SERVICES WORKSHOPS: Make the Job Fair Work for You - Learn the “do’s” and “don’ts” of this excellent networking and work search opportunity. 10:30-11:30 AM Register online at www.careerservices.uwaterloo.ca Letter Writing - Learn how to use letters to your advantage in the job search. 3:30-4:30 PM Register online at www.careerservices.uwaterloo.ca Resumes - Discover techniques for writing an effective resume. 4:30-5:30 PM. Register online at www.careerservices.uwaterloo.ca
4-Feb-03	CAREER SERVICES WORKSHOP: Job Search Strategies – Learn the “how-to” of job/work search, networking, and employer research: 2:30-4:00 PM. Register online at www.careerservices.uwaterloo.ca
5-Feb-03	Job Fair 2003 at RIM Park, 10:00AM – 3:30PM. For details visit www.partners4employment.com
6-Feb-03	Business Etiquette and Professionalism – Covers dining etiquette as well as appropriate behaviour at interviews, employer receptions/sessions, and other networking activities. 3:30-4:30 PM Register online at www.careerservices.uwaterloo.ca
10-Feb-03	CAREER SERVICES WORKSHOP: Working Outside of Canada - Intended for those thinking of an international work experience. Helps determine your readiness, and provide some advice on beginning the process. 3:30-4:30 PM. Register online at www.careerservices.uwaterloo.ca
11-Feb-03	Last Day of Co-op Employer Interviews CAREER SERVICES WORKSHOPS: Career Decision Making – After this session you will be in a better position to assess yourself and your “fit” in the world of work. 2:30-4:00 PM. Register online at www.careerservices.uwaterloo.ca Special Session for International Students – International students will learn best approaches to search for work in Canada after graduation from UW, including visa requirements. 4:30-5:30 PM. Register online at www.careerservices.uwaterloo.ca
12-Feb-03	Special Session for International Students – International students will learn best approaches to search for work in Canada after graduation from UW, including visa requirements. 4:30-5:30 PM. Register online at www.careerservices.uwaterloo.ca
14-Feb-03	Ranking Forms Available after 10AM at the Paging Desk on the main floor of the Co-operative Education & Career Services building. Ranking Forms due back by 4PM Co-ordinator Consultations end by 4PM
21-Feb-03	Co-op Job Posting #1 (continuous phase) available by 12 Noon (apply to this posting if you had no interviews or were not ranked during the initial interview phase)
24-Feb-03	Job Match results posted by 3PM Meetings for students without employment at 4:30 PM (see www.coop.uwaterloo.ca/students/impdates/7.html for locations)
25-Feb-03	Co-op Job Posting # 1 (Continuous Phase) expires 8PM Acceptance of Employment Meetings with Co-ordinators – check the Co-op Bulletin Board, located on the lower level, Co-operative Education & Career Services building for your scheduled appointment. CAREER SERVICES WORKSHOP: Business Etiquette and Professionalism – This workshop will cover dining etiquette as well as appropriate behaviour at employer interviews, employer receptions/sessions and other networking activities. 2:30-3:30 PM. Register online at www.careerservices.uwaterloo.ca
26-Feb-03	Co-op Job Posting #2 (Continuous Phase) available by 12 Noon Acceptance of Employment Meetings with Co-ordinators Continued.
27-Feb-03	Co-op Job Posting #2 (Continuous Phase) expires 8PM CAREER SERVICES WORKSHOP: Job Search Strategies - Learn the “how-to” of job/work search, networking, and employer research. 2:30-4:00 PM. Register online at www.careerservices.uwaterloo.ca Letter Writing – Learn how to use letters to your advantage in the job search. 5:30-6:30 PM. Register online at www.careerservice.uwaterloo.ca Resume Writing – Discover techniques for writing an effective resume. 6:30-7:30 PM. Register online at www.careerservices.uwaterloo.ca
28-Feb-03	Co-op Job Posting #3 (Continuous Phase) available by 12 Noon Work Reports (marked by co-op co-ordinators) available for pick up at the CECS reception. CAREER SERVICES WORKSHOPS: Interview Skills: Basics – Learn the fundamentals of successful interviewing. 2:30-3:30 PM. Register online at www.careerservices.uwaterloo.ca Interview Skills: Preparing for Questions – Discuss and learn from taped excerpts of actual interviews. 3:30-4:30 PM. Register online at www.careerservices.uwaterloo.ca

CEC - What the New Co-op Building is All About

Andrew Lin
3B Chemical

On December 16, 2002, the new Co-op Building (CEC) officially opened for business. Throughout the months of construction, the site has morphed from an empty field to a messy construction zone, and finally to a completed modern building. In investigating the new features and procedures of CECS, I spoke with Olaf Naese, Communications and Public Relations Administrator. This is what I learned:

What's new?

- 102 dedicated interview rooms – NH had 53 interview rooms, but some of those were actually employee offices which were taken over when needed for interviews, forcing the employees out of their own offices for days. The CEC interview rooms are larger and more spacious. Most of them have windows or frosted glass to allow natural light inside. Rooms have more sound insulation and privacy to reduce distractions during interviews.
- Quicker Co-op Process – Extra interview rooms mean that interviews will now take place in a much shorter span (2 weeks), instead of dragging on for almost a month. Speeding up the process allows UW to compete with other schools, which are developing their own co-op programs. UW has nearly 11000 Co-op students (63-64% of student population). Since those schools are invariably smaller, they can offer matches between students and employers much quicker than we can.
- Phone interview rooms offer more privacy than in NH
- 7 new meeting rooms, including a 120-person room divisible into 2 sections when necessary – NH had only 4 meeting rooms, and 1 of those was almost permanently

converted to offices.

- Lockers are available for rental for a quarter per usage, promoting safety and reducing risk of theft.
 - Separate lounges for employers, staff, and students – Situations occurred where employers were overhearing what students and staff were saying while on break, and vice versa.
 - CEC location – Construction site was selected based on a variety of factors including: close proximity to centre of campus, parking lots, easily visible and identifiable from around campus.
 - CEC building design – 4 floors greatly increases available space. Having only 1 long hallway avoids networks of hallways which waste space.
- Modern design is appealing for staff, students, and employers.
- Booking appointments with co-op advisors can be done from the Central Information Desk on 1st floor.

What's old:

- For this term, applications will still be done the old-fashioned way, with postings in the hallways, and bins for resume packages located in CEC. Winter 2003 should be the last term using this process; subsequent terms will make use of the new "CECS online" system.
- Interviews, co-op advisor meetings, workshops will all still be held at CEC.
- Basic format of Co-op process remains unchanged (postings, applications, interviews, matching, ranking, continuous phase). Only the delivery mechanism will shift with the more flexible online system.
- The Co-op Student Council is a group of students representing every faculty, and their job remains to communicate major issues between students and CECS. They have an office on the 1st floor of CEC.

What's coming soon:

- CECS online – Moving the entire Co-op process online is what CECS online is all about, and it will likely be implemented this May. Students will be able to view job postings, apply using electronic resumes, choose their own interview times within employer-decreed time slots, and also rank jobs online. The only reason to come to CEC would be to have the actual interview. Employers will be able to check applications almost instantly, select students for interviews, and rank them online. This would eliminate the need for paper resume packages, bins, postings, and the costs of shipping those papers around.
- Silent paging system – Instead of paging each person out loud, monitors throughout the building and in waiting areas would display interviews on screens. Students see their name appear on the screen and proceed to the paging desk to check in.

What MIGHT be coming (lick your lips with eagerness, but don't bank on them necessarily happening; these changes are still under review and could be modified):

- More flexible ranking – Instead of forcing employers and students to rank sequentially starting from 1, they would be given more flexibility. Students could rank 1,5, or 1,2,3,9, etc. Employers would also be given more freedom, though not as much.
- Removing exceptional students (those ones who get 10 interviews every term, you know who they are) from the system early, thus freeing up interview opportunities for the other students. That student could accept a job early, and those other 9 interview spots would open up. This may

apply to any student who has already decided to accept a job, they may choose to exit the system early, freeing up space for other students.

- Cancelled jobs will not mean you lose an application (out of your 24 quota). As soon as the cancellation is recorded, students who applied will be allowed to apply to an additional job to replace the cancelled one. Any screened job for which you did not get an interview would also result in an additional application.

What will become of Needles Hall?

- NH will be reclaimed by the Registrar's Office and other departments.
- Departments which were running out of space in NH will now be able to shuffle their offices and make use of the additional space and improve their operation.
- No more Co-op activities will be conducted out of NH, everything will be done from CEC.

More information can also be found online, at the CECS website. The Co-op Student Manual actually contains lots of information about Co-op issues, including a breakdown of finances and the Co-op Fee, which always seems to be a subject of hot debate. Details about "Proposed Co-op Process Changes" can also be found under "News."

In speaking with Naese, a primary concern of theirs is student awareness. To combat this, CECS encourages students to look through the CECS website and find information online if possible. They really want students to learn more about the new system, and they wish to emphasize that many answers to questions are available online. Online information will be updated periodically, especially now, at the beginning of the transition.

Quarter-Life Crisis at 21

Sung Hon Wu



3A Computer

I recently came to the stunning conclusion I am having a quarter life crisis at 21. Here is the story of how it came about.

I was moving back to V1, and everything was going fine and dandy. Suddenly the don comes into my room. She is very nice and introduces herself. The only problem is suddenly I realize, I have done this before, I did it when I was a frosh. That made me start thinking,

I am old,
I AM OLD.

At this point, I should explain what the quarter life crisis is to anyone who is not familiar. What I know comes from my high school history teacher, where he had a lecture go really off topic one day. The quarter life crisis is similar to the mid-life crisis. Usually, it occurs after a person graduates but before they reach 30. The quarter life crisis starts with the realization "I am no longer young." Next, the person loses the aura of invincibility, something

everyone had from high school. Finally, the person hits rock bottom, realizing they will not be the Vince Carter or Tom Cruise they imagined they would be by the time they were 30.

Back to my experience, 30 seconds after realizing I am old, this chill comes across my body. Suddenly I feel old, and not quite as invincible as before. The idea 3A would be all fun and games go AWOL, replaced by the idea of three long months of torture. Next, my delusions that Microsoft will finally hire me vanish. I think, "I probably will not find a job at all". At this point, 60 seconds have passed since this all started, but I thought it had lasted an eternity.

Now I start getting very depressed. As a teenager, I always assumed I would be richer than Bill Gates and win 10 Nobel prizes. However, where am I now? Just another poor student looking for any job that will pay for tuition. My dream of Nobel prizes, they disappeared in 1A when I received my report card. What have I done in my life, nothing, nothing of consequence. I could make out my future right there and then, and it was depressing. I

was becoming just another Joe Blow, a perfectly ordinary person never destined stand out from the crowd.

I wondered how it had all come to this. I always ate correctly, got those necessary fruits and vegetables; I studied hard in high school. I never smoked, or picked up any of those bad habits my parents said I should avoid. Nevertheless, why did I end up being so mundane? And even worse, so old?

But just then, the darkness lifted, and the world looked sunny again. I smiled, the crisis was over.

Oh did I tell you how the quarter life crisis ends? You realize you are only a twenty something. A crisis is when you hit 40.

"I wondered how it had all come to this. I always ate correctly, got those necessary fruits and vegetables..."

Guided Tours for CEC

Lisa Mack

Communications Associate, CECS

The following dates have been arranged for providing guided public tours of the new CECS facility, located between South Campus Hall and Arts Lecture. The tours will run at 12 noon and 12:30 pm on each of the given days. To register, anyone interested should contact Olaf Naese at olaf@uwaterloo.ca. The dates are as follows:

Thursday & Friday Jan. 23 & 24

Monday & Tuesday Jan. 27 & 28

Tuesday Feb 25, Thursday Feb 27 & Friday Feb 28

Tuesday Mar 4, Thursday Mar 6 & Friday Mar 7.

ENGINEERING SOCIETY EXECUTIVE REPORTS

President Report



Dave Clegg

President

The IW editor wants me to keep this exec report under 500 words. This is going to be very difficult given the amount of stuff that has happened over the last three weeks! By the way, Happy New Year! Welcome back to those of you on co-op, and welcome to BSoc for those 1Bs and 4Bs who have just joined us from ASoc.

So what's up in Engineering-land? Well, over the work term the exec was embroiled in an issue involving the UW Microsoft Partnership that was unveiled in August after exams were over. The story made international news by the fact that it appeared that Waterloo had relinquished academic control over its curriculum in exchange for a donation from Microsoft Canada. Read all about it at <http://uwstudent.org/story/10136> and please check out your exec's response at http://engsoc.uwaterloo.ca/www/documents/EngSoc_MSStatement.pdf.

Also during the fall term a new Dean, Adel Sedra, was chosen to replace Sujeet Chaudhuri, who will be stepping down in late June. We also selected our FOC 2003 Engineering Orientation week organizers: Laura Mooney and James Kunz from

ASoc, with Grant Holohan and Justin Bishop representing BSoc. Finally, as promised all summer term long, POETS finally got its new furniture! Go check it out!

Now on to this term and the first three weeks of January. Where to begin? As many of you may have heard, Fed Hall was the scene for some New Year's Eve violence. As a result, on Monday January 6th UW administration assumed control of Fed Hall and the Bombshelter (<http://uwstudent.org/story/13610>) for an undetermined amount of time. Pursuant to a Senate meeting on Monday January 20th, VP Academic and Provost Amit Chakma decided to revoke the liquor license for both Fed Hall and the Bombshelter (<http://www.feds.uwaterloo.ca/bartakeover.html>). Furthermore, despite the fact that the bar was still permitted to operate, albeit without a license, the administration called in police to remove patrons from the Bomber Monday night, thereby violating several FEDS/UW agreements, not to mention encroaching on the right to free assembly.

At the time I write this report it is unclear how these happenings will affect Engineering. POETS may escape unscathed from these actions, despite the fact that we are also under a UW liquor license. However, events such as TalEng and IRS that are scheduled to take place in the Bomber and Fed Hall respectively may not be permitted to run in those locales. Both Gradcomm and the exec are current-

ly investigating options for all events affected, and we will make adjustments accordingly. Rest assured that you will be kept abreast of all updates on this issue. Incidentally, this is the exact same issue that forced us to monitor attendance closely at the BOT for this term, because of the extra vigilance being employed by the province's liquor inspectors.

Another discussion that has arisen is a petition currently being circulated that would allow students to pre-opt out of incidental refundable fees on Quest. While a very positive step for students wanting control over their own finances, there is also a danger for engineering students in that many of the services offered by both WEEF and EngSoc depend on these incidental refundable fees. If a huge participation drop followed such a move, it could severely cripple the operations of the society and would likely imply the removal of some of the services offered, the closing of some venues, including the C&D and the Orifice, and possibly the termination of some of our employees. As a result, if the petition comes your way, please think carefully about what both WEEF and EngSoc offer you before you rush to put your name down.

Finally, early morning on Monday January 13th the C&D was broken into and robbed of \$300 of petty cash. A number of locks were broken and keys stolen, which necessitated the re-keying of several doors last week. The safe was also damaged quite extensively, but luckily it was not broken

into. As a result of this and a string of similar break-ins that have occurred across campus over the last few weeks, the exec has decided to invest in some additional security for the C&D. Expect to see that in place by the end of the term.

Wow, this has gone on for a while. Okay, my last few things I'll say very quickly:

-The on-line exam bank is finally complete! Check it out at <http://engsoc.uwaterloo.ca/www/exambank/>, and if you like it, be sure to send a thank you email to the webmasters at engsocweb@engmail.

-All YahooGroups mailing lists used within engineering, including the EngSoc link, the Gradcomm link and many other class links, seem to have finally caught the attention of the spam mail blockers. As such, many of these lists have been out of commission in recent weeks. This problem will be corrected as soon as possible, and I will be talking to IST immediately to see what options are available.

-Polaris will be completely phased out by the end of this term, to be replaced in all corners by Nexus. This will also mean that the Orifice will be upgrading some of its machines out of necessity. Expect some items related to Orifice upgrades on the W2003 budget!

That's it, that's all guys! Thanks for being so patient. If you have any questions about this or any other things that have happened, or if you just want to inquire about the society in any way, please feel free to email me at bsoc_prez@engmail.

Vice-President External Report



Steph Purnell

VP External

Welcome back, everyone! Lots of exciting things have happened since my last report. In September the Engineering Student Societies Council of Ontario (ESSCO) met in Collingwood for the annual President's meeting—the VP X's all get to go, too. The high points of the meeting included: a presentation by the Ontario Society of Professional Engineers (OSPE) about student membership; the

presentation of the ESSCO budget and the newly formed Lobby Information Acquisition Committee gave a report.

OPSE is a new society formed by engineers looking to further the professional and economic interests of engineers in Ontario. OSPE has created a student membership program that includes a Career Centre that could help you find a job and the EngineersFirst Program (which gets you deals on PC's, cell phones and other stuff). Visit www.students.ospe.on.ca to find out more about OSPE's mandate and how you can benefit, or come see me in the Orifice.

In November, we sent two delegates to the annual Women In Engineering Conference held by Queen's University.

There were a lot of ideas presented and I am very excited about the WIE activities in the coming term. There will be a WIE wine and cheese event on February 27.

But by far the biggest event has been the Canadian Federation of Engineering Students Congress. Students from across Canada met in Saskatoon to share ideas about events and policies. We also vote on the locations of CEC 2005 (Calgary) and Congress 2005 (Toronto). A new national executive is elected, as well as the Board of Directors for CEC, Congress and Project Magazine (the CFES magazine). Waterloo rose to the challenge—we had four students elected: Jon Fishbein, CFES BoD; Jeff Henry, ProMag BoD; Justin Bishop, Congress BoD; and I

was elected to the VP Ontario Region position. Besides all the important work we accomplished, we had a lot of fun. We attended hospitality suites (parties) hosted by each region in Canada and got a taste of local culture. Ask your VPI for more details.

CFES has been expanding and updated its services over the last year and there are a few things you can take advantage of: CFES Cafe, cfescfe.ca (has a career centre) and Complimentary Education Courses for a start. If you want to be involved, visit cfes.ca or ask me how.

Until next time,
Steph

Vice-President Internal Report



Josh Levitz

VP Internal

Welcome Back B-Soc (and others who have joined out society),

It's been good seeing everyone again after what was for me an amazing work term (I recommend being a WEEF TA to everyone). I hope you all had just as good a work term as I did. First of all, I'd like to welcome all the Frosh who have been lucky enough to switch over to EngSocB –

we hope to see you out at events and helping out with the society. It's always good to see new faces. I'd also like to welcome the 4th years who have switched over as well – good luck in your last term at Waterloo and I'll see you at IRS (just as security though).

So, right off I'm going to say I want my second term as VPI to be better than my first. I have quite a few new ideas I'd like to get off the ground but I'm going to need your help to do it. We also have many directorships which we have given a bigger budget and more directors so look for some upgrades to older events. If anyone out there has any ideas they'd like to try, feel free to let me know at any point.

Being the end of the third week already (midterms in just 3 more weeks....) we've already had some great events thanks to some efficient organizing by our directors. I'd just like to highlight the basketball tournament for no particular reason (other than to say that my team won). Upcoming we have a ski trip to Blue Mountain this Monday – i expect to see a full turnout for this one whether you ski or not! Enginuity is on the 30th, so come out to CPH Foyer and see how good of an engineer you actually are. TalEng is tentatively on Feb 4, but because of the whole no bomber thing (I want my bomber back!) this may change. The third EngSoc meeting of the term will be the next day, Wednesday the fifth.

There are other events going on so stay tuned to email to find out more!

That's my opening term article everyone. I just really want to stress that if anyone has any ideas for new events, or criticism on how to make the society better and more inclusive, I really want to hear them; we want to do everything we can to make this term more than just school and work so email me at bsoc_vpint@engmail. Take care, good luck in school, and hopefully see some of you at the bomber when we get it back (and we will!!)

Josh Levitz
VP Iwant my bomber back (see some themes to this article?)

ENGINEERING SOCIETY EXECUTIVE REPORTS

Vice-President Finance Report



Mark Mollison

VP Finance

Hello fellow engineering students. I hope those that were on a work term had a financially profitable one and I would like to welcome 4B A-Soc's and our new frosh. Well I am here to talk about EngSoc money. I would like to thank those who handed in a budget request form, and I guess by now we should have

an approved budget to work from.

My job is to prepare a budget for the term and ensure that we stay on track. Some people ask me where does our \$14 EngSoc fee go. Well, we supply many services and activities for members of the Engineering Society everyday. In the Orifice we have old exams, fax services, book binder, and the least expensive photocopiers in city (\$0.05 each). Why is the C&D (The Engineering Coffee & Donut Shop) so inexpensive? The price of the food is subsidised and services are provided by the Engineering Society. P.O.E.T.S. is another place where many of you can spend you

free time, watch movies, and taped TV shows, and every Thursday and Friday between Noon and 4:00pm, Bar Services are there with a full fridge. The Iron Warrior and Engnewsletter are also under the Engineering Society. Several events throughout the year involving many activities, sports, and events. Some of my favourite subsidised events are The Brunny, B**5, Semi-Formal, SCUNT, and Canada Day well there are just so many to list I only have so many words.

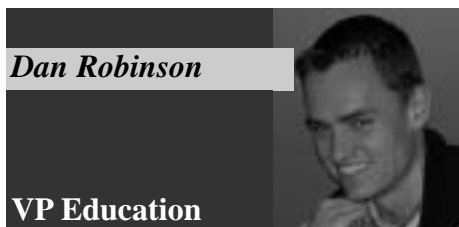
I would like to ask all directors to hand in their expense forms on a regular basis, at least at the end of every month so as not to

bombard me with a whole pile at once. If you decide to hand them in all at once, at the end of the term it may take a while to get them out, otherwise expect a timely return. If you are unable to use your own funds up front for an expenditure, please feel free to ask me to forward you in advance.

As for throughout the term I will notify everyone on the status of there current allowable funds at EngSoc meetings. If account levels start to get low I will notify the appropriate directorships accordingly.

Good luck in your studies.

Vice-President Education Report



Dan Robinson

VP Education

Welcome back everyone. For those of you coming back from co-op I hope you all had great work terms. On the subject of co-op, there are several things you should be aware of. First off, the new CEC building is open (Ed: There is an article

elsewhere in this issue). If you have a chance, you should take a couple of minutes and take a tour of the building. With the opening of the new building, the implementation of the new online application system is fast approaching. If you will be applying for a co-op job after this current term (i.e. if you plan on applying for a job through co-op for September 2003 or later) you will need your resume in HTML format. The online system will be completely web-based so you may wish to start brushing up on your web design skills. For those of you less web-inclined

there will be several good templates available as well. I am also trying to ensure that disclosure of marks remains optional and disclosure of past co-op performance information becomes optional.

Sandford Fleming Foundation Technical speaker competitions are coming up. Dates vary by department, but all participating departments should have chosen their representative by December 31st. Faculty finals are scheduled for February 13th at 10:00 am in DWE 2534. Also, the faculty level SFF debates will be held the

week of March 10th, with each department supplying a team by February 6th.

If any of you have any education related issues feel free to drop by the orifice (CPH 1327) and let me know.

Finally, if any classes have not yet selected representatives (academic or otherwise) please do so promptly.

Dan Robinson
VP-Education
Engineering Society "B"



We build cool stuff.

Design yourself in. Now.

Get more career information here:
www.tundra.com/wu0103



Tundra System Interconnect ...
Silicon Behind the Network™

C.I.T.T.
Bringing Advanced Logistics Management to Business

Enhance your skills and knowledge
The C.I.T.T. is the leading organization providing individuals with the breadth of knowledge and essential skills necessary to prosper in logistics and supply chain management.

Diversify your career path. expand your opportunities
Virtually every critical business activity is a component of logistics. With the essential knowledge and skills gained through the C.I.T.T. program, you'll open the door to abundant employment opportunities that embrace big picture thinking, and integrated solutions.

Reward yourself
The "CITT" Professional Designation is well recognized by industry as an identifier of the people with the core knowledge and heightened professionalism in logistics management. In a recent industry survey, the CITT designation was ranked as the number one logistics-related professional designation held in Canada.

For a copy of our course calendar, please visit www.citt.ca or contact info@citt.ca.

Engsoc



Groups are great!



No, Dave, you are not Superman

Crawling our Pubs...

Jonathan Ng

4B Computer



make them unique. For example, the Spur has karaoke, and Philthy's has a dance floor in the basement. These features make the whole pub crawl experience a rich one.

Many, many people came out to this event, to the point that we were packing the places that we went. However, that is a good thing - many people there means many people to talk to, to catch up with. To my surprise, there were also quite a few people from my class at this event!

As our Iron Ring days loom closer and closer, we grow more, and more restless. What better way to celebrate that final leg of the journey to Ringdom than a new and improved Pub Crawl?

The journey begins at POETS, home of the Engineer. Then through the stops we go, Kick-off, Molly Bloom's, McGuinness Frontrow, Paddy Flaherty's, the Silver Spur, and finally to Philthy's. Each pub has a distinctive feel and features that

In a place of design projects, regular projects and studying for midterms and finals, it's nice to have a place to be able to relax and talk to the people who have been with you since you first stepped foot in this place.



Well, don't we have a lucky guy here...



More Pub Crawl Madness...



Cheer up a little, smile!



Yo, yo, wake up, don't pass out on me!



"This couch seems a lot more squishy..." "Um, that's not a couch."

Ryan Bayne
Mutant Dog Creator

Mmmmm.... Comics....

Mutant Dog Goes Blogging



Hui Lam Yau
3B Mechanical

Arts Announcements

Hello everybody,

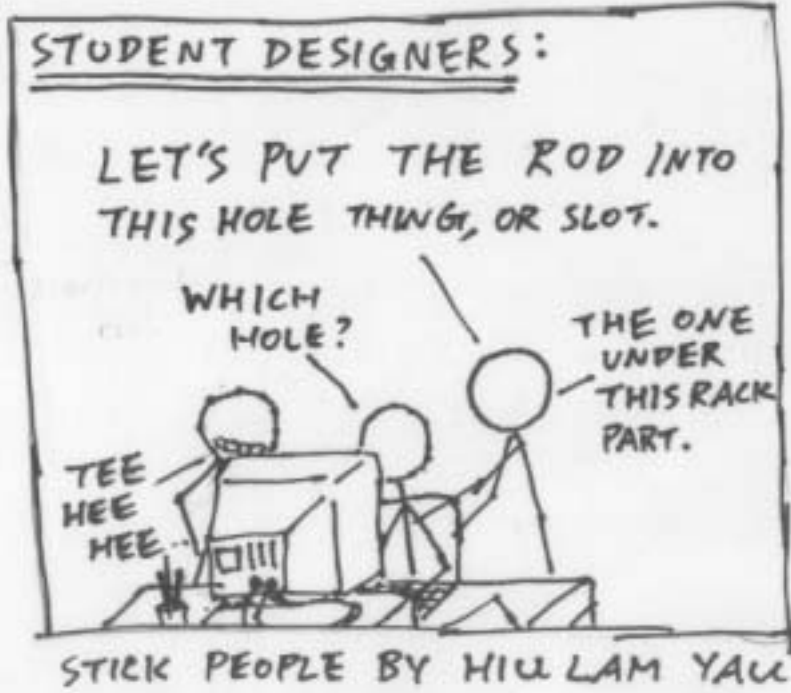
To increase the amount of artistic content of this paper, I'd like to have a call for submissions for the arts section of this paper.

Everything goes! If you want to submit a drawing or a photograph, go ahead! If you want to submit a story or poem, you can do that too! The amount of artistic submissions depends on you guys!

We'll take the best submissions and showcase them in the Iron Warrior.

It's a great way to relax after a grueling day of studying, so get your creativity caps and get to it!

In addition, there will be a digital photography contest and an arts contest coming soon! Keep your eyes peeled for this wonderful opportunity!



Try these Games!

what's wrong with this picture?



can you tell what's wrong with this picture?
look over the picture above carefully, then
put your answer in the space provided below!

your answer here _____

Which is
BIGGER?



A.

LIMA BEAN



B.

Mark the correct box below with your answer.

A.
B.

Arts and Entertainment

Dude, Where's My Engineering Degree?

Jason Griese



4N Computer

You know the scene. It's 3am, and you realize that you've missed dinner. You're tired. You're anxious. Finals are in a few weeks, and you're behind on all your course material. But you can't worry about that now, now you worry about the project in front of you. It will work perfectly when you present it in two days to the T.A., adding a wonderful full 30% to your final mark, but right now the project is in shambles, and you have no idea how to go about fixing it. As the arteries in your head begin to throb, you remember that this is not an isolated incident. At that moment, you wonder if an engineering career is right for you. Don't worry; you're following in the footsteps of other engineers who abandoned engineering for fame, fortune, and power.

Many "big name" movie stars got their start in engineering. Will Smith abandoned a MIT scholarship and Computer Science to pursue his rap career. Cindy Crawford dropped out of Chemical Engineering for a modeling career. Actor Liam Neeson studied Computer Science. British comic Rowan Atkinson, remembered best for playing Mr. Bean, earned an Electrical Engineering Degree at Manchester and Oxford. Ashton Kutcher studied B i o c h e m i c a l Engineering before playing dopey Kelso on That 70's Show. Talk show host Montel Williams worked as a Naval Engineer. Dolph Lundgren studied Chemical Engineering at MIT before taking on Rocky, and everyone loves Bill Nye "The Science Guy", who holds a Mechanical Engineering Degree.

If you'd rather be the guy calling the shots,

you could try your hand at directing. Frank Capra studied Electrical Engineering at CalTech before going on to make "It's a wonderful life" and "Mr. Smith goes to Washington". Famed Filmmaker Alfred Hitchcock studied Electrical Engineering before becoming involved with movies, and director Roger Corman studied engineering at Stanford

"...Mr. Bean earned an Electrical Engineering Degree..."

But your options are not just limited to the entertainment business. Former Dallas Cowboys coach Tom Landry, who led the team to the super bowl five times, was an

Industrial Engineer. Florida Marlins pitcher Kevin Brown, who helped the team to a World Series win in 97, studied Chemical Engineering at Georgia Tech.

If politics are more your style, you would be joining the ranks of world leaders like Nobel Prize Laureate Yassar Arafat (Chemical Engineering), Former US

Presidents Herbert Hoover (Mining Engineer) and Jimmy Carter (Nuclear Engineer), Soviet leader Leonid Brezhnev (Metallurgical Engineer), and former Russian President Boris Yeltsin (Civil Engineer).

Other Engineers who made it big in other disciplines include US Olympic Gymnast Jair Lynch, who studied civil engineering at Stanford, Boston lead guitarist Tom Scholtz (Masters in Mechanical Engineering from MIT), and Astronaut Neil Armstrong (Master's in Aeronautical Engineering).

So remember the next time a calculus equation triggers a severe bout of depression, your future is not limited to a Scott Adams-esque cubicle farm hell. Many people began in engineering and went on to excel in other fields. Engineers can do and have done far more for society more than simply solve calculus equations and tinker with engines.

Of Books and Movies

John Olaveson



1B Civil

As everyone knows, novels can make great movies. Take three of my favourite book-to-movie examples. Lord of the Rings, Harry Potter, and The Green Mile. All three are quite distinct in style and story and methodology. Now I haven't read the original Green Mile novel, but I feel now that I don't need to. I'd probably just end up crying again.

In recent days, there has been a big push to make novels into movies. I don't know whether Harry Potter or Lord of the Rings sparked the phenomenon we have all come to love, but whichever one it was, it didn't stop with just those two series. Now all sorts of literature are being movie-ized. Spider-man, X-Men, even the Hulk was going to have a movie once upon a midnight dreary.

But the thing that beat them all to the big screen, the thing that no one now seems to remember, is the Batman movies. Now I will admit that the latest Batmans have been rather unsuccessful additions to the

Batman legacy. But the original Batman, the one with Jack Nicholson as the Joker, that is a classic film full of darkness that fully suits my impression of Gotham city.

But lets not forget other comics that have been turned into movies. There's the wonderful film Spawn, which anyone who has seen it will tell you is a fabulous display of computer animation and effects. The computer animations are one thing that all the new book/comic conversions have stolen from the good old oldies. Lord of the Rings would be so much harder to do without computer effects. Try to organize over 10,000 actors dressed as Uruk'hai into a fighting force on a sound screen, then have them siege a fortress while being killed off by arrows and swords and falling rocks without computer effects? That will be the next big challenge for us engineers. Once we can genetically engineer people without the world berating us for tinkering with God's creatures then we'll be free to engineer super-people who look like Uruk'hai and can be "killed" until the cows come home from the growth hormone factories.

"The computer animations are one thing that all the new book/comic conversions have stolen from the good old oldies."

But of course we cannot make invincible people, because then the secret would get out to some terrorist organization and they would begin to grow an unbeatable army of people who need no food to live, just big weapons and lots of body armour (that apparently doesn't work well against long-range elf bows) and the UN would stop any of its members from building a counter-army, but George Bush in his "infinite wisdom" would go ahead and do it anyway and further tighten the stranglehold the US has over the rest of us, and would thereby increase political tensions worldwide until everyone just snapped and jumped onto a rocket headed for the new Mars colony.

Harry Potter featured some excellent computer animations. Just take a look at the quiddich scenes in the first two movies!

Sweeter than a tall glass of your favourite beverage on a hot summer's afternoon in POETS. Well, to avoid being beaten up, not quite that sweet, but the quiddich is still excellent. As a devoted Harry Potter fan, I can't wait to see what happens in the next movie. Of course I've read the books, but the movies always change some little things. Sirius, though, he'll be excellent. I hope he's as good as Kenneth Branagh; that man is my idol!

Plays that have been turned into movies work well, so long as they either have Kenneth Branagh doing the screen adaptation (Hamlet and Much Ado About Nothing) or Robin Williams doing some acting (Hamlet again and What Dreams May Come, and the classic Hook). Yes,

Robin Williams is a genius. One Hour Photo was too creepy for my tastes, though. Good thing I had my sister's hand to hold onto the whole time.

Lord of the Rings brought great innovations of computer technology. Treants have become my favourite aspect of that movie. I love seeing the bad guy get his come-uppance. Especially when delivered by trees. Harry Potter uses the technology from Lord of the Rings to produce its own wonders of sight and sound. The next time I watch a quiddich match, I will think of all the computer engineering that went into its creation. There must be plenty of engineering in those scenes. I certainly hope so, or this article will be about random rubbish instead of how engineers are helping the world. That reminds me of last semester...

**2003 YEARBOOKS
FOR SALE**

January 21 - January 31

11:30 - 1:30

CPH Foyer

Limited Quantity Available

"448 Pages of the times you'll never forget and, occasionally, the times you'll never remember."

For only \$50

Cash or Cheque

Note: You do not need to be graduating to buy a yearbook, we understand if you are taking the extended plan and should be graduating. Sucker.

Tea and Trumpets Invades Engineering



Dear Tea-and-Trumpets,

I sold GradComm Pizza last Wednesday, but I am not graduating. I thought that the 4B's would say thank you, but they didn't even know that the pizza was theirs to sell. I feel so underappreciated. What should I do?

- Underappreciated.

Dear Underappreciated,

First of all, I would like to say pizza is a glorious thing! I love to eat it and I love to drink beer with it. Selling pizza outside POETS is a great idea! Pizza and beer in the same place saves me so much travel time, especially in the snow! Why, oh why did the liquor licenses get revoked for the Fed and the Bomber? Now I must travel farther to get beer than pizza! What an outrage! I guess I now have to go to a better school, one with beer and pizza in the same place!

Dear Tea-and-Trumpets,

I really need your help. I've recently told a little what would be construed as "a little white lie". I bluffed that I was a martini

expert, and I promised to show off my martini making skills this weekend. However, I don't know anything about martinis! Please help me, I need all of your martini lore or I'll look quite the foul in front of my friends.

- Shaken and Stirred

Dear Shaken and Stirred,

I guess martinis are the in-thing now. Anyway, I don't really know much about martinis, what with all the beer. Well, if you want to make a martini all of your friends will enjoy (this is assuming you stick to the tradition of having only Waterloo Engineering friends), then all you need is a martini glass, an olive or two on a toothpick (optional) and a bottled beer. Just pour the beer straight from the bottle into the martini glass and add olives if desired. For different flavours, just use a different brand of beer! No shaking or stirring required. Enjoy!

Dear Tea-and-Trumpets,

All my favorite evening drinking spots on campus are gone. I lost my fourth year room and Bomber is closed. Worst of all, I think I am sober now! Please help me!

- Too long sober

Dear Too Long Sober,

You only had two drinking spots? Well, since they were both on campus, I'll excuse it. As for drinking places, I hear that Unit 36 occasionally invites people in. If they're too elitist for you, though, don't worry. Think of this as an opportunity! Take advantage! Take the initiative! I'm sure many people are facing the same dilemma. So gather some of your friends and some people you don't even know and

start a new drinking tradition! Rent a house, find a spot under a bridge, even start a school club! Imagine how it would look on your résumé: you formed your own club and within days, possibly even hours, half of the campus had joined! Employers will flock to you. Good luck!

Dear Tea-and-Trumpets,

Why can't dating for Waterloo students be organized like co-op postings? I'd learn a lot more about potential partners through their résumés than a first date anyway and it would save me a lot more time to work on my labs.

- Single in Systems

Dear Single in Systems,

What an excellent idea! I can see it now! Each female student can write a "job description" for all the men out there in Engineering. Then the men can send in a résumé to the girls he likes. Interviews and ranking will follow and boom! You've got yourself into a mandatory four-months relationship. The men will be at the beck and call off their (the way things usually work out anyway) until the next term comes and life returns to its normal blissful state. Of course some relationships will be two-terms commitments, but that's the way the system works. So everyone, be prepared to write a second set of résumés or you may find yourself without any companionship during cold winter nights.

But if that fails, I am single. Send your résumés to teaandtrumpets@iwarrior.uwaterloo.ca (Ed: That address doesn't work at the moment. Please forward all resumes to iwarrior@engmail.uwaterloo.ca and I will take care of them)

Dear Tea-and-Trumpets,

I sit in the same classroom all day. One day, this weird person not in my class took my spot. I told them politely that it is my spot but they didn't move. I need my spot. I can't think anywhere else.

- 3B Electrical Dude

Dear 3B Electrical Dude,

You've tried the rational, friendly, "moral" way of dealing with the situation, and it didn't work. So I have two questions to ask which will tell you what course of action is best for you to take.

First, is the offending individual in your class? If you don't know, assume s/he is, that may save you some embarrassment. If yes, skip to the next question. If no, then feel free to rally your class against the offender. There is no justice as potent (or effective) as mob justice.

If the squatter is one of your own, you have two choices, depending on your personality. Pick the one that suits you best. If you're violent, then pick a fight. Force that dude away! If you're shy and want to avoid a direct confrontation, then just pretend the chair-stealer is not there and sit on him/her. Act as if everything is normal. I guarantee that one of these actions will solve your problem.

the Iron Inquisition

Jonathan Ng, 4B Computer

"If you could clone anything in the world, what would you clone?"



"Me!"
-Anonymous Raelian



"Me!"
-Anonymous Raelian



"Me!"
-Anonymous Raelian



"Me!"
-Anonymous Raelian



"Me!"
-Anonymous Raelian



"Me!"
-Anonymous Raelian



"Me!"
-Anonymous Raelian



"Me!"
-Anonymous Raelian

Point-Counterpoint

POINT VS. COUNTERPOINT

Is it Better to Work for a Small Company or a Large Company?



Kiran Dhaliwal

2A Electrical

These days, on the issue of whether it's better to work in a large company, or a small one, I'd have to say: "If you have a job already, be satisfied with what you've got!" It's no surprise to most engineering students that the economy's in need of major intensive care, but the recent downturn is even more apparent in small, start-up companies. Start-ups can be more social and casual workplaces than large company offices, but are about as secure as leaving your front door wide open before going on vacation. At least with a

large company there is usually an opportunity for a return placement either at your current position or a better one or a chance to work in a new department. On that note, working in a large company allows one to make contacts in various departments and

offices as well as being able to meet people with many varied backgrounds. This can be a real benefit when looking for future co-op jobs or even a position after graduation. Unless you're used to people having puzzled expressions when you speak, it's nice to have the name of your workplace recognized by others when it's brought up in conversation. In terms of your resume, the name of a large company really stands out because it carries a certain level of prestige (with the exception of perhaps Nortel these days) and can usually be identified with a certain technological role in industry.

One criticism of working in a large company is that you get overlooked by the CEO and heads of the organization. This may be true, but then again, who's to say that your immediate supervisor, your fellow co-workers or the other co-ops at your placement won't be on the executive board in the future? Speaking of other co-ops, larger companies can usually afford to hire more than one student, if not in the same department, at least in various different ones. It's nice to have people your age to converse with while everyone else talks about gardening, health problems or their kids who happen to be your age. Then again, as the old adage says, "With age, comes wisdom," meaning working in a large office with professionals, technicians and business people in various fields can be a great opportunity.

"...if you're rolling out a sleeping bag on the floor by your desk every night, there's a problem."

Something that I've really enjoyed about working in large organizations is that my absence when I'm sick or taking the day off wouldn't cause a catastrophic impact on my projects. It's reassuring to know that you can just pick up from where you left off on the next day and leave when you're supposed to, because you

aren't a pivotal beam in the corporate structure. Putting in a few extra hours for overtime is fine once in a while, but if you're rolling out a sleeping bag on the floor by your desk every night, there's a problem.

Small companies do have their charm, but large companies have recreational facilities, company lunches, travel expenses and paid overtime. If you have the fortune to make the choice, I recommend stepping up to the big leagues.



Joseph Fung

3N Computer

Having worked for both large and small companies, I can confidently say that while having access to the resources afforded by a large company can be attractive, the availability of said resources, quality of work and of the working environment found in a small company is superior by far.

Yes, a large company may be able to provide you with better computer equipment. Yes, a large company may be able to provide you with a free cafeteria. Yes, a large company may be able to provide you with the prestige of working for a famous name brand. However, a large company is also likely to have more layers of bureaucratic fat than a blue whale, making it damn near impossible to appreciate any of these facts. It is painfully common, when working for a larger company, to be simply lost in the shuffle of things. From both my own experience, and from the experiences of my peers, it's a common thing for a new coop student to waste days simply trying to gain access to the computer network, to have his or her passwords defined, or to have an email account opened. This type of hang-up does not happen in a smaller company as it is always possible to find someone to make things happen. In a large company it's required to fill out the proper forms and to go through the proper communications channels. Large companies are machines, and while it's possible to make the machine work for you, it takes a long time, and much practice, to do so. Time is not something coop students have. In contrast, with many smaller companies, coop students are expected to produce, and are therefore given tasks on their first day of work - possibly within the first couple hours. And by work, I don't mean reading a fist-thick policies and procedures manual.

An additional reason why smaller companies are preferred employers is because of

the quality of work. Many smaller companies work on projects with shorter life spans, meaning it's possible for coop students to play a more integral role, to have more responsibility within the project. With larger companies, however, because the projects are based on longer time spans, it's impossible to give a coop student (who will only be around for four months) any real responsibility. The budgets of said projects play a similar role in deciding whether a student can have any real responsibility. With a smaller company, with smaller budgets, there is less fear of a student's failure. If, however, a project's budget is in the millions, it's inconceivable that any financial responsibility rest on the shoulders of a mere student.

The final reasons why working for a small company is preferable are the expectations of the employers. It's inevitable that the expectations of an employer will be a poor match for what the student can provide. While it is possible that the employer can expect too much of the student, the situation is usually in the reverse - the abilities of the student are used poorly. If, in a large company, a student is able to meet and exceed expectations, there is little recourse for him to make this fact known. He could tell his manager, but then his manager would be tied as there are often limited projects in which the student can participate. If, however, in a small company a student is starved for challenge, it is a simply matter to bring this to the attention of someone who can affect change. This means that in a smaller company, a student's skills will be better used and better appreciated, making the work experience better over all. Additionally, the manager of a small company is unlikely to be tied by a company mandate that "there is no such think as an outstanding coop student" - a mandate which seems very popular in many larger corporations.

Smaller companies are better to work for in a coop environment. Bureaucracy of resources, of projects and of expectations; while each of these factors is, individually, enough to support the previous statement, when taken together they make ridiculous the idea that anyone would voluntarily seek such employment.

Editor's Note: Point vs. Counterpoint is intended as a forum for objective and thought provoking debate on various issues. The views and opinions expressed here do not necessarily reflect those of the author(s), the Iron Warrior, or the Engineering Society.

While You Were Out



Janna Hickson

4B Systems

Ever wonder what really happens while you're away? Here are the major life-changing events that happened last term:

Bomber Patio Expansion Completed:

The Bombshelter patio expansion was completed for the first Wednesday night of the fall term, but unfortunately the extra area on the patio had to be blocked off as

the paperwork for the extension to the liquor license had not been submitted by the University administration.

Microsoft mistakes:

The Engineering Society A organized a forum about the Microsoft partnership announcement that the University made after final exams in the summer term. The most controversial part of the partnership was a donation to support UW to integrate C# into E&CE 150. The daily bulletin estimated that 125 people attended this forum. During this forum, students were assured that the integration of C# will go through the normal approval procedures.

Sedra will be the next Dean of Engineering:

Adel Sedra, who may be best known by students as the author of 'Microelectronic Circuits', will be the new Dean of Engineering - starting this July. He was the vice-president and provost at the University of Toronto for nine years.

Engineering Students take half of the President's Circle for Volunteerism Awards:

Jeff DeLoyde in Environmental Civil, Sara Ehrhardt and Scott Griffiths both in Systems Design, John Vellone in Electrical Engineering and Amir Zaheer in Mechanical Engineering were all hon-

oured in December for their volunteer efforts both on and off-campus.

Longest Serving Prof Retires:

The longest-serving Prof at the University of Waterloo, Prof P. Roe of the Department of Systems Design, retired October 1st. Prof. Roe was one of the founders of the Department of Systems Design. He said that he plans on continuing writing papers and teaching on a sessional basis.

World News: Perspectives from China North Korea - Too Close To Home



Joseph Fung

3N Computer

While working in Dalian, China I've been somewhat isolated from U.S. and Canadian news sources, resulting in a somewhat different perspective on world events. Sometimes I regret this, other times I grateful for the different bias.

Not too far from Dalian is Dandong - a city sitting immediately next to the Chinese - DPRK (Democratic People's Republic of Korea or North Korea) border. Because of the proximity of North Korea, many Chinese people have been paying close attention to the rumblings between it and the U.S. The general feeling is that while North Korea is not acting wisely, the U.S. is being belligerent and underhanded.

On October 21, 1994, after North Korea withdrew from the Nuclear Nonproliferation Treaty of 1985, the US and North Korea signed the Agreed

Framework for the denuclearization of North Korea. Under the Agreed Framework, North Korea was to dismantle its facilities at Yongbyon and Taechon, and in return the U.S. was to provide North Korea with 500,000 metric tons of heavy fuel oil annually to make up for the energy foregone by dismantling of the nuclear power plants. Although this program resulted in the disabling of one graphite-moderated reactor and one plutonium reprocessing facility, the halting of the construction of two more sites, and the canning of eight-thousand spent fuel rods (thereby preventing them from being reprocessed for weapons-grade material), the US has long suspected North Korea of secretly running a uranium enrichment program.

"...while North Korea is not acting wisely, the U.S. is being belligerent and underhanded."

Recently, citing proof of such a program, the United States included North Korea in its "Axis of Evil" and stopped providing the fuel, attempting to force North Korea into abandoning its attempts to become a nuclear power. Unfortunately, part of this program includes media-based attacks - attacks on the North Korean lifestyle, something which many Chinese people disagree with.

Many U.S. news sources are trying to paint North Korea as a country collapsing because of its financial instability. Such stories refer to farmers with little to eat, and people dying on the streets of North Korean cities.

Popular opinion in China, is that the U.S. is ignoring the fact that people also die on U.S. streets, and that the U.S. is being patronizing a country which resembles China in many ways.

For North Korea's part - many North Koreans are also offended by U.S. media and claim that the U.S. was the first to abandon the Agreed Framework, and has targeted North Korea for preemptive nuclear attack. Additionally, many North Koreans are taking umbrage at other aspects of U.S. culture - for example the latest James Bond movie "Die Another Day" reflects Korea in a very negative way, emphasizing the division between South and North Korea. North Korea news



sources are accusing the U.S. and U.S. supporters of trying to hinder the reunification of Korea. This has led to the North Korean government to release the slogan "Let us bring earlier the independent reunification by the concerted efforts of our nation" and begin urging its citizens to unite against the American attempts to undermining the Korean nations.

As the U.S. continues its War on Terrorism, the combination of the U.S.'s "playground bully" foreign policy and North Korea's pride are fueling already unstable situation, a situation most Chinese feel is too close to home.

UW will Suspend the Serving of Alcohol in Two Campus Pubs

UW News Bulletin

WATERLOO, Ont. -- In response to ongoing concerns about safety in its two campus pubs, the University of Waterloo will suspend the serving of alcohol in Federation Hall and the Bombshelter Pub.

The suspension will remain in effect until

a better management arrangement for the two facilities can be worked out between UW and its Federation of Students.

UW holds the liquor license for the two establishments, and is responsible for ensuring compliance with the Liquor License Act. Concerns over pub safety have led the university to suspend the serving of alcohol.

"The safety and security of our students is

of the utmost importance to us," said Martin Van Nierop, UW spokesman. "Quite simply, if we can't be sure that the campus pubs are being operated in a way that guarantees our students and other patrons can safely enjoy themselves, then we can't serve alcohol until their safety is assured."

UW is ultimately responsible for ensuring the safety and security of all patrons to the campus pubs, and bears the full legal

responsibility under the Liquor License Act.

"This is an accountability issue," said Van Nierop, "What we would like to do is work with the leadership of the student union to ensure the safety and security of all patrons to the Bombshelter and Fed Hall. But until they are ready to work with us toward that end, it would be irresponsible of us to continue serving alcohol."



Opinion/Events

The Stream Shuffle - Switching Streams

Joseph Fung

3N Computer



Having changed the sequence of my work terms and study terms two times during my as of yet uncompleted post-secondary education, I'm in a reasonably experienced and appropriate position to tell you that not only is it not difficult, but it is often a rewarding experience. A sequence change is any change to the order of your work terms and or study terms, be it doing a double work-term, eliminating a work term from your schedule, or even taking time off from your studies. If a student is looking to go through with any of these actions, they must submit an application for Course and Work Term Sequence Change.

Despite the seemingly confusing paperwork, and the sometimes-less-than-effective University bureaucracy, switching streams is, as John Westlake put it, "...pretty straight forward process", and there are "...very rarely any problems." Socially, though, it can be both very rewarding and very difficult.

Having first switched from ASoc to BSoc by doing a double work term, then switching back by taking a year off school, I've been given the opportunity to experience many of both the pluses and the minuses of stream switching. While some students are required to switch streams because of difficulties in their studies, the majority of Engineering students who go through the process do so voluntarily.

According to John Westlake, the CECS (Cooperative Education and Career Services) Program Administrator for the

Engineering Department, of the 25 to 30 students who apply for a sequence change every term, the most common reason is to work with an employer for a second official work term. Additionally, it seems that these requests are very rarely refused. Possible reasons for refusal include the change would result in a student having fewer than 5 work terms, which is insufficient to graduate.

The first step is to check with your Undergraduate Associate Chair to ensure that the sequence change is academically ok. Next, download and print the application form from http://www.cecs.uwaterloo.ca/students/pdf/stream_switch.pdf or pick one up from your program's office. Once the form is filled out and submitted to the program chair, it is reviewed and passed on to CECS for review. The entire review and approval process takes approximately one week, so because the administration will not contact you, it is suggested you check in with CECS or the registrar's office to confirm the change after a week has passed.

Once the process has been completed, all that is left is for you to adjust socially. It is somewhat ironic that many of the drawbacks of this process are also the strong points.

The first, and most obvious, drawback is that you will be leaving your classmates and many of your friends behind in the other stream. You've spent a lot of effort getting to know the social ins and outs of your class – and by now you know who is good to work with, and who you should avoid come group project time. While it is

difficult to go through this process again with a new group of students – it is easier the second time around, and you are guaranteed to meet a number of people who approach problems differently than your old classmates – increasing not only your sphere of friends, but also enriching your problem-solving abilities. Similarly, for those involved in the Engineering Students Society, while the switch from ASoc to BSoc may cause some stress, it's quite rewarding to see exactly how the two societies differ, and to learn from the strengths of each.

The second most obvious drawback is returning to school if your sequence change involves an 8-month work term. While it is difficult to switch from the "working and have money" mode to "studying and having none" mode, it is not as difficult as one may think. Eight months is a long time when your life is normally based on a four-month cycle, and after the double work term, studying is a welcome break from the drudgery of nine-to-five work hours.

A problem, or benefit, that many people often overlook or underestimate is subletting. If you plan to sublet – fine. Finding an apartment is rarely a problem. Subletting, however, is. While the stream switch could, at first, make the sublet easy (you now know many, many off-stream people), it could also make subsequent sublets that much more difficult, as you don't know the one-stream people nearly as well as you are used to. If you are planning on switching your course sequence, be sure to plan to spend a lot of effort finding a sub letter (this should become some-

what easier in the future, considering the double-cohort set to enter the University this fall). By similar rules, the sequence change can make it easier, or more difficult, for you to sell and buy used books. Remember to plan in advance.

The final, and possibly the most difficult, social change is the possibility of delaying your graduation. To many people the year of their graduation is a mark of achievement (these people refuse to buy their leather jackets till their 4B term to be sure); to others it is a matter of little consequence (these people can ignore this advice). It is important that before you make a sequence change, you know which type of person you are, and you investigate whether the change will result in you graduating a year later than originally planned. Keep in mind, however, that it is not the end of the world if you graduate in 2005 when your jacket says 04. The purpose of our program is not just to fill our heads with math, physics and chemistry, but to make us into Engineers – conscious and socially aware people. It is important that one realize a course sequence change is most likely going to help you get more from your University career – you are tailoring your education to suit your interests – so your actual year of graduation is irrelevant. Students, and students' parents, often place too much significance on the digits following the phrase "class of..."

While it's a simple matter administratively, there is always the possibility of problems. While it's a simply matter socially, there is always the possibility of problems. In short – one should always plan for the sequence change – don't let it just happen. Don't try to force it through at the last moment. Take the time to make sure it is processed correctly not just by administration – but also by your own mind.

To Go Online or Not to Go Online?

Janna Hickson

4B Systems



In the age of online banking, eCommerce and Quest, does it make sense to force students to walk all over campus to collect refundable ancillary fees? Why shouldn't students be given the power to opt out of these fees when they pay their tuition?

The Progressive Conservative Organisation on campus has been circulating a petition to call a referendum on this question. By Federation of Students bylaws, they need 5% of the voting members of the corporation to sign this petition, which has been approximated to be 1800 signatures to force the question. The wording would have to be approved by the FedS President, Brenda Koprowski.

As the question on the PC petition stands, the fees that would be in question for engineering students are: Waterloo Public Interest Research Group (WPIRG), CKMS, Imprint, Sanford Fleming Foundation, Waterloo Engineering Endowment Fund (WEEF), and the

Engineering Society. The Federation of Students' fee is not included as it is a non-refundable ancillary fee.

This issue was on the agenda for the FedS Students' Council meeting for January 12th. The intent was to look into Students' Council's options for exercising their right to call a referendum on the same topic. If Students' Council called the referendum, they could regain control over the content of the question.

A circle of concerned individuals and representatives from many of the affected parties lined the wall around the table of councillors at the Sunday meeting. The president and WEEF director of Engineering Society B were among those who attended. The off-stream engineering society was represented by their VP Education.

The crowd at the meeting was somewhat relieved when the motion was withdrawn from the agenda due to a technicality. The motion was withdrawn because it was mistakenly attributed to Aaron Lee-Wudrick, a non-voting member of council. Robert's

Rules of Order do not allow non-voting members to make motions. Alex Cassar, the councillor representing Lee-Wudrick intended to present of motion of Lee-Wudrick's behalf.

To not disappoint the crowd who came to talk about the issue, the topic was moved to "items for discussion." This resulted in an approximately five hour long discussion on the merits of the motion, the lack of results from a committee formed to look at the question of referenda on external organizations and the expansion of the mandate of this committee.

Lee-Wudrick was allowed by council to speak during the debate. He told the room that if the motion hadn't pulled by Students' council for the technicality explained above, he would have pulled the motion in recognition of the need to notify and consult with the groups implicated.

By the next Student's Council meeting, the committee, which includes representatives from WPIRG, CKMS, Imprint, was

instructed to have a preliminary report prepared. This will be included in the package of information that councillors receive prior to the meeting and therefore will be available on the FedS website (feds.uwaterloo.ca).

A representative from CKMS warned that this is an extremely short timeline, and then quoted the Rolling Stones "You can't always get what you want, but you'll get what you need," basically warning that the report will not be thorough.

To have your say on this issue, you can attend one of the open committee meetings during the next month. You can also contact your engineering student councillors. Between the two streams of students, engineering holds a total of 6 seats on Students' Council.

The engineering student councillors are Lawrence Lam (lawrence@feds.ca), Jay Liu (jay@feds.ca), Geoff Rawle (geoff@feds.ca), Piragash Velumyllum (piragash@feds.ca), Jasmin Mulaomanovic (jasmin@feds.ca), and Shezana Manji (shezana@feds.ca).

"Students, and students' parents, often place too much significance on the digits following the phrase 'class of...'"

"...does it make sense to force students to walk all over campus to collect refundable ancillary fees?"

Canadian Undergraduate Technology Conference

...continued from Page 1.

Don Tapscott – Co-Founder, Digital 4Sight. Author of the well know books Paradigm Shift and The Digital Economy, Mr. Tapscott's speech was aimed at inciting the audience to get involved and make a difference in our society. Arguing that the generation of today's youth, raised in the internet age, is fundamentally different from that of our parents, he challenged delegates to change the direction of our country, and discover new ways to think about education, business and government. He proposed that the next step in the evolution of the internet will be know as the "hypernet", in which more and more devices – everything from cell phones to refrigerators to automobiles – become connected, and society undergoes a profound change.

TechExpo. Many exhibitors were on hand to show off some of the latest high-tech gadgets. A HyperSonic Sound (HSS) device was showcased by American Technology Corporation. This is a entirely new type of speaker, which creates directional sound waves, such that sound can be focused like the beam of a flashlight. Other exhibitions included Microsoft with the new tablet PC, Nortel Networks' voice over IP phones, and Queen's University's Human-Computer Interaction lab with video communication and eye tracker systems. Besides the cool demos, there were also plenty of recruiters on hand to discuss employment opportunities.

Michael Neuman – President, Bell Mobility. Mr Neumann explored the future of wireless communications, discussing Bell's next-generation network, providing

high-speed packet-based data transfer for cell phones, PDAs and other wireless devices. He went on to demonstrate how businesses today are using wireless to improve the delivery of products and services.

Think Tank. The conference wound down with the Think Tank, where small groups met to discuss topics related to seminars held throughout the conference. Industry and academic leaders, including Jim Tobin, VP of Technology, AOL Time Warner, and Dr. Jim Mitchell, Director of Sun Labs, Sun Microsystems, were present to lead the discussion. The topics greatly varied among groups, with some considering whether it would eventually be possible to live without a body, where one's brain is directly connected to a computer which provides all the necessary stimulation. Other groups explored the meaning of entrepreneurship or discussed nanotechnology or organic LEDs.

Entertainment. Aside from all the serious events, there was also plenty of opportunity for entertainment. On Thursday night, a "Human Foosball" tournament took place, followed by Yuk Yuk's comedy and a Counterstrike tournament in the computer lab. Friday brought a trip to downtown Toronto, where delegates took in the nightlife. Finally, the conference closed with a banquet and formal dinner.

Attracting 500 students, CUTC continues to be a great success year after year. If you missed the opportunity to go this year, be sure to stay tuned for information about CUTC 2004! And if you'd like to help organize next year's conference, check out the web site <http://www.cutc.ca> for more information.

An Open Letter to the University Administration

I am a computer engineering student at the University of Waterloo, currently in my fourth work term. During the Fall '02 semester I was the Editor-in-Chief of the Iron Warrior and I have participated in every Frosh Week since my own, in Fall 2000.

It is my conviction that you (the UW Admin) have acted with reckless disregard for the rights of your students, with the revoking of the Feds liquor license. UW Administration time and again seems to have no regard for the poorer students enrolled here. Deregulation, continuously raising tuition by the maximum amount, downloading the Co-op Student Building cost onto student fees, and now putting some 150 students out of work. This record is absolutely shameful.

However, I am open to your side of the story. I would greatly appreciate answers to the following questions, related to this unfortunate development.

1. How is liability in the Feds bars shared between the University and Feds?

I have read that Feds assumes liability for the patrons and are required to carry insurance for their operation liability. This would seem to absolve the University from most liability. Please respond.

2. How will this affect the Iron Ring Stag? As you may well know it is a long-standing tradition for Engineering students and it would be a very black mark against the fundraising efforts of UW if the night that Engineer undergraduates (and soon to be Alumni) look forward to - for five years - was soured.

3. The Director of Food Services, Mark Murdoch, described the bars as "well-run and well-controlled". One rare incident (The New Year's beating) does not indicate a lack of safety. Therefore, how do you justify closing the bars, by citing safety concerns?

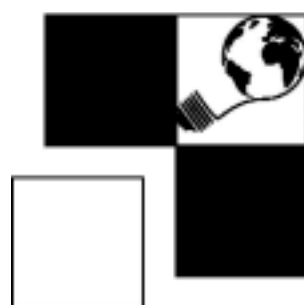
4. Your press release makes the following claim: "Quite simply, if we can't be sure that the campus pubs are being operated in a way that guarantees our students and other patrons can safely enjoy themselves, then we can't serve alcohol until their safety is assured." How could you EVER manage to "guarantee" or "assure" the safety of patrons? Is it not true that this statement allows you to draw this terrible situation out indefinitely? Was this the intent of this statement?

5. Feds' bars are their most prolific method of generating revenue. Is the revoking of the license a calculated move to undermine the revenue of the Federation of Students, making them a weaker organisation and suppressing dissent against your actions?

I look forward to your responses.

Sincerely,

Matthew Harper.



Engineers Without Borders/Ingénieurs Sans Frontières
National Conference 2003

Engineering in International Development: One piece of the puzzle
waterloo ontario canada
29 january - 1 february 2003

Media Advisory

Engineers Without Borders National Conference 2003 on international development

DATE: Wednesday, Jan. 29 – Saturday, Feb 1

TIME: Schedule (to be posted on website)

PLACE: University of Waterloo, Room Schedule (to be posted on website)

Engineers Without Borders (EWB) will be hosting their National Conference at the University of Waterloo. Over 300 members of EWB from across Canada, U.S. and the U.K. will come together to discuss and learn about the role of technology in international development. This student driven initiative has attracted high caliber speakers, which include Stephen Lewis, Former Canadian Ambassador to UN, James Orbinski, Past-President, Médecins Sans Frontières – Delivered Nobel Peace Prize speech for MSF, the Right Honourable Flora MacDonald, Former Secretary of State for External Affairs and David Hughes, President & CEO, Habitat for Humanity Canada.

The recently established volunteer-based organization has already sent over 40 interns to work overseas with developing communities and NGO partners; begun projects with overseas partners in Chile (water resources), Bolivia (water resources), Cameroon (health and sanitation), Ecuador (Water and Energy), Phillipines (IT learning centres), Uganda (education and IT), Tanzania (water resources) and Guatemala (water resources). The largest gathering of EWB interns will be present at the conference for the first time.

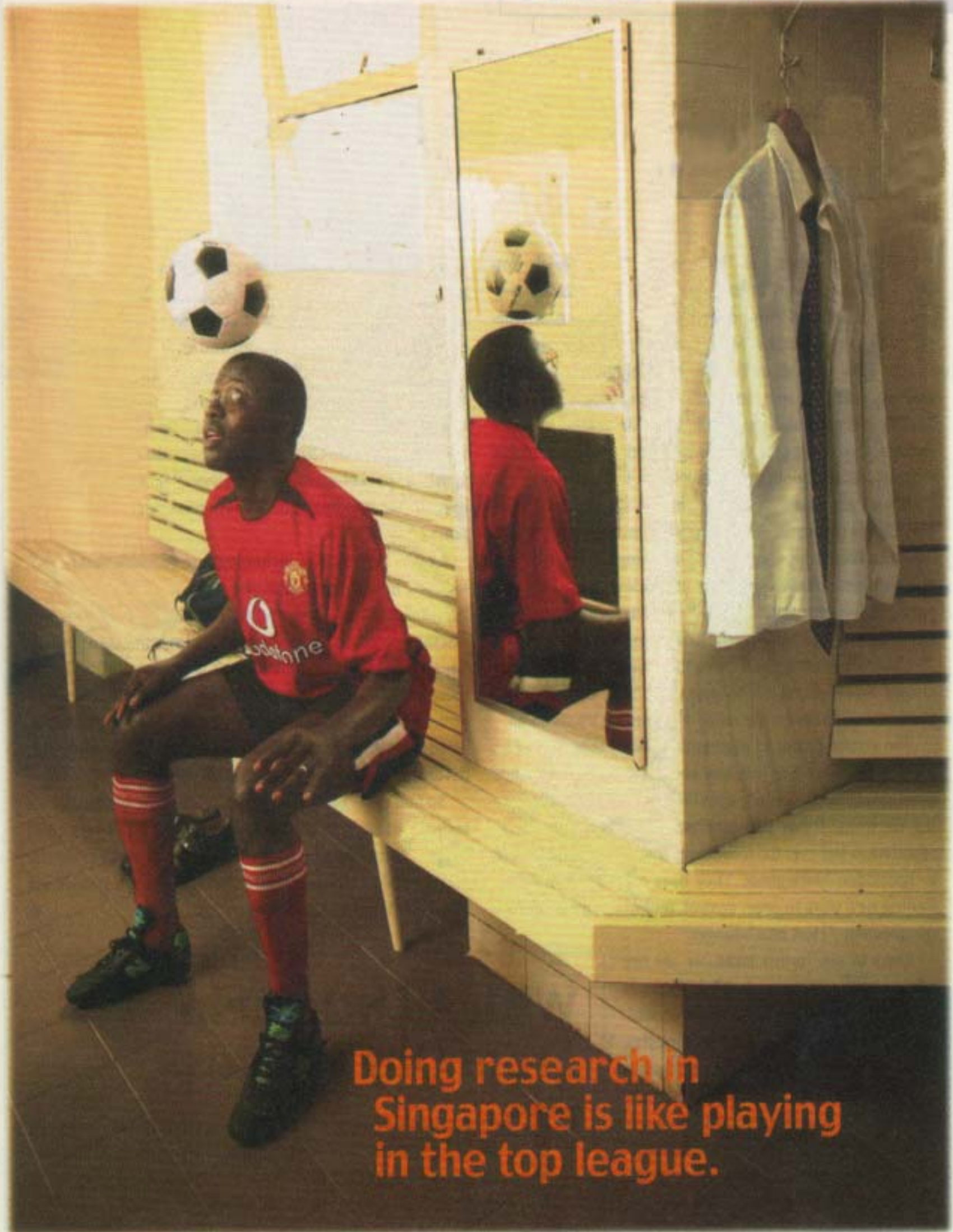
Engineers Without Borders is a facilitator of student innovation. The conference will display 25 research projects and initiatives in the field of international development through appropriate technology.

Engineers Without Borders – Ingénieurs sans frontières is a Canadian charity founded by two Waterloo engineers. In less than three years, EWB has grown to include 20 chapters across Canada, harnessing the creativity and ingenuity of more than 2,500 engineers, and helping developing communities gain access to the technologies they need to improve their lives.

Contact:

Michele Heng, Conference Communications Coordinator, EWB National Conference 2003
(519) 880-9601, communications.conf@ewb.ca

Ryan Matthew Merkley, Chief Communications Officer, EWB Canada
(416) 802-0662, ryanm@ewb.ca



Doing research in Singapore is like playing in the top league.

Dr Adekunle Adeyeye, a soccer enthusiast, made his big career move to the National University of Singapore as an Assistant Professor.

"I was struck by Singapore's educational excellence, economic vision and technological edge on my first visit in 1997. When I returned in 2000, I brought my wife because I am here to stay."

A top student in his homeland, Adeyeye spent eight exciting years at Trinity College, Cambridge University, where he was the first Nigerian to be elected as a research fellow. Moving to Singapore enables him to further his groundbreaking research in nanotechnology.

Adeyeye's work has endless applications, ranging from the computer and automotive to medical industry. All of which adds to his delight with the scientific advances he has made. Above all, he is also thrilled that Singapore's rising prominence as a high-tech hub is a magnet to world-class companies and scientists.

If you want to be exploring new frontiers in the research arena, visit www.contactsingapore.org.sg today. It could be a win-win situation for you and Singapore.

Singapore. Your world of possibilities.

Contact
Singapore

OFFICES: BOSTON ✕ CHICAGO ✕ SAN FRANCISCO ✕ LONDON ✕ SYDNEY ✕ CHENNAI ✕ HONG KONG ✕ SHANGHAI ✕ SINGAPORE