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the IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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Road Sign Theft
in Austria

Tin Soldier
Special Report



It's a bird! It's a
plane! It's another
movie review!

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The Secrets of
NEXUS

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Check us out @ <http://iwarrior.uwaterloo.ca/>

WOMBaT Competition Results

JEFF MOULTON
WOMBAT TEAM LEADER

The results for the 2006 Mini-Baja Midwest competition have been released. I am pleased to announce that the team has had their best year to date and has set the stage for even better results in the years to come. Overall, the team placed 66th out of 140 teams at the competition with some outstanding finishes in the individual events.

The judges responded positively to the design of our 2006 Warrior car as can be seen by our scores in the design category. We placed first for our vehicle design report which highlighted the design features and decisions of our chosen design. At the competition we presented our design to a panel of judges and completed the design portion of the competition in 15th place.

In the chain pull, the goal was to drag a heavy chain back over itself until the

vehicle comes to a halt. We successfully pulled the chain 33 feet to finish 9th place overall.

We finished above average in the maneuverability event ranking 54th. The acceleration track was slick when our turn came around and the car fishtailed off the starting line. Despite this we still managed to achieve above average results with a 60th place finish.

The endurance race went well this year as we were still racing when the

checkered flag signaled the end of the race. We finished the race in 73rd place, 2 hours behind the leader. This was due to the failure of the steering rack that broke when jumping over a series of logs on the course, requiring a challenging repair that cost us nearly 2 hours of race time.

Overall the team had a great experience at the competition and gained excellent practical engineering experience through the design and construction of the car.



What is this Management Engineering?

HAROUT MANOUGIAN
3A ELECTRICAL

When the University announced Engineering's newest undergrad addition, the Management Engineering program, on July 5, students were taken aback. Upon hearing the news, most had the first impression that it was a bad move. "Ha! Are you serious? They're actually going ahead with that? I thought it was a joke!" exclaimed a third year electrical student.

Indeed, it seems that the faculty has a policy of growing through the addition of new programs, as opposed to admitting more students into programs that are already established. Fall 2003 saw the first class of Mechatronics engineers who still need to explain to their interviewers that "it's kind of a mix of electrical and

mechanical and aspects of computer and systems design, all with an emphasis on robotics." Mechatronics, which was (and still is) an option available to Mechanical, Electrical, and Systems Design students, was expanded into a yet-to-be accredited ground-breaking complete program of its own.

The arrival of the first class of Nanoengineers is still fresh in our memories as they attended frosh week less than a year ago and are currently all on work term. Their studies include chemical, ECE, and materials aspects and promises to be the next "big thing" to hit the world's engineering community. They will design faster and smaller computers, stain-resistant pants, tiny robots that shoot lasers at germs inside your body and who knows what else.

Continued on page 4, see Management

Largest Hard-Rock Tunnel In The World!

DAN ARNOTT
3A ENVIRONMENTAL

Something big is happening in Niagara Falls, Ontario. Or more precisely, something big is happening under Niagara Falls, Ontario. Something 15m in diameter and over 6 kilometres long. Something which will give us enough electrical power capacity for 160 000 households. That something, of course, is the new Niagara Tunnel.

Ontario Power Generation, Hatch Acres, and Austrian tunnel-boring moguls Strabag are teaming up to bring us one of the greatest engineering works Ontario has ever seen. This new tunnel will run from the existing control works above Niagara Falls, underneath the town of Niagara Falls, Ontario, to the Sir Adam Beck Generating Station. This immense project

is being drilled using the largest hard-rock tunnel-boring machine built to date - approximately 15m in diameter.

What was fenced-off forest a year ago, populated only by deer and wild turkey, is now a hive of activity. Cranes, rock trucks, bulldozers, aggregate crushers, excavators, drills, and the omnipresent pickup trucks run round-the-clock today. According to Strabag's Ernst Geschnitzen, once tunneling starts, the only day not worked will be December 4th, St Barbara's day (the patron saint of miners, tunnel borers, and those who work underground).

Work on the tunnel began in summer 2005 and is scheduled to be completed in December 2009 - blinding speed for a project of such magnitude. The tunnel-boring contract was awarded to Strabag in August

Continued on page 5, see Niagara

From the Desk of Your Iron Editor



GABRIEL CHAN
EDITOR-IN-CHIEF

Two weeks flies by and suddenly the world became a more exciting place. Especially for the media and all you media frenzy people who would rather read this right now than listen to your prof give you some “tips” for your exam.

While everyone was going nuts over Iran defiantly refusing to defuse their nuclear crisis and North Korea launching a series of very expensive fireworks displays, Israel and Hezbollah in Lebanon started trading their own fireworks. It will probably be a while before they stop and let's hope they will keep the trading with conventional weapons only. In the meantime, stop bitching about the petrol prices and use that bike of yours.

As for entertainment news: the Zizou-Materazzi incident was over-analysed by everyone. A rookie lip-reader on the Iron Warrior sports bureau was able to decipher what Materazzi said to Zidane moments before it happened. Something about how Italian wines are so much better than any of the merde that France has to offer. That and he said Zidane's mother is an Italian wine drinker.

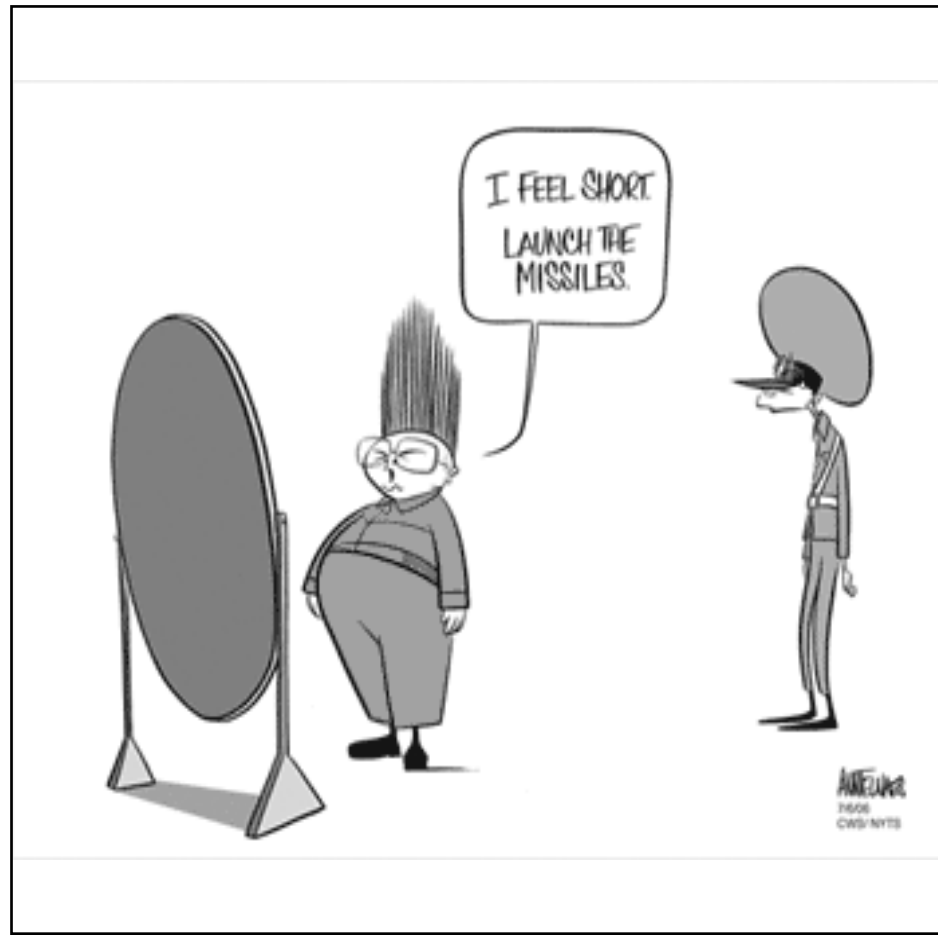
It is finally the last issue of the term and it was a great experience commanding this student newspaper. I am very thankful for a generally dedicated and reasonably experienced staff and regular contributors. Although at this point, with four term project deadlines looming over my head, I could care less about Iron Warrior right now. Nonetheless, it is a very good experience in running a student-volunteer organization.

Harout Manougian is the super efficient copy editor who is always on the ball: not only does he contribute everything as diverse as current events, reviews, comics, and the Enginoku puzzles, he has set a new record in editing through articles. Every time I check the database, everything is always ready for publication.

Culture of Bias (Re: The Modern Kulturkampf between Life and Death)

Dear Iron Warrior,

I was very insulted when I read the recent article written by Michael Simoes. If he wanted to argue for pro-life he could have achieved this without including racist, prejudice and sexist comments. Simoes degrades Muslims by implying that an increase in the Muslim population would be a bad thing. Only a racist would care if “the region becomes mostly Muslim”. He also makes references to homosexuals in a negative light. Further, the Canadian Medical Association defines abortion as termination of pregnancy up to 20 weeks, not 24 weeks, with the majority of abortions being conducted within the first trimester. Regarding our “Society of Death”, halting the relatively small number of abortions would not come close to impacting the trend of shrinking populations in the western world. Consider also that a low birth rate actually helps save our environment and



Hewett Sze, Teri Leung, and Candy Wong make up the layout editing team. Our new work flow approach has saved us up to 66% of the time it normally takes to put this paper together. Hewett doesn't need sleep and the fate of whole issues has rested in his hands more than once. Teri is very consistent and punctual with her work, which is very valuable for other team members and the project manager. Candy may not be as sweet as her name, but her enthusiasm (and energy) is unmatched and can always be channelled to work with 120% efficiency, even at 2 in the morning.

Dan Arnott is the invaluable distribution manager and one of the most prolific columnists as well. His previous experience as the Editor-In-Chief has helped me through many a tight spot.

James Schofield is also an invaluable member of the team. Besides giving me tips from his previous Editor-In-Chief experience, he maintains and adds to Iron

Warrior's online systems.

Peter Szabo and Taneem Talukdar are the advertisement managers, who are setting up Iron Warrior for business after the slow summer. They are also very good columnists, able to whip up something on the fly.

Phil Newman is the official IW photographer. You may have fallen victim to his Iron Inquisition before. This term, he is also able to lend a hand in writing. The paper can't live without his help either.

Special thanks to The Friendly Stranger for his “tips” on success in life.

The results of the survey has been tabulated; the winner is nmkhan@uwaterloo.ca! Please provide us with your Swiss Bank account and we will transfer the cash to you. Although we were unable to implement most of your suggestions, IW will continue to move towards being a better newspaper. Keep those Letters to the Editor coming! Remember: it's YOUR paper! Watch for Iron Warrior next term!

reduce the number of starving people. Letting people starve to death because of higher demand than resources also creates a “society of death”. This campus is supposed to be an accepting and diverse environment something which Michael seems to be attempting to disrupt. If you are concerned with a “society of death” perhaps you should focus on more pertinent issues such as war and famine.

Sarah Bornstein
3A Psychology

Response (Anonymous):

The “Culture of Death” camp is talking about irresponsible sexual behaviour leading to unwanted children and the only way to get rid of unwanted children is either by giving them away or killing them and the most convenient and popu-

lar way to accomplish said objective is via abortion. A fetus is alive: some people think its a human while others can't see much difference between it and a tumour or something. Therefore, promiscuity kills and since Western society is cool with promiscuity, we invite a culture of death. QED. Promiscuity does not cause wars and famines.

Muslims are not bad people and the author is obviously siding with them in his article (both take the pro-life stance). An increase of muslims is alarming to the West for the same reasons why, for example, U.S. cultural influence is so alarming to the Islamic countries. People are generally resistance to change, which is why convincing arguments result in more successful transitions than outright revolutions.

Every one has their own vision of what makes the world better and through co-operation and active dialogue, the world can be a better place. Sorry if you were offended.

IRON WARRIOR

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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.

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How to Submit a Letter to the Editor of

The Letter to the Editor section will feature short blurbs on issues that the reader cares about. Letters are significantly shorter than articles (100-200 words). Submit letters to iwarrior@engmail with subject line “Dear IW”.

EDITORIALS AND OPINIONS

The Story of an Engineering Society Rep: Why I Love EngSoc

PETER SZABO
3A SYSTEMS DESIGN

If you can spare a few minutes, I'd like to share with you a few thoughts I have developed over the past two terms regarding EngSoc. I had never participated in EngSoc until last term (F05), my very first meeting attended was as an elected class rep for 08SYS (currently 3A SYDE). I wanted to get my feet a little wet in the student society of the best engineering school in Canada. What I got was a little upsetting; here's how things unfolded for me...

Some of you may or may not remember me as the class rep who talked to EngSoc about potentially halting the ratification

of the (now current) B-Soc Execs. For the record, at the time I had no personal bias towards any of the nominees. In fact, I still don't to half of them. Regardless, there were more than enough reasons to follow through with requests from my class to bring the matter before EngSoc.

You see, my class was very involved in EngSoc before Fall 2005. Ironically enough, when I started my EngSoc participation and got caught up in all of this, all my classmates left. Most of them, instead of attending EngSoc meetings, went off assisting in (if not running) events, such as OEC (Ontario Engineering Competition), CUTC (Canadian Undergraduate Technology Conference) and EWB (Engineers Without Borders). Why did

they abandon the EngSoc community?

So, there I was, standing in front of EngSoc, being my 4th or 5th meeting, and stated that my class collectively was not satisfied with having only one candidate run, and thus were handed an Exec position. There was a little tension to say the least, and a few comments from people stating I was wrong. The Exec nominees were dead silent by the way, and understandably so.

To put it bluntly, many people (not just from my class) felt that there was a "cliquish" movement of sorts underway; a group of friends essentially helping each other unfairly. In hindsight, these concerned people were right. Let me give you some examples.

Immediately after stating that my class was not satisfied with the election, there were several people who I distinctly recall immediately piped up and shot down my argument with "no, I think this election was fair."

The sole Exec position that had multiple candidates (total nominees: 2) was the VP External position. Not naming any names... *cough cough* the individual who didn't get the position stated something along the lines of "I am through with EngSoc," quite bitterly as I recall. Apparently not, it seems. As he is now the speaker of the house at all EngSoc meet-

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Hunting for Grad School ?

SARAH BROWN TESOLIN
PHOTO PRESS PUBLICATIONS

Dear Iron Warrior,

I am contacting you in order to inform you of a recent web site that was created which is aimed at undergraduate students and would be very useful to your readers: <http://www.mygraduateschool.com>

MyGraduateSchool.com was developed in response to the successful release of the book entitled "Graduate School: Winning Strategies for Getting In With or Without Excellent Grades", 1997, 2004.

Canadian author Dave G. Mumby, Ph.D. successfully dispels many of the misconceptions that students tend to have about graduate school, and about how the selection process works. He shows prospective graduate students how to successfully navigate, step-by-step, through the application process, how to maximize the quality of each component of the application, how to

avoid the costly mistakes that many students make and how to overcome less than excellent grades.

At MyGraduateSchool.com students can access much of the information they would find in the book, and more valuable tips provided by the author, which are updated regularly. Check out this month tips at: <http://www.mygraduateschool.com/with-or-without.html> This month the author discusses how you can get into graduate school without excellent grades.

Students can download one of 10 e-Chapters each dealing with separate and important components of the application process or they can download the entire eBook for a fraction of the price of the hard copy. Download Chapter 1 (How to Use this Book) for FREE at:

<http://www.mygraduateschool.com/order.html>.

Thank you for your time,
Sarah Brown Tesolin

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A Letter from Beirut

GUEST WRITER
A QUEEN'S UNIVERSITY STUDENT

Dear All,

I am sending this email from Beirut, because I want to let as many people as possible know about the atrocities that are happening in Lebanon. I send this email because I need to speak out, because nobody seems to know what's really happening. Perhaps there might be some response, some protest, a demonstration on the part of the Queen's or the Canadian community.

I was supposed to come back to Canada today with my family, but because I am not a Canadian or American citizen, there is no ship or plane to smuggle us out of the country. I came here to see my family and my country and am now watching my country being destroyed...Israel says it is striking military bases, but so far what are army planes targeting? Not bases, but whole buildings of innocent civilians, blasting their limbs here and there. They are striking terrified families who have been warned to evacuate their homes just as they are fleeing in their cars and buses.

Entire families are being wiped out. Children and babies who have no idea of what is going on are being charred, trapped in burning houses and cars. Entire bridges, highways, electricity companies,

airports, touristic points are being annihilated. There is no way I can possibly convey to you the horrors and the injustices that are being committed. 25,000 have had to flee their homes because their homes have been leveled. All the produce in our farms and fields is going to waste because there is no way to distribute it to the needy families in the country. There is no communication between areas, so families are unable to check on their loved ones. People flee from one area only to be struck in another.

And what is the Western world doing? I don't know.

I am sending this email, not for any sympathy or condolences, but because I am a Lebanese student and because Canada and Queen's are also part of my community. So I send it in the hope that there might be at least a little awareness and hopefully some action or sign of protest - I really don't know. Here me and my family are giving out clothes, food, and opening our homes to those who need homes. I only wish I could do more. I am sorry if my email has errors or isn't very fancy, but it is hard to be coherent and clear-headed when ur country is being torn piece by piece. I thank all of those who have sent me emails for their concerns, especially my close and dearest friends.

God bless,
Rula

Who's Showing The Ropes of Engineering?

KRISTEN YEE LOONG
3A SYSTEMS DESIGN

Hold on, what exactly are the ropes of engineering?

Here's me...

Never attended an EngSoc meeting in 1A - Didn't have a clue what EngSoc was about. As an impressionable first-year, I had the impression that people just drink at these biweekly meetings and eat food that my EngSoc fee pays for.

Then there was me...

A volunteer at the 2004 OEC Qualifier held in Fall 2003 at U@Waterloo Day.

The qualifier was well-organized by Prof. MacGregor (that's right, she's not JUST the mastermind behind PDEng, she ensured UW was represented at a prestigious provincial engineering competition). Its only downfall was the location as it was held in RCH where viewing by prospective students and families was limited. This was supposed to be a big kicker for UW Engineering. It was supposed to show the potential frosh what engineering could be - needless to say, I was a little deflated in the dank RCH 2nd floor.

I wanted to do something huge that people could actually see. I wanted to show everyone that engineering at Waterloo is awesome, that you can do anything you want, that we work hard but have so many options away from books, including a wide variety of student teams such as Solar Car, FSAE, UWAFT and WARG to name a fraction.

I wanted to show the face of UW Engineering.

With the help of 08SYS and friends, I was met with SUCCESS. A new component to Student Life 101 was born: The Engineering Showcase (aka Most Extreme Engineering). Complete with 100% support from the Student Life office.

For those who need a run down, the Eng Showcase features a variety of student teams as well as a design competition which pits departments against each other to attract the attention of all frosh passing by the B2 Green. Throughout the day, incoming frosh can speak to current students about the ups and downs of engineering.

The best part is that the event "works". I have had people tell me that they joined a student team because they spoke to a team representative at SL101. I have friends tell me that younger students ask advice of them because they conversed at SL101. It gives me the warm fuzzies inside.

But what is this face that we showcase every summer? A mask? At meetings, why don't we recognize these student teams and groups when they race in England or travel North America? Why don't we show

support to events that go beyond BOAT Racing? The first time I stood up in an EngSoc meeting was in 1B to promote Student Life 101 - I was met with blank stares... and crickets.

Following the Summer '04 event, why did the Student Life Directorship take several summers to finally become "official"? I received the green light from FOUR past ENGSOC presidents to make this directorship a reality. So, why, oh why, was the directorship left off of the directorship application list repeatedly?

After constant persuasion, it's finally a directorship. But now, why, oh why, do Student Life Engineering Showcase Directors not even have a photocopy account? Needless to say, I have been extremely disheartened by the static role of EngSoc in this matter.

I'm not implying that I'm not up for hard work, but setting up this directorship took a surprisingly large amount of effort given that the Student Life Office "absolutely loves the concept of the Engineering Showcase." Why wouldn't EngSoc want to be all over this? We are the only faculty represented at SL101 in the form of 'non-BBQ'.

Why was I told by a certain VP that "We are trying to cut down the number of directorships within EngSoc because people don't actually do anything.?" (Facial Expression = WTF M8?). Well then, cut down the directorships that don't do anything! SL101 directors have been working around the clock to get it together to promote engineering; not for themselves, but for the Society and to reach out to impressionable frosh.

But, again, this makes me wonder, what exactly are they promoting? They are promoting a Society that does not care to promote itself but would rather spend the day recovering from an EOT hangover. For goodness' sake, we made it into the Toronto Metro Daily Newspaper during the inaugural Engineering Showcase - publicity much?

Why are the SL101 Engineering Showcase directors receiving very little support from Engineering Society members? EngSoc, where are you?! Student Life 101 happens on Saturday July 22. Why aren't students jumping at this opportunity to show incoming frosh that their department is Number 1?

You are damn right that last sentence was a challenge to all classes. Sign up on the Orifice door or with Cat Hay (1B Systems - in10SYDEe) - c2hay@gmail.com.

So what exactly was this article even about?

Two Words: Student Life.
You define it.

STUFF YOU SAY

Turkey Continues its Genocide Denial



HAROUT
MANOUGIAN
3A ELECTRICAL

The Istanbul Chief Public Prosecution Office has launched an investigation into whether the leader of the Armenian Apostolic Church, Catholicos Karekin II, “insulted Turkishness” when he called for Turkey’s recognition of the Armenian Genocide during his recent visit to the country. This is indicative of the extent of Turkey’s draconian nationalist policies. Article 301 of the new Turkish Penal Code, which makes it a crime to “insult Turkishness”, is used to imprison those who speak out against the totalitarian policies of the Turkish government; whether it is to criticize the Turkish occupation of Northern Cyprus, to refer to the Kurds as a distinct people, or to talk about the Armenian Genocide.

Orhan Pamuk, a world-renowned Turkish author, was similarly charged for declaring “Thirty thousand Kurds and a million Armenians were killed in these lands and nobody but me dares to talk about it.” This caused an international uproar about freedom of expression in Turkey until the European Union pressured the government to scrap the case in January 2006. Five other Turkish journalists were also charged when they criticized the government’s cancellation of a conference on the Armenian Genocide. Hrant Dink, editor of the *Agos* Armenian newspaper, and of Armenian ethnicity, was charged and received a six-month suspended sentence under the same law for his views on the genocide.

The Armenian Genocide was perpetrated by the Ottoman Empire’s governing party, the Young Turks. It began on April 24, 1915, when, in the midst of World War I, 200 Armenian intellectual

and spiritual leaders were rounded up in Istanbul and executed. Subsequently, Armenian men were taken from their homes, from towns and villages in which their families had lived in for hundreds of years, and were massacred. The women and children were forced to march into the Syrian desert of Der Zor without food or water while enduring abuse and rape by Turkish soldiers. In total, 1.5 million Armenians perished at the hands of the Ottoman Empire during this time, including complete branches of my own family tree. April 24 is still remembered by Armenians worldwide as the day of Remembrance and Commemoration of the 1915 Armenian Genocide.

At the end of World War I, the government of the Young Turks was overthrown and military tribunals were held which sentenced the three heads of the party, Talaat Pasha, Enver Pasha, and Djemal Pasha, to death for their crimes. They had been tried in absentia, however, as they had fled the country. Subsequently, as Turkey became a republic and developed stronger ties with the West, the Armenian Genocide became a thorn in its side. Eager to forget the past, they adopted a policy of silence about the issue and used their influence as a NATO ally during the Cold War to stifle discussion about the topic altogether. In this way, a generation of Turks grew up without ever having heard of the genocide. This is what led to the Recognition Movement by Armenian survivors and their descendants, which saw most Western legislatures adopt motions to officially recognize the Armenian Genocide.

In Canada, the Senate passed such a motion in 2002, followed by the House of Commons in 2004. However, it was not until April 2006 that the government of Canada, despite threats of economic sanctions by Turkey, released a statement that condemned the 1915 massacres as genocide.

CSE Review: WS205 Gender, Culture and Technology

TONI CARLISLE
3A MECHATRONICS

Although I am not usually the type to get excited about taking an extra course in an already heavy engineering workload, this summer I thought I’d explore another side of myself - my feminine side. I opted to take an elective in Women’s Studies, not only to have a little variety to my usual number-crunching courses in Mechatronics, but, honestly, to meet some girls. There are both benefits and drawbacks to being a woman in engineering: finding lab partners is usually a breeze, but finding someone to have “girl talk” with is often impossible.

WS 205: Gender, Culture and Technology not only fulfills my CSE List “A” requirement to graduate, without having to take an often dreaded STV course, but also was overall an interesting (and fun) course. I knew nothing about Women’s

Studies before attending my first class, and I was actually a bit frightened by the idea of being surrounded by raging feminists, but I found that the course was very open and friendly, involved no man-bashing, and showed insight into why technology is seen as masculine by nature.

The course topics included biographies on successful women in technology throughout history, women’s entrance into the workplace beginning with WWI, and the effects of technological inventions such as the microwave and internet on gender relations. The course required significant reading, but with no midterm, a take-home final, and a research project of my choice, the workload did not seem overwhelming. I suggest this course to anyone who is interested in understanding the relationships among gender, culture and technology, or to anyone who is looking for a different (girly) spin to the usual CSE choices.

Management Engineering

Continued from page 1

The Nanos were accompanied by the first set of Architecture frosh who took part in the Engineering Orientation Week due to the recent annexation of the School by our Faculty. Although the profession diverges somewhat from traditional engineers in its emphasis on aesthetics and creativity, the overlap with Civil makes most of us accept the architects with open arms (although it would be nice to see them once in a while).

But what exactly will a management engineer do? As an undergraduate option and graduate program, the Department of Management Sciences basically serves as UW’s M.B.A., designed with the technical background of engineers in mind. If you take a look at the research that is carried out in the department, it consists mostly of decision-making and dealing with uncertainty. These are key skills that an engineer should have when managing people, but does it really constitute engineering in itself?

Since the program will be accredited by the PEO, students will have the typical first year with algebra, calculus, physics, and chemistry, along with a new MSCI 100 concepts course. They will go on to learn about digital computation, electrical engineering, materials science and mana-

gerial economics. In fourth year, they will specialize in operations research, supply chain management, information technologies, and the management of technology. From this description, it appears that the program is electrical engineering with an MSCI option and several STV courses, but without the opportunity to specialize in communications, micro-electronics or power.

Also, since the addition will include co-op like all other engineering programs, where will these first year management engineers work? Are there many corporate vice-presidents that are looking for student assistants? Would they not prefer someone who has actually worked on a technical project before? CECS has already stated that “the availability of appropriate jobs for first and second work term students in this new program will be a challenge.” Although “many senior alumni” disagree, I can’t see an employer choosing a management engineer over a student from any other discipline, armed with the MSCI option.

It is not unlikely that my reaction to the situation is based on a lack of information. I’m sure (or at least sincerely hope) university staff are much more confident about the success of the program, which will begin in Fall 2007. In which case, there should be better communication with current undergrads, explaining the details of the plan, and asking for our feedback.

Life in High Definition

MICHAEL SUE-KAM-LING
2N CHEMICAL

For the past couple of months, it’s been a rarity for me to browse Google News without reading the words Blu-ray or HD-DVD. The supposed battle for the next generation of home video format has emerged front and centre and everyone is holding their breath to see who will emerge victorious on the bloody battlefield known as home entertainment. Well... everyone except me.

I quite frankly don’t see what the fuss is all about. The transition from VHS to DVD was overtly advantageous, but this change seems rather trivial. The VHS media was bulky, poor quality and easily destroyed. I’m sure all of us remember the endless heaps of eaten tape, or the times when the only way to decipher the on-screen scramble was to enable auto-tracking.

Now we’re faced with a completely new transition, but honestly, what’s the difference between Blu-ray/HD-DVD and traditional DVD anyways? A few more pixels? Two more speakers in your already overpriced surround sound system?

It makes me sick to think that millions of people are buying into this supposed “next generation” technology all for a higher pixels per inch image. I don’t know about anyone else, but I don’t exactly sit inches from my television and count the pixels as I watch my favorite movie. I happen to enjoy my home video experience at a comfortable distance from the screen. A distance where you can’t make out every single individual pixel, even on the “primitive” DVD images.

Now people are spending bundles to boast to their peers about the crystal clear image they’re getting on their expensive HD digital cable packages and their shiny new Blu-ray player. Repurchasing all their

favorite movies for multiples of what they would pay for it on DVD. Excuse me, I think I’m about to vomit in disgust.

The worst part is, the industry can’t even agree on which format to use. Companies are already aligning themselves in what could be considered the Cold War of video technology. Given that the technology is, by the most generous of assessments, a slight improvement over its predecessor, it seems rather fitting that the new formats are gaining media exposure through a format war. Please, we’ve all seen this before. DVD+R vs. DVD-R, AM radio vs. FM radio (not to mention satellite radio), even VHS vs. Betamax. But even given the uncertainty, people are still gambling on which to buy. I hear Vegas is offering 3:1 odds on HD-DVD.

I guess the moral of the story is: people are gullible and idiotic. They are so technology hungry that they will consume most of the scraps you throw them. I for one will sit happily with my DVDs until they have finally been entirely replaced by the winner of this, in the words of Michael Moore, “fictitious war”. Someone come and get me when the battle is over and the blood has been shed. I’ll be in the living room counting the pixels on my television.



STUFF YOU SAY

Call it Nineteen and Two Halves

Turning 20 is no piece of cake



HAROUT
MANOUGIAN
3A ELECTRICAL

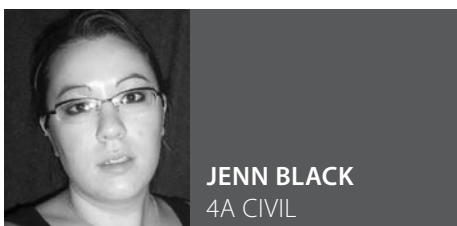
There comes a time in every engineering student's undergrad career when the soft baby blanket of immaturity is cast aside as we pass into a strange new world called (gasp) adulthood. Of course, I'm talking about the first birthday that you won't look forward to, the big 2-0.

Turning 20, due to our base 10 number system, is a giant psychological leap. Although you were done with puberty years ago, it finally hits you that you will never grow the last quarter inch needed so that you can say you're 6'2". You will never grow new teeth to replace the ones with cavities. You start to question the condition of your bones whenever you hear your back crack. And, looking towards retirement, you begin to read up on various mutual funds and make RRSP contributions even before you clear your student debt.

Since you are no longer a teenager, high school girls become officially off-limits while all the hot twenty-somethings are still too old for you. This is the first right you are deprived of, since you began to gain more and more rights since the age of 16. Yet you still have to bug your friend to buy booze for you when you travel south of the border.

This is the last year that you can

The Basics of Surviving a Weekend at School



JENN BLACK
4A CIVIL

With the end of term schoolwork pile-up period upon us, students might be tempted, nay, obliged to spend an entire weekend at school in order to accomplish the insane amount of work loaded on by professors desperately trying to cram in the last of the course material.

In order to endure this gruelling gauntlet of assignments, reports, labs, and projects, there are a few basics that every student needs. For your benefit, I present to you my list of things that every student needs to survive a weekend at school.

1. A Comfy Chair - No matter how padded you think your rear is, sitting on it most of the day will make you think otherwise. Now, there are many different types of chairs hanging around so seek out your favourite and settle in. (You might find a comfy new couch in the Civ Lab on weekends.)

2. Quality Snacks - To keep your brain nourished and to keep you alert throughout the day, quality snacks are a must. I know a quick trip to the plaza usually yields something fast and delicious but that can also mean unhealthy and expensive.

show your age using your fingers and toes (unless you have an eleventh toe, but you're screwed either way). Your shoe size will never get bigger, your jeans length will never get longer and, if your waist size changes, it will probably be for the worse.

Turning 20 has a special significance for me, since I've been able to avoid it until my 3A term. Had I gone to any other university, I would only have one more year of school to go. Had I been caught sneaking into the Bomber while still underage, I would only now be allowed to enter unhindered (well... not until the construction is finished). Alas, after years of making fun of my friends for being old and rickety, karma has finally caught up to me.

However, one has to look on the bright side of things. In the world of birthdays, there is something much worse than being 2 decades old: turning 22. It isn't until 22 that you really begin the end of your life, when there is actually nothing more to look forward to until 65. Luckily for me, unless my professors fail me for making them feel old, that will be one quarter-life crisis that I won't have to deal with as an undergrad.



Bringing some of your favourite snacks from home can not only be comforting but also cheaper and healthier. Fruit is always a safe bet and it'll keep you more alert than a cup of coffee.

3. A Hearty Supply of Good Music - The monotonous drone of computers can easily make you sleepy and sounds from the outdoors can be distracting so you must be armed against these deadly foes of productive work. Your favourite tunes can keep you upbeat and can effortlessly drown out that guy who keeps coming around and trying to talk to you.

4. Friends - Undoubtedly, you are going to be taking breaks throughout the day; I hear the average person has a maximum attention span of something like fifty minutes. Having friends there (hopefully suffering along with the same workload) to entertain you on breaks and to answer what seems like at the time life's most pressing questions (What in Sunday's best sweater is an integral??) can be a real asset.

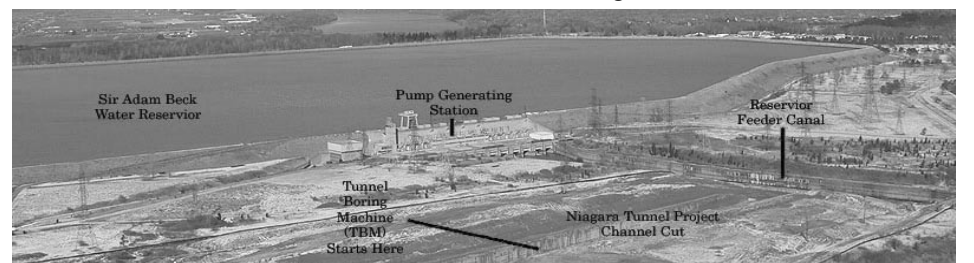
5. Perseverance - I know it seems like the school is holding you prisoner and that you'll never finish all that work but you will. Just keep at it. Remember, the amount of work you are given isn't impossible to complete before the deadlines, it merely seems so because it nearly is. You did not get into one of the best universities in the world because they thought you couldn't handle it.

Niagara Falls Tunnel

Continued from page 1

of 2005, and in less than a year, the tunnel boring machine (built by Robbins of Ohio) has been designed, constructed, delivered, and is in the process of being assembled. Boring should begin by September. Of course, a project like this has a price tag to match - over \$600 million.

The tunnel will be constructed using a double-liner system. As the tunnel-boring machine makes progress, it will leave behind the first layer, composed of steel ring beams and mesh, rock bolts and shotcrete. A waterproof membrane will be installed later, followed by cast-in-place concrete resulting in a final inner diameter of over 12 metres.



EngSoc Controversies

Continued from page 3

ings this term, a position given to him after the election results; obviously nothing to do with the fact that him and half of the elected Execs are amongst the centre of the so-called "clique."

Moving on... If you have never been to an EngSoc meeting, let me explain to you how it works. Every EngSoc meeting starts off quasi-respectable, but always ends up a drunken yell-fest of offensive insults to each other. Granted, most of these insults are directed to and from others within the "clique," which brings us full circle to my conclusion that the current EngSoc is nothing more than a glorified fraternity. Is EngSoc supposed to resemble a group of drunken friends hosting a show in front of a dozen impressionable first years? Most of the middle year classes don't even attend anymore, they aren't in 4th year yet (hence, not eligible for drinking at the back) and they are no longer naive (like first years).

There was an incident within the last year of a female engineering student who was seriously offended by an insulting comment made during an EngSoc meeting. A formal apology was stated by EngSoc, and then rejected by the student. Changes were to be made in how EngSoc meetings were to run. However, I still see alcohol present, drunken 4th year students, and derogatory comments thrown about. Is this how a meeting should run? Is this what EngSoc is supposed to be about?

I am still the EngSoc rep for my class; however, I have skipped the last two meetings and I don't see any reason to continue participating for many reasons. Bias from some of the "elected" officials, excessive unacceptable behaviour, and complete foolishness; it is interesting to see that some of these people in power at the meetings were drinking in the back row last term. These are the people who are responsible for upholding a fair and meaningful environment. Whenever a drunken outburst occurs, they sit back and pretend nothing happened. After all, who

This is truly an engineering project that combines nearly all disciplines. The tunnel itself is a great civil and geotechnical engineering project. The tunnel boring machine is a miracle of mechanical, computer and systems engineering, the increased power capacity will fall to the electrical engineers. Even environmental engineers have a hand in this project. Environmental consultants Jagger Hims Ltd. are monitoring the environmental impacts of this mighty project and providing additional technical consultation when necessary.

A project of this magnitude requires a lot of person-power. That means keep an eye out for co-op jobs relating to it; there will probably be a lot of them in some form or another. Wouldn't it look good to be able to say on a resume that you worked on the Niagara Tunnel?

would want to ruin all the fun? I mean, it's not like this is supposed to be the student society of the best engineering school in Canada. Whenever I heard "the administration" mentioned, everyone there quivered in their boots. They didn't want to let admin "get their foot in the door..." But to what end? Were they scared that admin was going to make things fair, decent, and respectable? Boo! Hiss! Are they afraid they are going to lose their freedom? If all they do is get piss drunk and act immature, then I am all for admin stepping in and taking the reins. At the end of last term, EngSoc voted down the then-president Karim Lallani's proposal to allow administration to sit in and watch FOC interviews.

Another example from the 3rd meeting of this term: a pointless story from a "clique" member regarding the sexual behaviour and experiences of one of their classmates resulted into a lively mix of cheers and eww's from the half drunken crowd from the back as well as a few chuckles from the Exec row... during the same meeting a valid presentation regarding a donation request for an engineering student going overseas to help poverty-stricken people resulted in... crickets chirping. Every time a friend of the "clique" talks, it's nothing but smiles and laughs. Every time a non-regular attendee gets the floor, it's... nothing at all. Let me ask again, what is EngSoc supposed to be about? I would really like to know what our EngSoc leaders think about the current EngSoc Forum... and how drunken 4th years yelling random insults fits into all of it.

There is something fundamentally wrong with the way EngSoc meetings are conducted. Many first years get turned away from EngSoc due to the immature behaviour at the meetings, while others are taught that this sort of obnoxious attitude is acceptable. This really is depressing. Sure, drinking for the sake of getting drunk is a personal choice, and some enjoy it. Many don't. Unfortunately, this behaviour represents our faculty and not all of us want to be associated with drunken rowdiness. Apparently, our leaders do.

ARTS & ENTERTAINMENT

Moonlight Masquerade

Photographer: Jessica Poon



Play On: Much Ado About Savings

DAVE MIKA
3A MECHATRONICS

Let's admit it: we engineers are generally an uncultured bunch. More often than not, it seems like we're doomed to a drab existence crammed to the brim with long lab hours and an endless flow of assignments and projects. As a result, my inner arts student was crying out pretty loudly for a dose of entertainment beyond the latest Pirates movie or a round of Halo. Luckily, the Stratford Festival is currently promoting their "Play On" series which aims to get students (aged 18-29) into the seats for one of the nation's most popular dramatic festivals.

For no more than \$20, I was able to see the witty duelling of Beatrice and Benedict in Shakespeare's "Much Ado About Nothing". Sure I felt like a poseur sitting in a theatre full of the fartsiest of the artsy but by the time the first few scenes were over and I had my Shakespearean ear turned on, I was having a great time. The seats were great too since Play On is open for all seating (first come, first served naturally) except the most expensive A+ section.

Although a comedy fit my taste buds, there are many other plays being offered under the Play On banner. Other discounted performances of works by Shakespeare include "Twelfth Night", "Henry IV, part I" and this year's major play "Coriolanus" starring Colm Feore. If Shakespeare isn't your cup of tea, other performances with reduced pricing include Tennessee Williams' "The Glass Menagerie" and "The Duchess of Malfi" by John Webster.

In the interest of further reducing the impact on my pocketbook, I was able to find some inexpensive accommodations after the play. The Stratford General Hospital and Conestoga College has a nearby residence set up for students studying nursing and other medical fields. During the summer, when the rooms aren't being used, they are rented out to visitors and backpackers. If you make sure you say that you're looking for a hostel, they'll only charge you \$20 per person as opposed to the standard \$65 (which still isn't all that bad).

So when all was said and done, I was able to kick my lack-of-arts blues to the curb for little more than \$40 plus the price of food. Quite the deal in my humble opinion. If you're looking for more information and show times, check out the websites of the Stratford Festival (www.stratfordfestival.com) and the Stratford General Hospital residence (www.sghresidence.ca).

EngPlay Review: Two Dozen Roses

DAN ARNOTT
3A ENVIRONMENTAL

Is the desire to commit infidelity as bad as actually doing it? This was the topic addressed by this term's EngPlay, 'Two Dozen Red Roses' by Aldo de Benedetti, adapted by Kenneth Horne.

This play follows the story of a middle-aged married couple, Marina and Alberto. Marina is getting restless with her predictable life with Alberto, and decides to go on vacation to see if other men still find her attractive. This, of course, offends Alberto, who orders two dozen red roses sent to an attractive young countess with a note from her 'secret admirer'. Marina finds the roses, thinks they're for her, and is suddenly in love with this 'secret admirer,' unaware that it's her own

husband. Matters are complicated by the maid Rosina, the florist Bernardo, and the couple's friend Tomasso.

This play was an ambitious one - three acts and almost three hours long, with two intermissions. This was considerably longer than most EngPlays, and the audience seemed a little bit fatigued near the end. The play was held in MC 2066, which was a good venue, but since it was not stated on the posters, many people may have wound up in Arts Lecture where it's usually held.

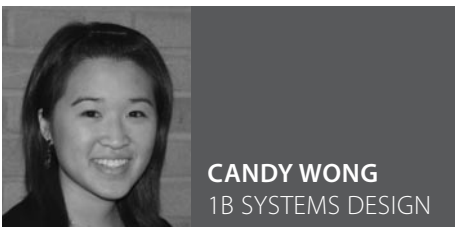
The play is a good one if you like love stories. However, the dialogue was a little bit cliché and archaic, probably due to its translation from Italian. The actors did the best they could with what they had, improvising some lines to make them sound more realistic, but all through the play I was constantly being reminded that it was a play instead of being sucked into the reality of it.

However, the cast and crew did the best they could with what they had. By

the time I saw the show (the last performance on Saturday), all the actors knew most of their lines, and when they forgot, it was usually covered up comically. Since it was the last show, actors were encouraged to improvise some of their lines, which resulted in great comedy without compromising the story. Rianne Ranta was a very expressive Marina, showing genuine emotion despite the somewhat outdated lines of the play. Tomasso was played by Ryan Wheeler, one of the strongest-voiced actors on stage. Patrick Bunker did an excellent job as a serious middle-aged Alberto, even when he was stuffing an inflatable killer whale into a suitcase. And Ahsan Butt and Miroki Tong were a great team as Bernardo and Rosina.

I found this play to be too serious overall for an engineering crowd, even with the comic relief thrown in. But despite technical and script difficulties, the cast, crew, and directors did an excellent job with what they had.

Film Review: Superman Returns

CANDY WONG
1B SYSTEMS DESIGN

Synopsis:

Five years after his disappearance, Superman returns to Metropolis after searching for his home planet, Krypton. He returns to work at the Daily Planet only to find out that his love, Lois Lane, is already a mother and is engaged with the editor's nephew. Furthermore, he is saddened by Lois' Pulitzer Prize winning article "Why the world doesn't need superman" and decides to revisit her to ask for an explanation.

Superman: Listen. What do you hear?

Lois: Nothing.

Superman: I hear everything. You wrote that the world doesn't need a saviour, but I hear them crying for one everyday.

Superman faces more trouble than his romance with Lois. His old nemesis, Lex Luthor, is back and determined to defeat

the Man of Steel. Lex devised a plan to take over the world by generating an image of Krypton's fortress, where superman cannot exert his super powers. Superman finds himself in a challenge to save himself and the city from destruction.

Once again, we believe that a man can fly! The return of superman excited fans and revitalizes the superman spirit we all shared in our childhood. This 2006 film, played by Brandon Routh, is the best interpretation of how the iconic hero is supposed to look. His appearance and voice is shockingly similar to Christopher Reeves who played the original superman back in 1978. Not only do the actors suit their roles, the story line and flashy effects work their magic to remind us of the man of steel power possessed by the super hero.

Superman is someone...

- who has to fight for something greater than himself - whose selflessness can be matched by none - who has to face endless problems and look forever strong



- who gives up everything for that one inch of happiness - who's resilience is majestic.

Perhaps there is a little superman in all of us sometimes... the one that keeps us smiling even when times are tough.

Director, Bryan Singer, satisfies not only the new audience, but for all of us who

have grown up in the realm of the super hero. I suggest you take a bit of time out of your hectic exam studying schedule to put your spandex outfit and watch the Superman Returns to revive that source of motivation that keeps us going.

Thumbs up for superman!

Film Rating: 5/5

the TIN SOLDIER

THE OFFICIAL MOUTHPIECE OF THE MINISTRY OF TRUTH OF UW ENGINEERING

VOLUME 27 ISSUE 10 | THURSDAY, JULY 20, 2006



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Counterpoint

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Check us out @ <http://iwarrrior.uwaterloo.ca/>

Engineering Admin Introduces Drive-In Lectures

J.Y. KELLY
4A FILM STUDIES

In response to increased enrolment, overcrowded classrooms, the large percentage of students with cars, and student outrage at not having an engineering parking lot, UW administration has sought a solution on the other side of University Avenue. Starting in the fall, drive-in lectures will be held in Parking Lots A and C.

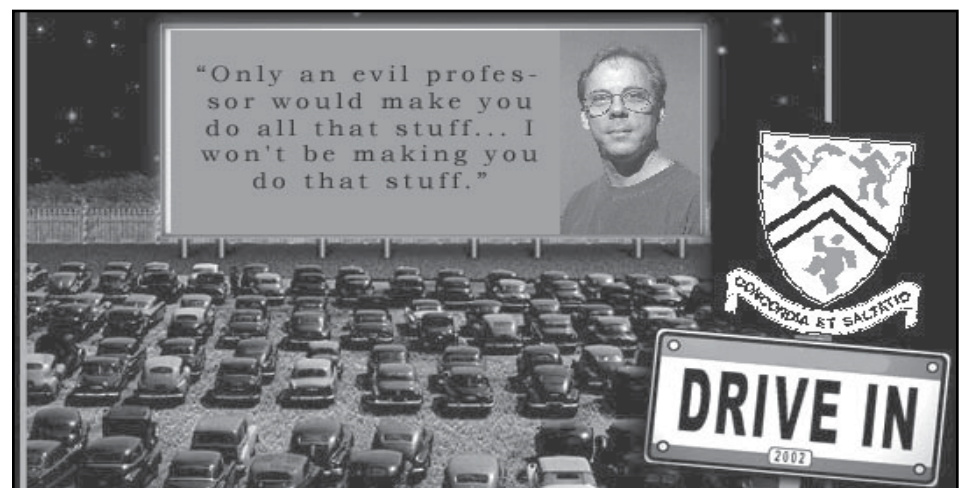
Due to the flurry of construction activities in the area, many students may not notice that large screens are also being constructed. Professors will lecture from the comfort of the classroom and will be projected onto these screens, while the few students who choose to physically go to class can still do so. Sound can be obtained by tuning your car radio to the desired frequency.

Most students are excited by this

idea. One ECE student commented that "you haven't seen Dean Sedra until you've seen him on the big screen!" There are apparently benefits other than seeing your professors projected larger-than-life, as another student commented. "I used to have to sit through boring lectures, and I couldn't fall asleep because the prof was right there in front of me. Now I just bring my girlfriend to class and we can make out during the boring parts!"

It has also been announced that the C&D plans to open a 'concession stand' in the parking lots which will provide students with caffeine and sucrose during 'intermissions' in longer lectures.

However, this idea is not without its drawbacks. Although the parking lots are large enough to accommodate most engineering classes, traffic jams of epic proportions are anticipated during Larry Smith lectures. Also, because



The Great Professor Calamai lectures to the masses about Optimization. "Drive-In Lectures may be a local optimum solution."

they will no longer have to appear in class in person, the already-shoddy hygiene and grooming habits of engineering students are expected to slip further into the abyss. Further complications are expected with respect to

handouts and midterms.

Overall, however, the project is greatly anticipated. "It'll put the fun back into education," said one student, "nothing beats a bucket of popcorn and a partial differential equations flick."

Tourists Caught Stealing Fucking Austrian Road Signs

GABRIEL CHAN
3A SYSTEMS DESIGN

FUCKING—Last week, the Austrian border police caught several men of Anglophonic origins attempting to smuggle road signs across the border. The police have identified the road signs as Fucking and the men were taken into custody for further questioning on why they have Fucking road signs.

"Today, we have successfully stopped these Fucking tourists from stealing the Fucking signs from the Fucking village, announced Fucking police captain Gerhard Scheissenschlager at the press conference. The chief was very happy about the arrests and hopes to put more effort into preventing future Fucking thefts. "The Fucking Austrian authorities will stop any Fucking thieves with zero tolerance and resolve at all costs."

The Fucking mayor Siegfried Höppl has asked visitors to take nothing but pictures, but the Fucking signs have been a target since the final days of World War II, when the American and British soldiers passed the Fucking village during the liberation of Austria. Besides showing the Fucking villagers a newfound freedom from the fucking Nazis, they also showed them a newfound meaning of their village's name. Höppl explained: "We had a vote in 2004 on whether to rename the town, but decided to keep it as it is. After all, Fucking has existed for 800 years, probably when a Mr. Fuck or some Fuck family moved into the area. The 'ing' was added as an old Germanic

word for settlement." He went on to express his hope that further thefts will be avoided through the use of increased concrete and bigger screws.

The Fucking village is a relatively small and unknown town in Austria (not unlike Waterloo, Ontario), so the Fucking economy takes the hit for

replacing stolen Fucking road signs. The nearby villages of Oberfucking and Unterfucking (Upper and Lower Fucking respectively) also suffer from road sign theft, after all the Fucking signs have been stolen. Similarly, on the other side of the world in China, Fu-Kin Polytechnic University also have to

endure periodic sign thefts, as some find their acronym funny as well (Fu-Kin U). The theft rate however is much lower than in Austria, as the Fu-Kin authorities tend to execute thieves on a regular basis.

By the way, Fucking is pronounced "Foo-king".



The Fucking signs from the Fucking village in Upper Austria (Oberösterreich) have been primary targets for Fucking tourists since 1945. "Bitte - nicht so schnell!" means "Please - not so fast!"

The Legend of the Mystery Bottle



DUSTY PHYLES
IW HISTORY BUREAU

There are few who have not heard the legend. Anyone who has walked by the Iron Warrior office (CPH 1323B) while the door is open has probably seen it. Maybe you've touched it, smelled its volatile and mysterious aroma. I speak, of course, of the one, the only, the Iron Warrior Mystery Bottle!

Much of this bottle's shady past is shrouded in utmost mystery. Nobody knows from whence it came - it has just always been there. But if even a few of the legends surrounding its mysterious origins are true, the story of the Mystery Bottle may sound a little something like this...

The Mystery Bottle was forged by ancient glassblowers from the sands of Egypt. Filled with a clear, strong liquor of unknown origins, it was being passed around one stormy night by a couple of workers near the top of the Great Pyramid. Suddenly, a bolt of lightning (sent, no doubt, by the gods themselves) struck the pyramid, and endowed the Egyptians with great electrical engineering abilities which still persist to this day. From that moment onwards, the hand of fate decreed that the Mystery Bottle should always return to the hands of engineers.

The bottle was later passed to the Greek rulers at Alexandria, and crossed the Ionian seas in a mighty war vessel. As the Greeks declined and the Romans came into their golden age, the Mystery Bottle found its way into the hands of the Republic of Rome's engineering department, where it oversaw the construction of such mighty works as aqueducts and the Coliseum.

But alas! As Rome fell, the bottle fell into the hands of wandering brigands and merchants, who traded and bartered it all the way across Europe. Already revered as a powerful artefact, it was said to have special powers even in those dark ancient days. Legend has it that the Mystery Bottle once fell into the possession of King Arthur, who had to search for the Holy Grail just so he could find a cup worthy of pouring its contents into.

In the 1500s, a young playwright took a drink from it in a London bar and ended up writing 'Romeo and Juliet'. When Leonardo DaVinci grew weary of designing, inventing, and dreaming, he too took a drink. Eventually, a group of young engineers decided to take it to the New World, where it would help them build a new life.

But once again, misfortune befell the Mystery Bottle. The ship was seized by murderous pirates, and the bottle took to the High Seas! China, Australia, Africa, and anywhere the dread pirates sailed, the Mystery Bottle came too.

Nobody knows how the Mystery Bottle finally came to rest in the New World. Some say it was carried by two African swallows, even though they are known to be non-migratory. But years later, in the soon-to-be-capital city of a fledgling nation, a young lawyer named John A. Macdonald took a drink from it and found that he could not stop.

In the mid 1950s, while looking for a site for a new university, the likes of which had never been seen, a fellow named Gerry Hagey tripped over a strange bottle half-buried in a Waterloo farm field. He decided that this must be the place, and the University of Waterloo was built around the Mystery Bottle, though few knew it.

Once again, the Mystery Bottle had fallen into the hands of engineers, where it rests to this day. But we must care for it well, for the tides of history themselves are swirling within that clear volatile liquid.

Computer Game Review: Don't Shoot The Puppy!

DOG DAY AFTERNOON
9K KENNELOLGY

The premise is simple; don't shoot the puppy! The execution is a lot harder. You can't help but shoot the puppy sometimes.

This game combines the best of flash animation with the best of storylines. The levels get trickier as you progress. Tricks and hints pop up everywhere; heed the advice carefully to save the life of the poor little dog.

This game has been nominated for 1989's Game of the Year award, up against

such titles as Space Invaders, Super Mario World, and Thy Dungeonman II. Just listen to what players are saying;

"This is even cooler than my nipple."

- hateiswierd

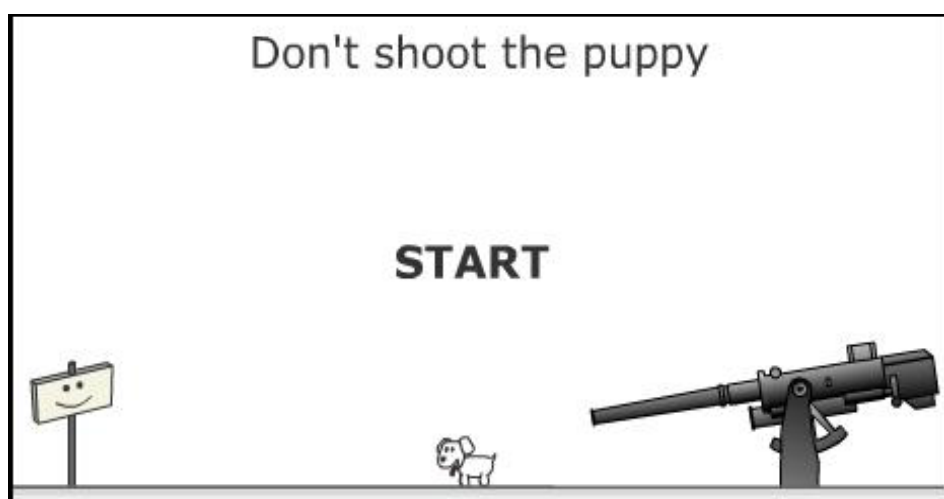
"This game messes with my head."

- dano

"i can't not shoot the puppy i LOVE it"

- jenaheaaaa

Try the game for yourself at <<http://www.addictingclips.com/Clip.aspx?key=7903FD1A94CEEAD2>>. Don't forget, don't shoot the puppy!



Village of the Damned Children Invade Waterloo



HAROUT
MANOUGIAN
3A ELECTRICAL

Hundreds of little blonde children have taken the UW Campus by storm. At first appearing to be innocent little summer campers, the children, known as Evil Small Quadrupeds (ESQ), have been reported to be the cause of recent unnatural events.

"Their eyes became red and I found that I couldn't resist the urge to strangle my friend," said first year Chemical Engineering student, Sandra Bullock. "I came across a group of them in the hall. When I looked into their eyes, I was determined to give 2B ECE students a hard time in their labs," confessed Ted Sprite. He continued, "I watched as they scrambled around in a panic but felt helpless to do anything."

During a press conference by the

Dean about the recent events, he reported, "The administration places the blame on ... How did you get in here? ... Nothing out of the ordinary has occurred."

Villagers from New Hamburg, Milverton, and Wilmot assembled across Ring Road with torches and pitchforks demanding that the demon children surrender themselves. They were, however, escorted off the campus by a UW Police crew that appeared to be in a daze.

"The noon-time assembly of the evil youngsters appears to be a time of feasting, running around, and general noise-making," said Dr. Kazinsky of the Department of Sociology, who has been studying the habits of the university's newest guests. "It appears that they drive away all others from the Grassy Knoll in preparation for this ceremony."

The provincial government has already intervened. Beginning in September, the children will be detained in internment camps throughout the K-W region under a plan code-named Operation Public Education. Until then, the insanity continues.

Brick Founder's Series Beer Review



TIN SOLDIER BEER
REVIEWING TEAM

Dan "You can haunt me all night long" Arnott
Jenn "I am the Lizard Queen!" Black
John "I run a D&D Campaign" Olaveson
Tony "Garbage-bag Wine" Hill

Brick Breweries, a Waterloo institution whose name is known far and wide for innovation in craft brewery, has recently released three new beers. These beers, known as the 'J. R. Brickman Founder's Series', are supposedly the best of the best. Jim Brickman, in his travels of the world, collected recipes and facts from breweries worldwide, and apparently applied them to these three special beers: Amber, Pilsner, and Honey Red. On Friday, July 14, 2006, the Iron Warrior Beer Reviewing Team (featuring U of G engineering graduate Tony 'Red Dog' Hill), decided to see if these beers were really as good as Jim Brickman says they are. Rating system is out of five.

J. R. Brickman Amber ("the blue one")- 3.375 'empties'

This brew was fairly well-received by everyone except Jenn. She wouldn't touch it after the first bottle. It was a rich amber colour, and had a slightly bitter, yeasty taste. This beer had no aftertaste, and like most beers, got better the more you sipped. Of all the beers reviewed, this one had the strongest flavour, which was a good thing because most of the beers had very light tastes. This beer was Tony's favourite.

J. R. Brickman Honey Red ("the red one")- 3.5 'empties'

This beer obtained the highest average overall score. Jenn had the following to say about this beer: "It's like this is made of candy. It's like a fuckin' girlie drink." However, this was a good thing. This beer was overall well-received. It lived up to its name, having a rich red-brown colour and a sweet, honeyish flavour. Some said it

was a good balance between honey-sweetness and yeasty maltiness. Some said that the honey overwhelmed the beeriness of the beer. The sweetness of this beer can be a good or a bad thing, depending on personal taste. It didn't have much aftertaste per se, but did leave a little bit of sweet stickiness in the mouth after drinking. This beer was extremely lousy when warm.

J. R. Brickman Pilsner ("the green one")- 3 'empties'

This beer had a nice clear colour, reflected in its smoothness. As with the other beers, it had only a little bit of carbonation. Apparently, Carl Thompson looks like the Colonel, the founder of KCF. I heard from the rat who lives in my left shoe that KCF puts addictive chemicals into its chicken. I ordered some KCF about 60 minutes ago, and its not here yet. Tony thought that this beer had little flavour, but what does he know? He burned off his tastebuds with homemade wine he drank out of a garbage bag. The bitterness in this beer differed from the bitterness in the Amber. John thought the taste was sharp, because he started to bleed after he drank it. Later, we learned that he tried to drink the cap along with the beer. What an idiot. The road of reminiscence brought Dan back to the days when he got loaded off of Steamwhistle. He gave this beer the best review of anyone. Jenn didn't like it but what does she know? She's a girl! Girls don't drink beer... Or do they? I forget. It's the only beer left in the fridge.

Dan "I need a sipper lid" Arnott chose to do his 4th year project on the use of garbage bags versus garbage cans as filtration systems for fermentation of wine. Sounds good, Dan! Any prof would love to be your technical advisor. But be sure to brew enough for all of us. The team would gladly review it so long as you promised us we wouldn't go blind. I gotta pee.



POINT VS. COUNTERPOINT

Mandatory Toplessness in Engineering?



NAY

I have one phrase for you that will mollify the debate over toplessness in Engineering forever: man boobies. Hideous, awful, and sometimes hairy man boobies.

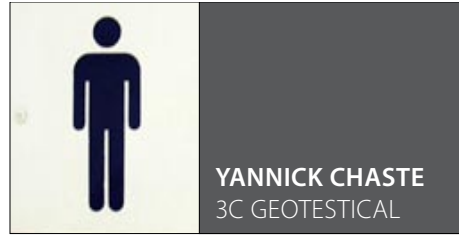
While most people in this heated debate have decided to focus on the toplessness of women, I'd like to take this opportunity to point out that the toplessness mandate proposed applies to men and women alike. I know all of the girls in Engineering are hot, hot, HOT but I'm afraid I cannot say the same for the guys. Granted some of the guys are passable but most suffer from a history of spending hours parked in front of a game console or a computer monitor ensuring that they are master of their magical fantasy kingdoms. Any muscle that may have once existed has most assuredly atrophied to a state of saggy tissue.

The man boob is not sexy. Knowing that going to school each day would result

in me having to see guys with larger, rounder breasts than me is a stomach-churning notion that would make me seriously consider taking as many distance education courses as possible.

As for female breasts, I just don't think people, of either sex, are mature enough to handle topless women on a daily basis. I feel almost ashamed to bring it up but if Janet Jackson's little Super Bowl stunt made North America realize anything, (besides what a wacko Janet is... A nipple shield? Come on now...) it's that we are just too obsessed with breasts. A nip-slip here, a full boob out of a shirt there and we're all atwitter. The public is foaming at the mouth for gossip like this. Can you imagine the kafuffle over a whole faculty of topless women?

I have nothing against The Negative Image Prevention Society (NIPS), nor their views on feminism but I just don't think that mandatory toplessness in Engineering will prove a point. Doubtless that the members of The Society of Waterloo Improvers of National Effeminacy (SWINE) should be slapped and sterilized for their inflammatory comments regarding women in Engineering but they are just sad and bitter men who have never had the pleasure, nay, privilege of seeing a woman's boob so lets not give it to them on a silver platter by making toplessness in Engineering mandatory.



YAY

The question shouldn't be about mandatory toplessness in Engineering alone; this issue should be raised campus-wide. And the answer should be yes.

As you may or may not know, a coalition of students calling themselves The Negative Image Prevention Society (NIPS) is lobbying for topless enforcement within the Engineering faculties. Incensed by comments about the lack and quality of women in Engineering by The Society of Waterloo Improvers of National Effeminacy (SWINE), NIPS initiated a public action to make toplessness mandatory in Engineering, claiming that it will empower women and make others sit up and take notice. NIPS took immediate action setting up public petitions and demonstrations supporting their stance and I, for one, wholeheartedly support their cause.

Alas, despite my plea that this public action be implemented campus-wide should

it be acknowledged, NIPS is focusing their attention solely on Engineering. This may foretell a dark day for my student line of credit as Engineering tuition will inevitably go up in order to install security measures around the Engineering buildings to keep other faculties from infiltrating Engineering territory and gazing upon our sacred treasure.

Exposed breasts at school will give everyone incentive to drag themselves to class everyday. If there was ever a time where I wished I was in Chem (statistically the class with the highest preponderance of women), this is it. I have great pity in my heart for you Softies and Comps. I see a future filled with course critiques with that bubble for "All Classes Attended" filled out on every single sheet.

Having mandatory toplessness in Engineering will lend this university international prestige for being forward-thinking and an extreme advocate for women's rights. Women from all over the world will see the example set here and possibly be inspired to go topless themselves, creating a worldwide sensation. UW's new image will hopefully encourage be vies of women (and probably men, too) from all over the world to enrol in Engineering for the experience of topless education. If there's anything better than home-grown breasts, it's exotic foreign breasts.

You stay classy, Waterloo.

Name Changes on Campus



The Department of Civil Engineering has changed its name to Civil and Environmental Engineering. "We've changed our name to better reflect the department's full range of strengths in its teaching and research programs," says Leo Rothenburg, department chair.

In other news, the Womyn's Centre is waiting for final approval to change its name to the Women's Centre. "We found that there wasn't much to do since there weren't actually any womyns at the university. There were, however, a mul-

titude of women. So we decided we'd be better off serving them instead," said Cymry Hnatyshyn, spokesperthing for the Centre. The Centre does not believe in having spokespersons because it feels that the inclusion of the syllable "son" in an English word suggests that men should lock up their wives to keep them from running away like Borat from Da New Ali G Show. Whatever makes you happy, Cymry.

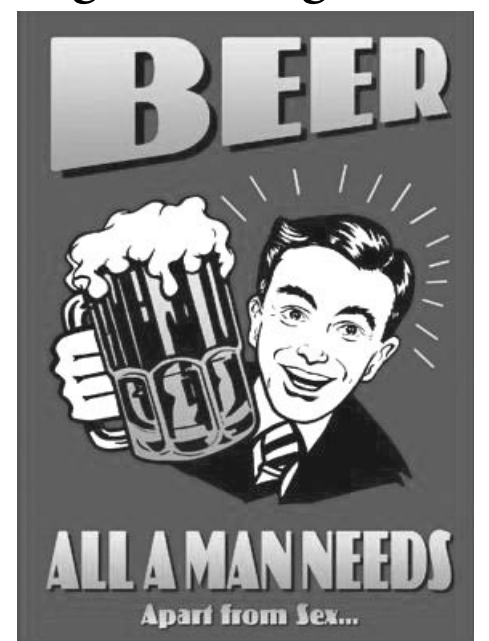
In response to the establishment of a Centre that serves only one gender, for the sake of equality, it was proposed that the Math and Computer building change its name to the Man Centre, keeping its initials as MC. It was pointed out, however, that the word "man" was often used synonymously with "mankind" and referred to both males and females, undercutting the very motivation for the name change.

Tin Soldier Presents: The Homebrewing Challenge

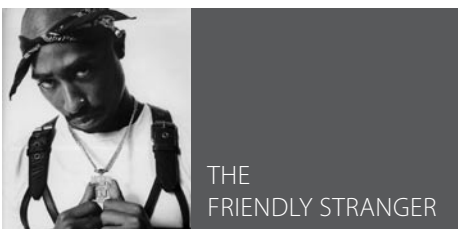
TIN SOLDIER NEWSROOM

The Tin Soldier will be sponsoring a homebrewing challenge in the Winter '07 term. This is your chance to gain fame and notoriety as the Engineering Brewmaster. The contest will be judged under several categories; Distillation Apparatus, Most Economic, Taste, and most importantly, Number of Fatalities (including brewery fires and explosions). Any permanent impairments caused to the judges will lose points.

Start thinking of how you will win over the tastebuds of your fellow engineers. Details and entry procedures will arrive early in the Winter term. All entries that do not cause instantaneous retching from the odour will be evaluated by our crack team of beer reviewers. Drink up me hearties, yo ho!



Iron Insight from The Friendly Stranger



Q: Dear Friendly Stranger:

The voices in my head keep telling me to go tango with the traffic. Should I follow their advice?

Signed, schitzo & friends

A: Dear Schitzo's posse,

If you know how to tango, then I say go for it. If not, then learn how. Dancing is always more enjoyable if you don't step on your partner's toes.

Q: Dear Friendly Stranger:

I've got this friend. He's real annoying, but he has all the cool stuff over at his place, and he's one of those guys that when he says to do something, people do it. Anyway, he keeps calling me 'Steve', when my real name is Stephen! It's really getting on my nerves, but I don't want to say anything in case he gets mad and doesn't want to be my friend anymore. What do I do?

-Stephen H.

A: Dear Stevie,

I see a few choices here. First, and simplest, is to shut up and enjoy the sweet ride. Those don't come around too often. Second, steal his stuff. But he might catch on when he comes to your place now that you're the one with the cool stuff. Third, maneuver yourself into his will. A couple days after he files the papers, knock him off. Make it look like he ticked off a drunk and got knifed. That should cover you.

Q: Dear Friendly Stranger:

My son finished his degree eight years ago and has been living in my basement ever since. How do I get him to move out and find a job?

-Laurier Mom

A: Dear Laurier Mom,

Deadbeat kids are excellent sources of money. Carve him up for his organs and sell them to desperate people with incurable conditions. Some organs can bring in up to \$20,000. The leftover pieces of the body, including bones and muscles, can go into a nice soup. It tastes like chicken!

This will free up a room in your house. I suggest inviting vagrants in. At least some of their organs should still be functional and healthy. I wouldn't make soup from them, though, unless you make soup for the homeless shelter. The poor feeding the poor. Its almost poetic.

Q: Dear Friendly Stranger,

Who should I turn to for advice when you leave for the fall semester? I don't know if I'll be able to survive life at this school without your 20/20 insight.

-Desperate Fan

A: Dear Fan,

Whenever you're lonely, sit on your hand for about five minutes. When it goes numb, the Friendly Stranger will be there for you.

So long, Engineering!

I look forward to making fun of your problems next semester.

Peace out.

Tin Soldier presents...

TA Quotes

brought to you by the talented TAs of UW

“Ohne Musik wäre das Leben ein Irrtum.”

- Wilhelm Scheissenschlager, MUS 270 Music Theory

“三年啦！三年之後又三年，三年之後又三年！

十年都黎緊頭啦老細，咁多 interest 你點還錢阿！”

- Chan Wing Yan, SYDE 331 Engineering Economics

“Жить стало лучше, товарищи. Жить стало веселее.”

- Aleksandr Ulyanov, ENVE 472 Wastewater Treatment

“از خودت گذشته، خدا عقلی به بچه هات بده.”

- Matlab Al-Jabr, STAT 230 Probability

“Przyszłość zaczyna się dzisiaj, nie jutro.”

- Józef Wojtyła, ECON 211 Introduction to Mathematical Economics

“서당개 삼 년에 풍월 읊는다.”

- Kwon Sang-Woo, MATH 119 Calculus II

“Alah bisa karena biasa.”

- Angelique Widjaja, CHE 661 Cell and Tissue Engineering

אני לא מהמהמרים, אני מהמהמרים

- Robert Aumann, STAT 333, Applied Probability

"taH pagh taHbe'!"

- Rok'har Kor, KLNGN 531, Shek'spearian studies

"Phaselus ille, quem videtis, hospites, ait fuisse navium celerrimus."

-Gaius Valerius, ME 799 Marine Architecture

"Մերոյ ջան, հոս էմ: Զինուած

պատրաստուած՝ ձայնիդ կը սպասեմ:"

-Sosse Mayrig, ECE 561 Distribution Planning

"7|-|3 4551g|||3||75 1n 7|-|15 c0u|253 w1ll b3

g1v3|| l355 w31g|-|7 1f y0u 4|23 pw||3d by 73h f1n4l."

- |)4|| 4|2||077, CS 1337

The Battle of Grey Matter: A Tale of Two Monos



One day I woke up with a dry throat. I drank water, thinking it was from drooling too much in my sleep. That didn't help, so I guessed it was a cold. A day later I could barely swallow. I went to Health Services.

They gave me tests. It was mono. They gave me drugs. They didn't help. I took more.

I got tired of not eating. The only way to solve this problem was to take the fight to the virus itself! No way was I going to wait for the five T3s to kick in. I wanted the virus and the pain gone now. Drawing on my knowledge of science, I realized the only way to attack a virus was to shrink myself down to microscopic size and fly inside my body.

I got my mechie housemate to build me a mock-up X-wing fighter and a mini-machine. Instead he built me a Death Star and a time machine, so I took him off the project and broke out the micro machines. I dressed up as a clown so I could fit into the back of the car. And I was off!

I flew in through the stab wound I got in a knife fight at the bar (bartenders get angry when you don't pay them). That placed me around the cerebellum. I poked around in there, looking for little viruses. I found... none. I guess mono doesn't like my brain cells.

A glorious breeze coaxed me out of the car. I stepped onto the squishy grey matter. It smelled slightly better than the Wastewater fieldtrip to the rendering plant, and tasted almost like an uncooked sausage.

I strolled around, looking for any sign of mono. The mono got to me first. Apparently the mono virus looks

like bears. That's right, the #1 threat on Steven Colbert's Threatdown. The mono was only eating salmon-coloured fleshy bits (good thing I'm so pale or there would be nothing left of me!).

The mono-bear approached. I circled it, and reached into my bag of Doritos. I pulled out the equation that described the shape of a Dorito. I sat there and tried to puzzle out what all those weird Greek symbols meant, but I got sleepy very fast.

I woke up to find the virus dead beside me. It had a small hunk of my arm in its mouth; I took it back. Sometime while I had been asleep, I had been relocated from my brain to my liver. I did a quick autopsy and found that the mono had mono! Of all the ways to die, being infected by yourself has to be among the most ironic. I used my CSI-derived medical knowledge to conclude that the mono had gotten miniature versions of the virus off my miniaturized self. The mini-bugs were too small to infect my cells, which gave me a weapon.

I incubated about ten million viruses and let them loose in my body. The timer on my mini-clock was nearing zero, so I hailed a red blood cell to take me back to my brain and my micro-machine transport vessel. The trip out was simple. I drove into my nasal cavity and then tickled my nose with a conveniently placed straw from Harvey's. I sneezed myself onto my bedroom floor. No room for a car there! With only ten seconds left, I drove the car into my housemate's room just as the vehicle expanded back to its original size; six centimetres long. I got out, took off the clown costume, and went to bed.

The next day the pain was gone, the swelling was down, and my stomach told me it was time to make up for two days of yogurt diet. A Benny's Homerun breakfast set me right.

Final tally: John: 1, Mono: 0. Unless you count damages due to lost time and personal suffering. Then I'll let the lawyers decide who wins.

the Tin Tribunal

Candice B. Riel, 1B Nono

Why did you miss the Engineering Semi-Formal last weekend?



“They ran out of bamboo soup.”

- Fang Pei, 1B Enviro



“Testing my 4th year design project.”

- Char Aznable, 4A Mechatronics



“Working in the radiation lab.”

- Spiderman, 3B Nuclear Physics



“Actually, I *was* there...”

- Phantom, 4N Opera Studies



“Jedi hunting...”

- Darth Vader, 4A Political Science



“Just hunting...”

- Batman, 3A Psychology



“Helping the fireworks display.”

- The Guy, 2B Pyrotechnics



“Headbutting the wall at the PAC.”

- Zizou, 4A Rec & Leisure

SPORTS

Civil Engineering Professor Survives Football Injury



DAN ARNOTT
3A ENVIRONMENTAL

Civil Engineering professor Dr. Bryan Tolson was injured last Friday, July 7, while diving for a low pass at an impromptu touch football game with the 3A Environmental Engineering class.

The game, a Friday afternoon tradition, took place in Waterloo Park. This was the first time Dr. Tolson had played, and he proved a force to be reckoned with. His speed and footwork gained him two touchdowns. (For those of you counting, that's also the number of goals Luke Lopers has scored in ball hockey all season).

Disaster struck late in the game when Dr. Tolson beat defensive back Jeff Paznar by a mile (so he says) and dove for a low pass which would have resulted in a third touchdown. Hitting the ground, Dr. Tolson sustained a shoulder injury.

Although maintaining his constitution and not passing out, Dr. Tolson was taken to the emergency room. Emerging hours later with his arm in a sling, he proceeded to his scheduled conference... by train instead of car.

The 3A Environmental class expressed great concern for Dr. Tolson. Although clearly an accident, some hostility was directed towards Jeff Paznar for the inci-

dent. 3A Enviro Indre Chimoutite had this to say: "You're an ass, Paz!"

Dr. Tolson returned to teaching on Friday, July 14. Despite the injury, he thanks Kyle Murray and the rest of the 3A

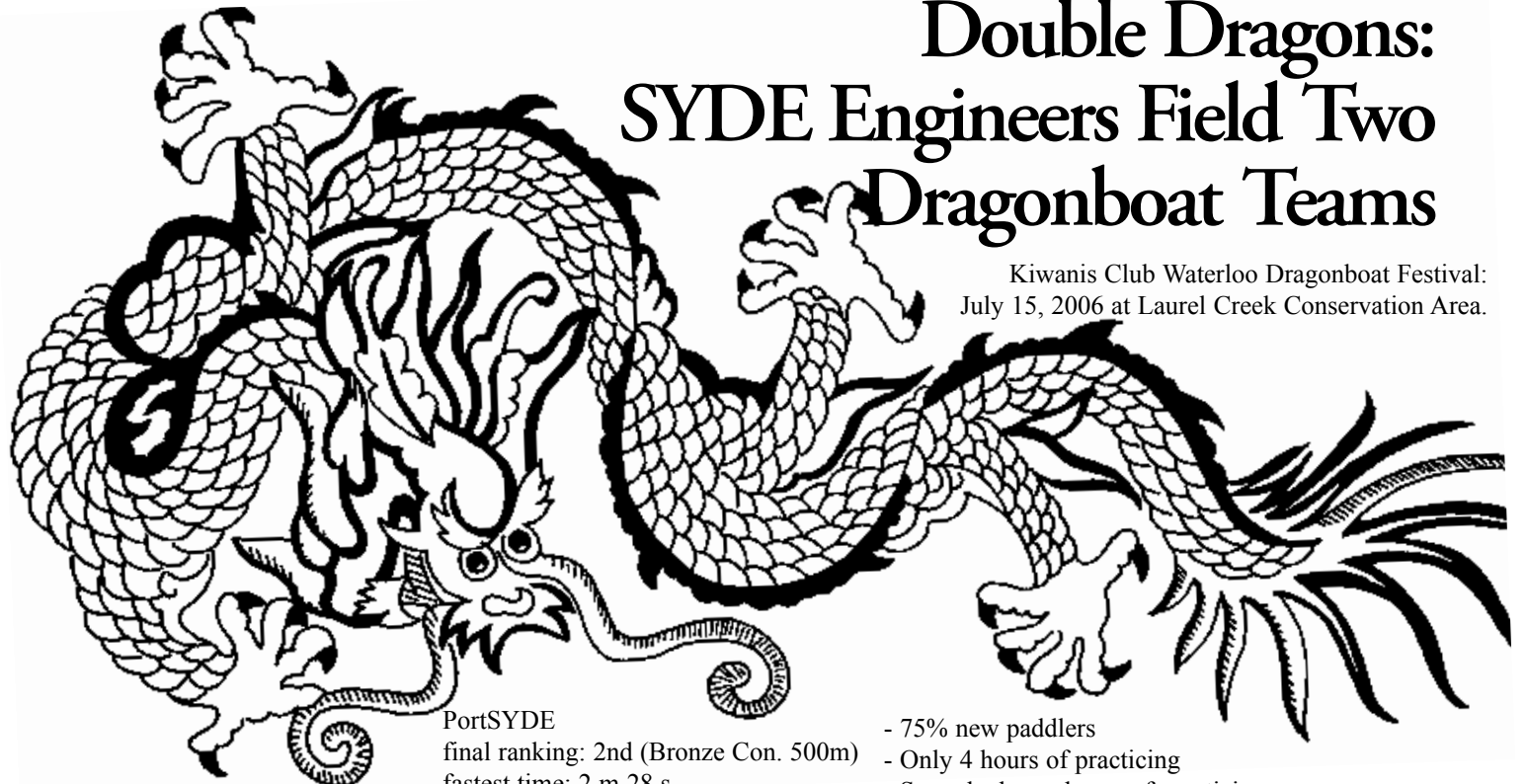
Environmentals at the game for the opportunity to play. "I will wait for a golf invitation next time," said Tolson, "I just hope I can actually play this season." Dr. Tolson's areas of research include heuristic optimization methods for environmental

simulation model calibration, sensitivity and uncertainty analysis techniques for environmental simulation modelling, and watershed modeling of flow and nutrient transport.

"Emerging hours later with his arm in a sling, he proceeded to his scheduled conference... by train instead of car"



The football hero



Double Dragons: SYDE Engineers Field Two Dragonboat Teams

Kiwanis Club Waterloo Dragonboat Festival: July 15, 2006 at Laurel Creek Conservation Area.

In10SYDEe
final ranking: 3rd (Silver Con. 500m)
fastest time: 2 m 22 s

PortSYDE
final ranking: 2nd (Bronze Con. 500m)
fastest time: 2 m 28 s

- 75% new paddlers
- Only 4 hours of practicing
- Some had zero hours of practicing
- two teams of mostly SYDE this year summer.
- Expanded the team to 1B class; hopefully they'll continue :)
- Next race: possibly Stratford in September



ENGINEERING SOCIETY REPORTS

Spring 06 Endgame

JEN CARROLL
PRESIDENT

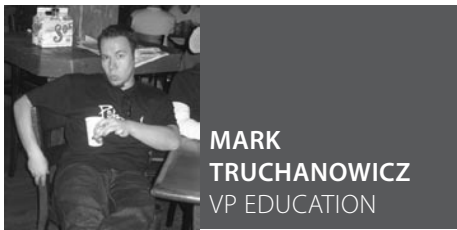
It's been an awesome term! Thanks to all of our wonderful directors for running some amazing events. Thanks

to everyone who came out to those events and made them the successes that they were. And thanks to the exec boys for keeping me (mostly) sane!

Can't wait to see you all again in the winter, have great work terms - make some cash, party a little harder, and think EngSoc-ish thoughts.

Don't forget to come out to EOT this Friday night!!!

Edu Exec Report

MARK TRUCHANOWICZ
VP EDUCATION

It's finally coming to an end... the Spring 2006 term that is! Overall it's been a great term and unfortunately I'm sure most of you have already or will soon be bucklin' down for finals.

I don't have much to report this week, but be sure to check out the results of the Debt Load Survey within this issue. A huge thanks goes out to everyone who participated. This kind of information is extremely important to the Dean and every survey counts. We had a 29% participation rate this term and hopefully in the coming terms we can boost that rate even higher!

Overall, I'd have to say that I was extremely impressed with all my Directors

and yet another huge thanks goes out to them. Everything from Resume Critiques to Frosh Mentoring to PDEng Rep Meetings and, of course, our very own Engineering Dance Workshop, the Dancineers (who won 1st place in TalEng, might I add) was incredible!

In the end, it's the dedication and determination of everyone within the Engineering Society that makes it what it is. Even if

I didn't get the chance to work with you this term, thank you for your time, effort, dedication and enthusiasm.

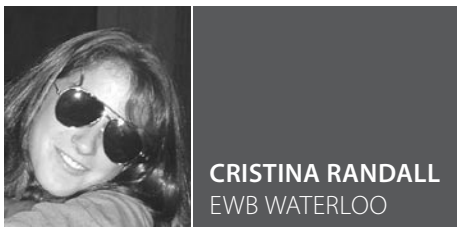
On that note, be on the look out for Directorship applications for Winter 2007, which should be available soon! This'll be your chance to possibly try something new, stick to something you love, or if you've never done it before to take on

some responsibility within the Engineering Society. After all, the Engineering Society is all about YOU!

Best of luck with finals, and see you all in Winter 2007, or earlier if you're working in Waterloo.

"In the end, it's the dedication and determination of everyone within the Engineering Society that makes it what it is"

Junior Fellows Overseas

CRISTINA RANDALL
EWB WATERLOO

As you read this, students like you have been distributed throughout countries like Ghana, Phillipines, Tanzania, and Mali to work on projects in rural energy, water and sanitation, agriculture, and IT building.

Waterloo engineers, Ben Best, Cat Denis, and Megan Campbell are among them. Ben is working in Ghana, catalyzing development within the local community, while Kat is in Mali involved in the Multifunctional

Platform (MFP). MFP is just a diesel engine that powers agricultural processing equipment such as a corn mill, cassava grater, oil press, or rice dehusker. It can also drive a battery charger, generate electricity for lighting, and power a water pump. 60% of Ghanaians lack access to electricity, which climbs to more than 80% in rural areas. With MFP, these

simple tasks now take hours rather than days to complete. This allows Ghanaian women additional time and income to devote to education and raising their children, who would otherwise be helping them with these chores. Megan is seeing through a long-standing EWB project in the Phillipines called SCALA (Sharing Computer Access Locally and Abroad) where she sets up computer centers and trains youth in basic computer skills to get them off the street and into a more promising future. These youth are among the 12 million unemployed and out of school children in the Phillipines.

These are just three examples of junior fellows (Engineers Without Borders interns), but there are more and all are facing the same questions. How can 1 billion people lack access to safe water? How can 2 billion not have sanitation? Why are 800 million hungry? Don't we have the technical expertise to solve some of these problems?

Development is about granting people the choices to lead the lives they value. To say that our actions in Canada have a profound impact on other lives of others is a gross understatement.

"60% of Ghanaians lack access to electricity, which climbs to more than 80% in rural areas"

Mad Skillz

GREG FITZGERALD
VP EXTERNAL

Hello, and welcome to my final HVP-External report (cue "Final Countdown" theme music) for the term.

The theme for this article will be mad skillz, because, hey, when it comes down to it, aren't your skillz all that matter? The answer is yes, especially when spelled with a 'z.'

Charities:

If you were around on July 8th you would have seen some mad car washing skillz in action as your charities directors ran a charity to car wash to raise \$245.62 for Breast Cancer research. Thanks to everyone who supported the car wash, you truly have sweet donating skillz.

On another charity frontier, if you have an insatiable desire for pancakes, YOU'RE TOO LATE! The final pancake breakfast for the term was held on Friday, July 12th, and offered a showcase of the finest flipping skillz in the business - don't worry if you missed though, there'll be lots of pancakes for you next term, just waiting

to be eaten.

Student Life 101:

Do you have insane design skillz? Well, regardless of how you answered that question, come on out to the Student Life 101 "Most Extreme Engineer" design challenge on July 22nd. The event will take place on the B2 Green, with one challenge running from 10am to noon, and the other running from noon to 2pm - bring your friends, bring your family, bring your dog, there are prizes to be won and your class pride is on the line!

CFES:

A pat on the (metaphorical) back, goes out to everyone who helped to organize the Automotive Technology Complementary Education course that ran last week, and in particular to Kate Kelly and Rene Marchand - you showed just how sick your organizational skillz are. The course was host to participants from all across Canada, along with one American and a

Swede to boot. Participants got the chance to go on numerous excursions, including trips to Toyota, Multimatic, Niagara Falls and a skid school in Kincardine, to test out their driving skillz.

Well, that's all for this term, I'm off to practise my bowstaffing - stay classy Waterloo.

"Participants got the chance to go on numerous excursions ... Toyota, Multimatic, Niagara Falls and a skid school in Kincardine, to test out their driving skillz"

End of Term, Oh Yeah!

ADAM NEALE
VP INTERNAL

First and foremost I would like to thank all of the internal directors for the term. It is all of you that make the engineering society what it is. Without your help there would be no fun in EngSoc. I have personally enjoyed getting to know and working with all of you throughout the term, and I hope that you all apply to be directors again next term. Thank

you very much for your hard work and dedication.

As for events for the rest of the term, there are still a few coming up. The last EngSoc meeting of the term is on Wednesday. This will be the engineering potluck, be sure to bring in some food so you can partake in the festivities. EOT is this Friday, it's going to be a blast as always. There is also a rumour going around that there may be a beach day on July 23. This will give everyone one last chance to relax before we all bunker down and learn the past 6 weeks worth of material in a couple of days. Best of luck to everyone, and once again thanks for everything.

Great term!

CHRIS OLEKA
VP FINANCE

Well, this term has been really fast and fun. I would like to thank all the volunteers that helped out with novelties and our novelties sales. For those of you who need money still. Please submit an expense statement with receipts no later than July 25th.

Good luck on exams! Farewell!

ENGINEERING SOCIETY



Did you know you can earn valuable P**5 points for volunteering time at the C&D? Email Mary Bland at mbland@engmail.uwaterloo.ca to schedule your shift.

ENGINEERING NEWS

Dean of Engineering Office: Engineering Co-op Student Debt-Load Survey, Spring 2006

1 Term Total

Total Responses 779

Number of surveys sent 2666

Response 29%

2 Does your family support you financially? (771 responses)

Yes 59%

No 41%

3 Average Cost of Living for a 4 month School Term (769 responses)

\$8,138

4 Average Cost of Living for a 4 month Work Term (692 responses)

\$3,533

5 Have you applied for local aid or other bursaries to pay for school? (770 responses)

Yes 43%

No 45%

Not Yet 12%

6 Have you applied for OSAP? (773 responses)

Yes & Received 32%

Yes & Denied 22%

No 46%

7 Do you have a loan for academic purposes? (771 responses)

Yes 34%

No 54%

Not Yet 12%

8 Has the differential tuition increases caused you hardship? (770 responses)

Yes 34%

No 31%

Not Yet 34%

9 How much debt do you expect to be in by graduation? (753 responses)

No Debt 30%

<999 5%

1000-4999 15%

5000-9999 15%

10000-19999 19%

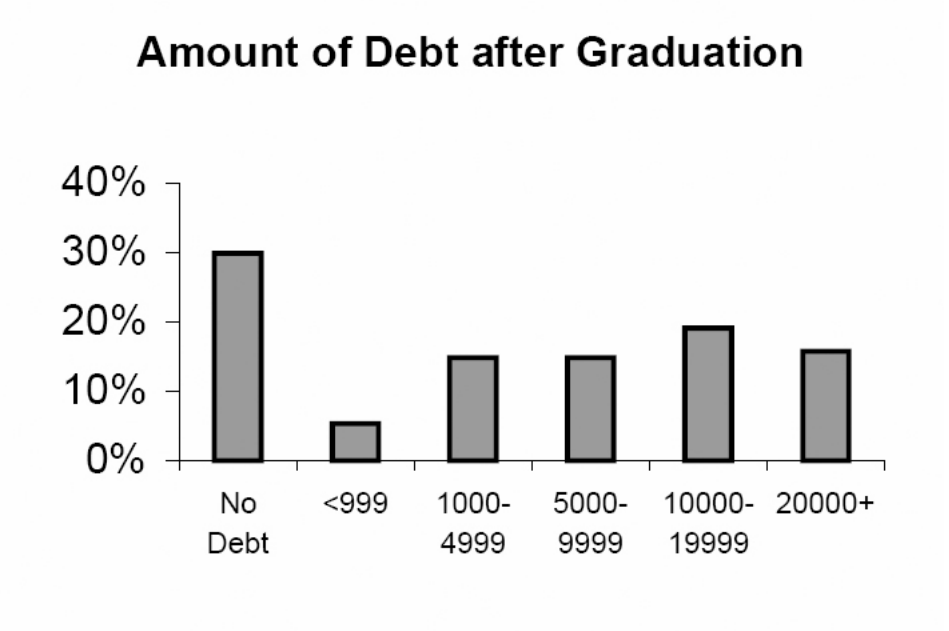
20000+ 16%

10 Do you live at home while at school? (775 responses)

Usually 7%

Used to 1%

No 92%

**11 Have you lived at home while on work terms? (770 responses)**

Always 20%

Sometimes 45%

Never 35%

12 Average of the weekly salary while on work term (670 responses)

\$570

How NSERC Can Help Us

HAROUT MANOUGIAN
3A ELECTRICAL

Science and Engineering are very important to Canada's future. The federal government acknowledges this fact and provides financial support to research initiatives through the Natural Sciences and Engineering Research Council (NSERC). The role of the organization is to make investments in people, discovery and innovation for the benefit of all Canadians. With an annual budget of more than \$860 million, it supports some 22,000 university students and postdoctoral fellows in their advanced studies. By financing university professors and encouraging companies to do the same, initiatives such as the NSERC-Nortel Research Chair awarded to UW Professor, Dr. Amir Khandani, are brought to fruition.

The deadlines are fast approaching for two NSERC grants: the Michael Smith Awards for Science Promotion and PromoScience. The Michael Smith Awards, named after the Canadian Nobel laureate, are grants of \$5000 for an individual and \$10,000 for groups that "further science promotion activities." Those who encourage public interest in science promotion beyond the formal education systems (almost all the engineering teams) are eligible for this grant. You can nominate an individual or

a group before the September 1 deadline by filling out the on-line form at www.nserc.gc.ca/msmith/index_e.htm.

The NSERC PromoScience grants are very similar. Organizations may request funds for up to three years at a time, which is ideal for long-term projects like Midnight Sun and UWAF's Challenge X. The grants support organizations that work with young Canadians to inspire an interest in science and engineering, motivate young people to study science and engineering to pursue careers in these fields, and bring interactive, hands-on science experiences to young people. These include organizations that focus on groups that are traditionally under-represented in scientific and engineering careers and those who train the teachers who teach science, math and technology to the country's youth. To be eligible an applicant must be a non-profit organization or a post-secondary institution and demonstrate ongoing involvement in natural science and engineering promotion activities for young Canadians. The deadline for this program is September 15 and application forms can be found at www.nserc.gc.ca/promoscience.

Pursuing an NSERC grant would definitely be a worthwhile venture for our engineering teams and the university as a whole!



MechEng Gets New Chair

HAROUT MANOUGIAN
3A ELECTRICAL

Pearl Sullivan began her three-year term as the chair of Mechanical Engineering on July 1. Dean Adel Sedra said in a memo that Sullivan is assuming "the chair's position at a critical and exciting time for the department" and will "lead the process of implementing the department's Vision 2010 plan." Sullivan took over the mechanical engineering chair from Gerry Schneider.

Her research on materials include predicting the long-term stability of polymers and their composites due to thermo-mechanical loading and aging, measuring mechanical property data deviation from bulk values as dimensions are reduced, adhesive bonding of dissimilar materials, and developing



smart structures via sensor embedment in laminated materials.

Dr. Sullivan teaches ME 219 and MTE 219, Mechanics of Deformable Bodies for Mechanical and Mechatronics students.

3A Mechs Crowned Geniuses

HAROUT MANOUGIAN
3A ELECTRICAL

The Spring 2006 Genius Bowl was held at 5pm in RCH 101 on July 12, 2006. The contest saw teams from all programs except Nano (who are off-stream) and Geo (who were writing an exam) come out for a grueling yet fun-filled two hours of trivia. It was definitely a heated battle as engineers faced off for the cash prizes awarded to the top three teams. In the end, the 3A Mechanical class, Team Unprotected Mechs, proved to be superior as they were able to score a total of 62 points. They received the first place cash prize of \$100. In second place, 3A ECE was awarded \$70 with a heart-breaking total of 61. The 3A Mechatronics A team received \$30 for their third place showing, with 53 points. Special mention goes to the four teams who were tied for fourth place: 4A Computer, 1B Mechatronics, 1B Systems, and 3A Systems

A.

The 4A Computer class, the original Genius Bowl champions, therefore have only one more chance to reclaim their title. Never before has the same class won a Genius Bowl on two separate occasions.

This term, round winners were awarded special food prizes. Ties were broken by fierce bouts of paper, scissor, rock, which proved to be too difficult a task for some teams. Also, the Death Round proved to be extremely fatal as no team answered more than 2 of the 5 questions correctly. These questions were worth 3 points each.

Here are some questions to help you get your brain into shape for next term's Genius Bowl. In Shakespeare's play, Julius Caesar, what is the name of Brutus' wife? In which French region is the city of Strasbourg? Which Viking is said to be the first European born in North America? What alphabet is used in Iron Warrior's weekly Enginoku puzzles?

ENGINEERING NEWS

How to use NEXUS to publish websites



TANEEM TALUKDAR
3A SYSTEMS DESIGN

Did you know that as a Waterloo engineering student, you can create and publish a website quickly and easily using your Waterloo NEXUS account? This is great for putting together a personal profile

site with maybe a resume or pictures that you want to share. In fact you can do much more and set up blogs, forums, wikis and much more. All for free.

How does it work? Every engineering student automatically gets a website address with his/her NEXUS account. This address is in the form: <http://www.eng.uwaterloo.ca/~nexusid>. For example, my NEXUS id is tatalukd, so my website address becomes <http://www.eng.uwaterloo.ca/~tatalukd>. If you've never used the service before and you try to visit your website, you will

be greeted with a blank page or an error. That's because you haven't published any web pages yet.

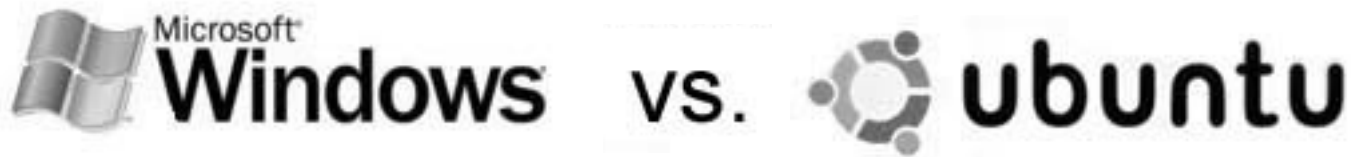
How do you publish a webpage? Log in to your NEXUS account and take a look at your network drive (the N:). You'll see a folder there that's named public_html. That's your web folder. You can also access it remotely by logging in to mywaterloo.ca and clicking on My Files. This will let you work with the public_html folder. Any files you put in there can be accessed from the internet. For example, if you put a file

named resume.html in that folder then anyone who visits <http://www.eng.uwaterloo.ca/~nexusid/resume.html> will be able to view that file.

And that's all you need to know to get started! If you've never created a web page before, don't despair – it's not difficult to get started. There are many places to get help. Start by visiting w3schools.org which contains good primers on web design.

Continued on page 15, see NEXUS

A Seasoned Windows® User's Take on Linux



JULIAN LAM

2A UT ARTSCI (BLASPHEMY!)

A mere month ago, mentioning the name Linux (officially rhymes with "Tin Ducks", but can also be rhymed with "Tin Bricks") would conjure up a singular image in my mind: A monochrome screen with pages upon pages of impenetrable code. I was convinced that even attempting to use Linux would cause my head to explode into a billion tiny pieces, because, let's face it, I'm a stubborn Windows geek.

In a sense, that nearly happened, but I managed to gather up the bits and pieces and write this layman's review of the Linux Operating System.

"Linux for Human Beings" – Says a lot, doesn't it. It's the kind of lofty goal that Windows tries to pursue (more on that later). User-friendliness seems to be the key, and interoperability, mainly with other Linux and Windows-based platforms, is one of its main goals.

My voyage began on the official Ubuntu website: <http://www.ubuntu.com>. A seemingly popular distribution and downloadable straight from the internet, the .iso file was a standard 698 Megabyte file that can be burned onto a standard CD-R.

Installation was minimalistic, and did not require much user input. Sticking to its motto, the installation surprised me in its rather intuitive ways of finding out information about the computer. Instead of choosing "Standard US 101-Key Keyboard" from a drop-down box (a la Windows Installation), Linux asked me to press the letter V. It then asked me to press the letter E. Then it asked me if the key "ç" existed on my keyboard, to which I replied in the negative. From that, it accurately deduced my keyboard model and continued with the installation. The partition manager was the only potentially troublesome spot, but a handy "guided partitioning" tool made partitioning my hard drive a breeze. In total, installation took a mere 30 minutes from start to finish, and I was good to go.

Dual-booting was expertly handled by the bundled program GRUB, which separated Linux's Ubuntu into its own category, and shoved my current installation of Windows into the "Other Operating Systems" category.

After a lengthy (compared to Windows) bootup, I was placed at a neat login screen, where my login credentials (set up in the initial installation) allowed me access to the desktop. From what I understand, Linux uses a desktop GUI, similar to Windows. However, the difference lies in that the desktop is completely peripheral, similar to Windows 95 or Windows 98. If desired, the user can go into a command line interface and work from there, a process that I would be all too familiar with.

My initial impression was absolute wonder. Ubuntu seemed to have thought of everything! A complete productivity suite (OpenOffice.org) came pre-installed, along with a web-capable browser (Mozilla Firefox) and e-mail client (Mozilla Thunderbird). For the fun of it, I clicked on the icon to open Firefox, and to my surprise, I discovered that Ubuntu had communicated with my router, providing it with an IP address and a fully configured connection to the internet! A handy notification reminded me that I had updates (very similar to Microsoft's Automatic Updates feature) ready to be installed, and from there I was introduced to the Synaptic Package Manager. This utility is basically Ubuntu's software store – A sleek user-friendly program, where everything happened to be free. Updates were quick and painless, and required nothing from the user. Ubuntu even connected to my network and plainly saw my connected Windows-based computers and their

shared network folders.

The initial setbacks begin once I really get into the system. Overly impressed by the initial ease-of-use, I transferred a music file from my Windows computer to my new Linux computer, and tried to play it. I sat in silence for a minute before I realized that the built in player wouldn't play my .mp3 file. So much for ease-of-use, eh?

Undeterred, I headed to the internet to find something to play my mp3's, not entirely sure of what I was supposed to be looking for. After an hour of searching, several unanswerable questions arose: What in the world's a .tar.gz? Compiling source code? Isn't that something the developers do before they release software? How do I use the terminal, and where in the world is my C drive? (This is where seasoned Linux users start laughing at my inability to do the simplest things). I eventually stumbled on a Terminal-based program, Vi, which looked similar to DOS' "edit". Poking around, I managed to turn a file from an organized bit of code into a distorted mess of characters. I even had trouble in trying to close the program. I eventually found the correct keystroke after a bit of searching on the internet, but who knows how long I would've been stuck in that program had I not given up!

The second most confusing thing about Linux is its gussying up of what's REALLY in your computer. Whereas Windows would allow you to access its innards (and easily mess up system files), Linux tries its hardest to keep new users from finding out where anything is. I tried to add Thunderbird to my toolbar (akin to the Quick Launch bar), but Ubuntu got stubborn and wouldn't tell me where Thunderbird was. Browsing my main drive (represented as a simple slash), I spent awhile looking for "Program Files" before giving up. I decided to sacrifice having my favourite programs a simple click away.

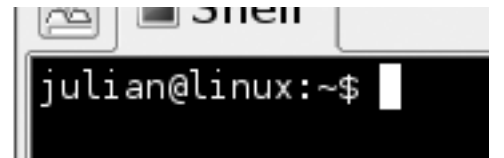
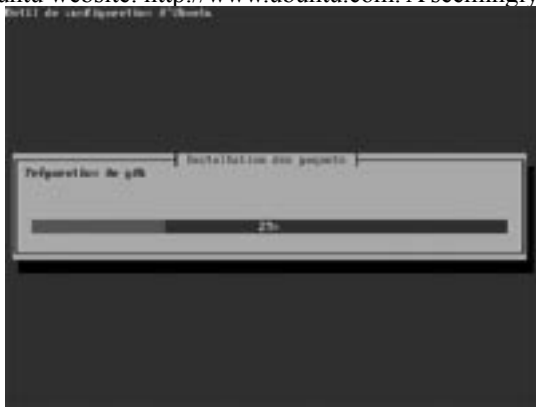
Also, installing programs from the Synaptic Manager is a breeze, but some programs don't add themselves automatically to the menu bar. Sure, I downloaded and installed the program, but now I have no way of running it. It doesn't help that it didn't tell me where it installed, nor if there are such as things as .exe files.

To this day, I don't know where any of my programs are loaded, or what any of the folders in my computer represent. /bin? /etc? /usr? /var? It all sounds Greek to me. Linux isn't for the Windows power user, and it certainly isn't for people who have a rather closed mind, as I do. Growing up with Windows, I am familiar with its intricacies and general operating practices. I know why things go wrong, and I know exactly how to fix it. With Linux, I am a helpless newbie who cannot customize my own system for fear of breaking something. I have no idea how to use programs, nor is there any easily accessible documentation (such as Windows' F1 keystroke). Apparently, there are help documents for every program, but they require a separate command from the terminal which I would never have guessed to use.

This is not to say that Linux is completely useless! The popular server configuration LAMP (Linux, Apache, MySQL, PHP) is installed on many servers worldwide, and truth be told, Linux hasn't crashed a single time during my bumpy (and ultimately futile) orientation. For users who don't intend to do more than surf the internet, Linux is a viable and simple operating system that has the potential to be much more than it appears to be. As you read this, government organizations are loading copies of Linux (perhaps Ubuntu, perhaps not) onto computers bound for the third world. In another example, Linux is a critical component of the "\$100 Computer" project. Linux servers probably even power and maintain your favourite game's internet matchmaking services! It just happens that the learning curve for such an operating system does not jive with my understanding of Windows. Perhaps I can be persuaded again to try another distribution, but for the time being, I'll stick with Windows, worts and all.

Julian Lam is an Arts and Science student at the University of Toronto in the St. George Campus. He wishes to acknowledge that he is but a mere ArtSci, and couldn't possibly compare to the technical genius of the innovative and technologically advanced students of UW. He acknowledges that some may argue that he barely gave Ubuntu a chance, but maintains that if it takes him more than a week to figure out how to play a movie, it's a week too long a wait.

Please direct your comments to the Editor-in-Chief with the subject "Re: Windows vs. Linux", who shall forward your responses (good and bad) to the writer.



ENGINEERING NEWS

China Completes Railway: 0 Workers Die



GABRIEL CHAN
3A SYSTEMS DESIGN

China is a country full of contradictions. To begin with, their “socialism with Chinese characteristics” is an example of the world’s first attempt at throwing two opposite sides of the social-political-economic spectrum into a mixing tank and hoping it won’t blow up. The party preaches against “catastrophic capitalist overproduction”, while Chinese entrepreneurs and factories flood the world with cheap goodies. If you have travelled to the cities on the coastal regions, it feels like you are in a modern developed country,

but once you start going inland, it feels like you are back in the stone ages. The most recent surprise is a positive one.

China recently completed the Qingzang (Qinghai-Tibet) Railway and the project managers are proud to report a very successful execution of the project.

By no means is the Railway an easy engineering project. The Qinghai and Tibet plateaus are the highest place in the world, with one of the world’s highest earthquake zones. The terrain ranges from shifting desert sands to unstable (mostly barely permanent) permafrost that would probably start unfreezing as the effects of global warming become more dramatic (they built an elevated track with liquid nitrogen cooling pipes to keep the heat down). The Railway cuts through the habitats of migratory animals (they built special bridges so the animals can cross

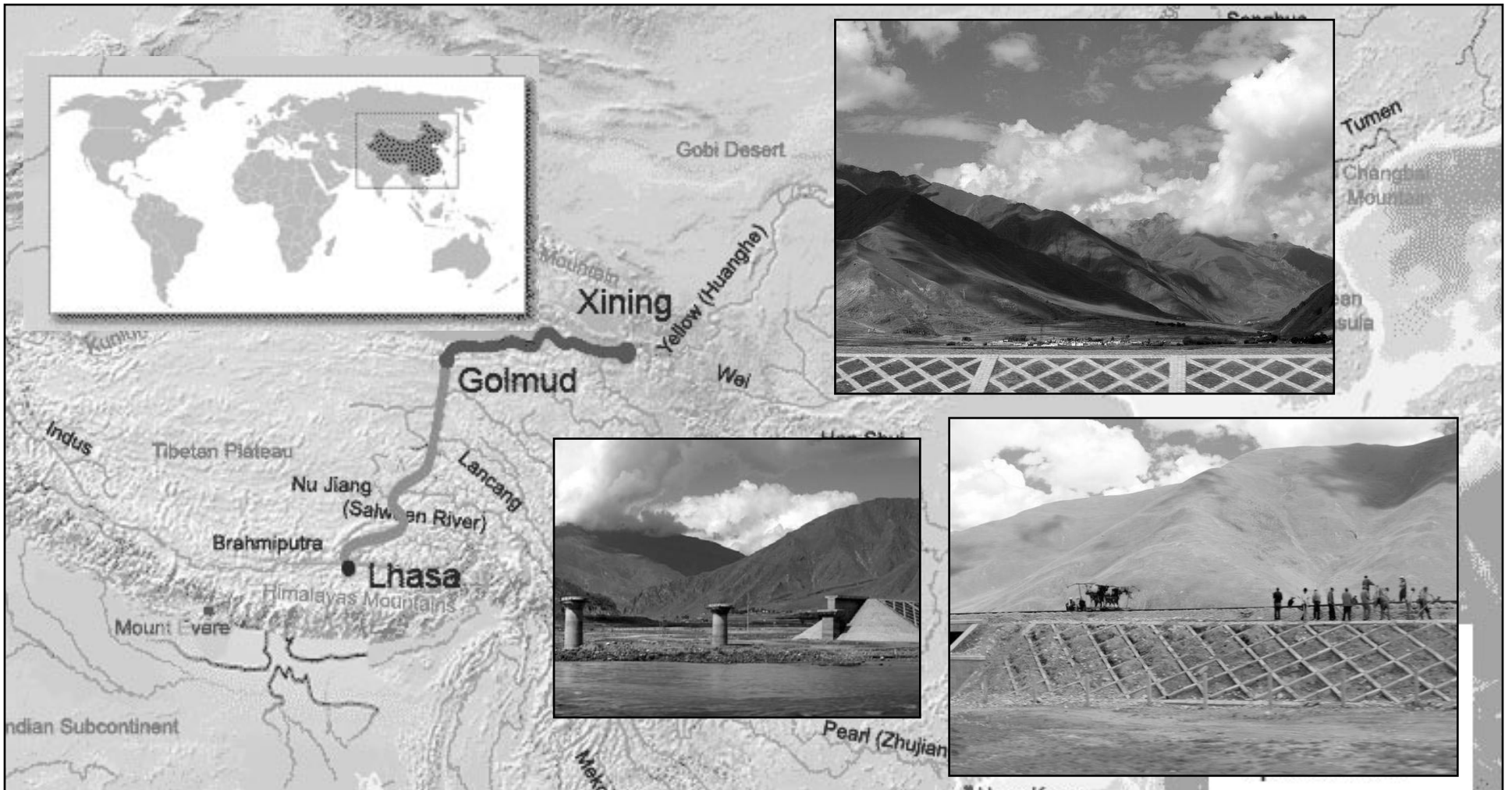
underneath).

Also, not only do the design engineers have to keep altitude sickness in mind when designing the railcars for the passengers, implementation was also a huge issue. The Railway is a five-year project involving thousands of workers undertaking a variety of tasks, most of which were not unlike those of coal miners. What is even more amazing is the fact that thousands of coal workers die in all sorts of accidents while thousands of workers under harsher physical conditions did not suffer one single fatality. This is definitely a surprise coming from a country that suffers a notorious industrial safety record. Plus the fact that previous civil engineering projects have claimed lives before.

The rich and prosperous coastal regions cannot keep their workers safe, while the

poor western regions can build 160 km of railroad through one of the most remote areas on the planet without losing a single worker. This is definitely something the central government should be studying, instead of playing the blame game and arresting “incompetent” officials.

If the People’s Republic wants to be a respectable modern nation, it should start caring about the people. Sure, you wouldn’t miss a couple thousand people out of 1.3 billion, but engineering is not all about technical achievements; after all, engineers are supposed to be responsible in their work. Sure the Canadian Pacific Railway was also a great engineering feat, but one Chinese labourer also died for every kilometre of it. With proper design, management, and implementation, history will have the final say on the ultimate success of your engineering project.



NEXUS

For those who are a little more advanced, here are some more details about your web space. The engineering servers disallow FTP access, but you can still upload and download files conveniently by connecting via SSH. This can be done by connecting to engage.uwaterloo.ca. You can use a variety of SSH applications to connect to the servers and I personally prefer using the free client program available at ssh.com. Your web space can also serve PHP pages – just drop them into the public_html folder. As a bit of trivia, did you know that the original creator of PHP was a Waterloo engineering student?

MySQL database access is not available by default but if you ask nicely you’ll get an account. This means that you can run any PHP/MySQL based applications on your space. If you want to know who to ask for a MySQL account, feel free to email me and I’ll tell you.

I wrote a version of this article about two years ago, and received a fair amount of email about it since then. I hope this refresher article is as useful. Feel free to email me with any questions or comments you may have.



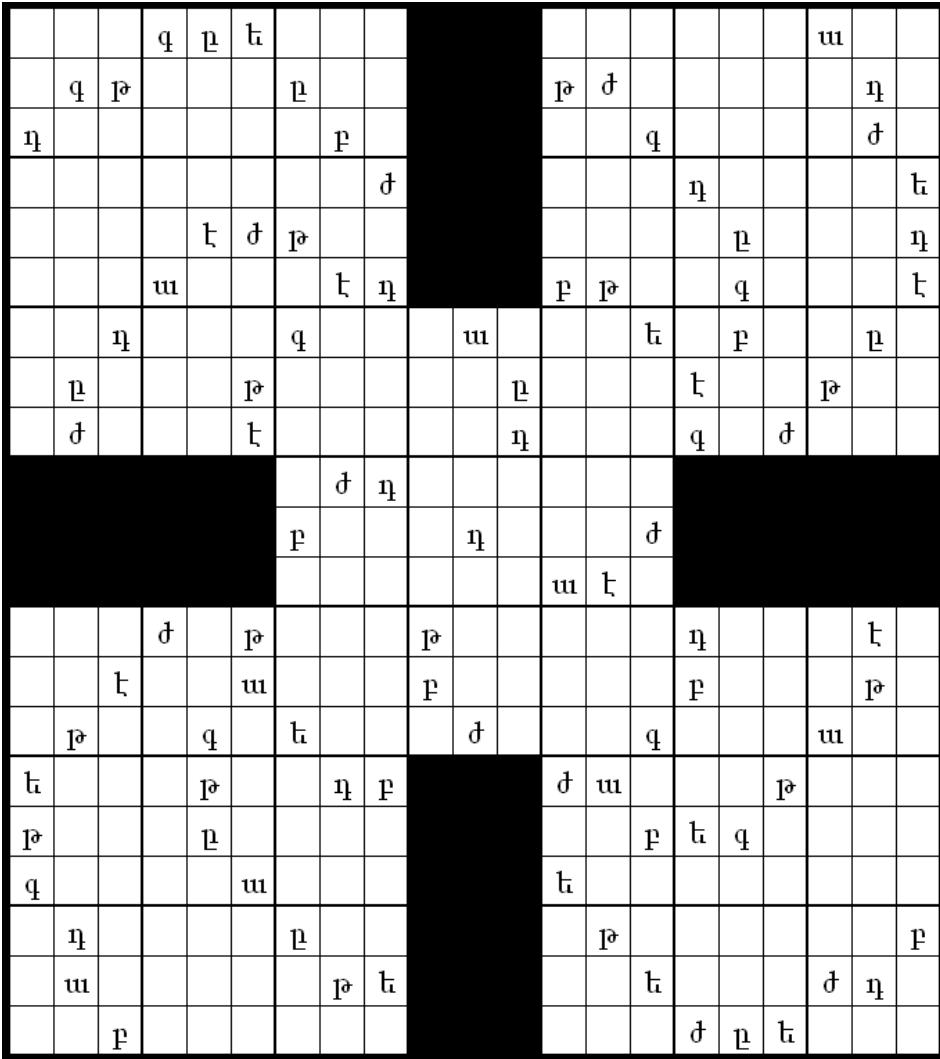
Sandford Fleming Foundation
E2 3336, ext 4008, sff@engmail
www.eng.uwaterloo.ca/~sff

<i>Awards</i>	Work Term Report Awards Convocation Awards Debates Departmental Award for Excellence in Design Dufault Award Teaching Assistantship Excellence Teaching Excellence Award Technical Speaker Competition Karen Mark Scholarship John Fisher Leadership Award W.R. Petri Engineering Award Wighton Fellowship
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Anyone wishing to learn more about the Foundation may contact the office

Here's a puzzle fit for an engineer's intellect.
HAROUT MANOUGIAN
 3A ELECTRICAL

Enginoku



This week's puzzle...

Samurai Enginoku:

For this Enginoku the following needs to be clarified:

Fill in the grid so every column, every row and every 3x3 box contains the nine symbols below (attached). Where the puzzles overlap, the rows and columns do not go beyond their usual length but the interlocking boxes provide more clues, and complexity. Do not try to solve each Sudoku grid in turn, the puzzle has to be tackled as a whole. For the solution, email hsmanoug@engmail.uwaterloo.ca.

Solution to last edition

q	p	t	u	v	w	x	y	z
v	w	x	y	z	q	p	t	u
y	z	q	p	t	u	v	w	x
z	q	p	t	u	v	w	x	y
q	p	t	u	v	w	x	y	z
p	t	u	v	w	x	y	z	q
t	u	v	w	x	y	z	q	p
u	v	w	x	y	z	q	p	t
v	w	x	y	z	q	p	t	u
w	x	y	z	q	p	t	u	v
x	y	z	q	p	t	u	v	w
y	z	q	p	t	u	v	w	x
z	q	p	t	u	v	w	x	y
q	p	t	u	v	w	x	y	z
p	t	u	v	w	x	y	z	q

profQuotes

"Only an evil professor would make you do all that stuff... I won't be making you do that stuff."
 - P. Calamai, SYDE 311

"You guys are so quiet this morning. It's eerie."
 - M. Collins, ECE 309

"I'm getting mixed stares - stares of non-understanding and stares of boredom. And I'm not sure which one is winning out."
 - J. Craig, ENVE 321

Prof: "And the last slide for today..."

Student: "NOOO!!!"

Prof: "You don't have to copy it down. You can even close your eyes if you want."
 - J. Craig, ENVE 321

"Perspicacious means clear, in a non-clear way."
 - R. Harris, ENGL 306A

"In 15 seconds, right down all of the words you can think of for breast."
 - R. Harris, ENGL 306A

"Take a deep breath, get your pen out ready, put down every word you can think of for vagina."
 - R. Harris, ENGL 306A

"All the words you have for penis, go!"
 - R. Harris, ENGL 306A

"They spent all this money to build homes next to a lake, and now they've got a big mud pit. Which can be nice... I like those kind of bars."
 - J. P. Jones, EARTH 458

"Either I'm crazy or they are. Possibly a combination."
 - J. P. Jones, EARTH 458

"OK, a slightly better bad way to do this..."
 - J. P. Jones, EARTH 458

"Nitrate and phosphate is like crack to algae."
 - J. P. Jones, EARTH 458

"Three Mile Island wasn't looked at so much as a contamination problem as a run-we're-all-gonna-die problem."
 - J. P. Jones, EARTH 458

"People got to thinking 'That's not good. Water shouldn't burn.'"
 - J. P. Jones, EARTH 458

"So if you want to grab money from NSERC and have an army of grad students do your bidding..."
 - J. P. Jones, EARTH 458

"Those people who are sleeping, please wake up for two minutes, look at page 129 and sleep again."
 - A. Khandani, ECE 316

the Iron Inquisition

Brought to you by in10SYDE and portSYDE dragon boat teams.

What would it take for you to swim in Laurel Creek?



"A damsel in distress."

- Sheel Shah, Engine



"A damsel in distress."

- Kristen Yee Loong, Captain



"Eternal fame and fortune."

- Simon Whitmell, Engine



"A nude beach on the other side."

- Fahd Butt, Engine



"If I really had to pee...."

- Matt Colautti, Token Tron



"What's the big deal, I'm Chinese with immunity to everything."

- Annie Leung, Pacer



"What are you willing to offer?"

- Derek Hans, Terminator



"What's the problem with Laurel Creek?"

- Bernice Duck, Quacker