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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY | VOLUME 29 ISSUE 3 | WEDNESDAY, FEBRUARY 27, 2008

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Gates Encourages Students to Expand Horizons

OM PATANGE
2T NANOTECHNOLOGY

After a humbling introduction by University of Waterloo President David Johnston, Bill Gates, chairman of Microsoft Corporation, walked onto the Humanities Theatre of the Arts stage on Thursday, February 21st, sporting a UW sweater to present his thoughts on the future of software and how it will play a role in his philanthropic future. This was his third visit to the University – the second in less than three years – and the only Canadian stop on his farewell speaking tour.

Prior to his presentation, Gates met with various UW faculty members in a closed session. The presentation itself was viewed live by students from the University and various high schools, as well as local and national media seated in the Humanities Theatre and in the Davis Centre via a live video feed. It was also broadcast live on MSN Video.

"Waterloo is a special place – it's a university that's doing great work. It's been a source of some incredible people who have come and worked at Microsoft," Gates said. "In fact it's almost always in the top three or so universities in terms of the of number of engineers that we hire," adding that he had been looking forward to the visit.

After announcing that July 1st, 2008 will be his last fulltime day at Microsoft and transition to fulltime work with the Bill and Melinda Gates Foundation, he played a video parody of what his last day is going to be like. The star-studded video, featuring among others U2's Bono, George Clooney, Warren Buffet, and Barack Obama, demonstrated Gates' sense of humour and down-to-earth nature.

The software-centred portion of the talk began by a description of the current trends in supporting technologies such as transistors, wireless and optical fiber communication and displays.

See PHILANTHROPIST on Page 10

Bill Gates returned to UW for the second time in less than three years to speak to a packed Humanities Theatre audience.

Waterloo Victorious at Annual Concrete Toboggan Race

CHAD MUNDLE
4B CIVIL

Waterloo911! celebrates victory after coming in first place at the Great Northern Concrete Toboggan Race.

On Feburary 2nd the University of Waterloo's "Waterloo911!" troopers prepared themselves atop an icy slope in Sherbrooke, Québec at the Great Northern Concrete Toboggan Race (GNCTR). Announced on the PA system was "Attention spectators, this is going to be a fast one. Clear the sides of the track".

UW's Waterloo911! Concrete Toboggan team then completed one of the fastest runs of the day. It was only "one of the fastest" since the judges were unable to clock the sled on the radar gun.

The Great Northern Concrete Toboggan Race was first held in 1974 by the American Concrete Institute to challenge the creativity of civil engineers. It requires teams to design and build a toboggan with a running surface made entirely out of concrete. The sled must weigh less than 300 pounds without its riders, have a safe roll cage to protect its riders in the event of a rollover, and also it must incorporate a braking system. Recently, a steering requirement has been added to the designs of toboggans. Teams are judged on categories such as top speed, best run, most improved team, braking, and aesthetics. Each year an award is also given for the best overall entry.

It is also customary for each team to adopt a theme for their toboggan and dress in their appropriate uniforms. Teams use this chosen theme to display the technical aspects of their toboggans during a technical exhibit and team spirit. The team from the University of Waterloo chose a combination of the popular TV series Reno911! and the cult DVD hit Supertroopers as their theme. They dressed in mock police uniforms for indoor use and Carhartt coveralls for outdoor events, all while donning authentic moustaches.

The week began with an activity day on campus of the Université de Sherbrooke. It involved teams playing a variety of clever games put together by the organization committee to promote members of different teams from across Canada working together.

The following day held the team technical displays. This is where teams present an exhibit that displays the technical aspects of their sled through their chosen theme. Waterloo's team built a 10 ft by 10 ft mock diner as seen in the movie Supertroopers. The diner was complete with coffee machines, classy diner photo's, doughnuts, and their 288 pound concrete toboggan smashing through one of the walls. The day was filled with cheeky shenanigans as teams tried to show-off team spirit and team camaraderie on top of their technical prowess.

In order to show spirit to the judges, Waterloo held many dance and crowd surfing parties within the tight confines of the diner.

During the day the UW team managed to beat the University of Toronto in a tug of war. However, UW was dominated by Royal Military College in tug-of-war. That is understandable, though, considering that RMC engineers are professionals in the tug-of-war ring.

See VICTORIOUS on Page 10

Letter from the Editor
On Carbon Taxation

DAVID MORRIS
EDITOR-IN-CHIEF

So, the third issue's come around and, although it's 16 pages long, we finished the layout in record time. This record is partially thanks to the fact that nearly everyone submitted their articles on Friday, rather than Sunday, but also thanks to assistant editors Bahman and Stuart for sacrificing part of their reading week and helping out so much on Friday and Saturday. For those not selling their souls to *The Iron Warrior*, I hope you had a fun and unproductive reading week that has left you with plenty of sleep but a small amount of nagging regret. If, on the other hand, if you were responsible and managed to get a significant amount of work done, please email *The Iron Warrio*r and tell us how you managed to do so!

Carbon Taxation

Gordon Campbell's British Columbian Government is planning to implement a "revenue-neutral" carbon-tax. For those of you who don't know what a carbon tax is, the name sums it up well: it's a tax on anything that produces CO2 or, more specifically, on fossil fuels. The "revenue-neutral" portion implies that any money earned from such taxation will be returned to the taxed individuals in the form of tax-reductions (or as the BC government calls it, "Climate Action Credit"), ideally creating a strong incentive to burn less fossil fuel, without too strong a negative impact on the economy.

The tax is expected to generate $1,849 million over three years, and will be divvied up as follows: 21% will go to persons with lower incomes, 42% to reductions to personal income tax, 14% to small businesses, and 23% to the general corporate income tax. The idea behind it is that the tax will encourage companies to reduce overall emissions, and therefore help fight climate change. Such a tax has already been enacted in a few countries in Europe: Sweden, Finland, the Netherlands, and Norway (all around the 1990s) have all imposed such taxes.

Premier Campbell decided upon this tax during his visit to China, where the intense pollution left quite a mark in on him; "You saw the impact of millions of individual actions on the environment around you". That being said, such a tax is extremely controversial and has created a large amount of debate on both sides of the political spectrum.

Many opponents of carbon-taxation are afraid that such a tax would drive companies away, that such a tax would be inflationary, and that increasing the prices of commodities that are already at record highs is an economically foolish move. Ontario's Fair Tax Commission was also skeptical of a carbon tax, satiating that if enacted, such a tax shouldn't be used to bolster general revenues, and that it could negatively affect too many key sectors of the economy, specifically manufacturing and transportation.

A group that works on the federal-level, The National Round Table on the Environment and the Economy (an independent agency created by Parliament in 1988), has also stated that a "revenue-neutral" carbon tax would be effective, and would, in fact, be the only viable way for the Federal government to meet climate change targets, but the government has currently ignored the panel, stating that its current regulation systems are sufficient.

The "revenue-neutral" approach is the approach that both groups recommended, as the taxed money would be given back to the corporations and individuals. That being said, it would seem that, with the way the tax in BC is planned to be set up, 63% of the income from the tax would be returned to individuals, while only 37% would go to corporations, which may not be proportional to the sources of taxation, and could therefore significantly damage corporate profits, if the proper balance isn't achieved.

In itself, this tax will most likely do little to mitigate the effects of climate change, but the largest benefit of this tax, in my opinion, is that it will serve as an interesting test-run for other provinces or countries interested in enacting such a tax, and will help eliminate speculation and consolidate opinions on the matter; it may serve as the key catalyst to create such taxes or environmental incentives in other provinces. Also, some economic analysts state that the reduced pollution levels will create larger economic benefits in the long run, in terms of better living conditions, reduced effects of climate change, and other factors. Note that Quebec has also adopted a very modest version of a carbon tax, charging .8 cents per litre of gasoline, and .9 cents per litre of diesel, but this has been generally considered a tax grab as it does not offer any tax relief in exchange, and is considered too small to create any incentive to reduce fuel usage.

It will also be interesting to see the magnitude that such a tax will affect carbon-emissions, in order to compare its effectiveness to other alternatives, such as a cap-and-trade system, where companies are limited to certain levels of carbon emissions by being given a certain number of carbon "credits", which can be bought or sold in order to increase emission limitations, or gain profit through emission reductions. This method allows the government to create well-defined emission-reduction targets, and can be cheaper to enact overall. This method has been criticized as not reducing overall pollution problems, as small, non-polluting companies tend to sell all their credits other, heavily-polluting companies, and neither changes their emission levels at all. It has also been criticized as causing a "grandfather" effect, where the government gives companies free credits on top of the baseline that are granted.

Of course, the intent of a carbon tax is to reduce carbon emissions, and the taxation of industries and the public isn't the only way this can be done; alternative energy sources, better mass-transportation infrastructure and better overall urban planning, initiatives for a more energy-efficient home, encouraging the production and purchase of fuel-efficient cars, as well as a myriad of other solutions exist, many of which are being employed by governments throughout the world, but none that are as encompassing as a carbon-tax or a cap and trade system, and many cost much more than the price of a new taxation infrastructure.

Overall, I feel that the Premier has taken an extremely bold step, one which might've been thought out better, but seems to have solid reasoning overall, and I am extremely interested in seeing how this will go. In order to make any dent in predicted climate-change effects, however, a lot more needs to be done, and a lot of that is far out of our control.

Although a lot of Europe is continuing to invest in alternative energy sources, as well as other environmentally-friendly movements, China and India's rapid development will require a lot of pressure and convincing in order to slow down its growth to allow some environmentally-friendly leeway, and with economists in the US predicting a rescission in their economy (thanks to the combination reckless spending, snowballing (perhaps avalanching would be a better term at this point) debt, and increasing oil prices), it might seem like economic suicide to further reduce profits for such a long-term investment with extremely hard to predict returns.

Letter to the Editor

Re: Better Know a Beer: Sports (Rory Arnold, Feb 6, 2008)

Review a Real Beer Next Time

I would like to point an obvious flaw in Mr Arnold's recent article regarding the strong link between sports and beer. He solely mentions 5 beverages (Budweiser, BudLight, Canadian, Busch and Labatt) which he continuously mislabeled as "beer" instead of their true title: Pisswater. Honestly, not only does he mention these 5 generic brands of crap, but he also calls the Europeans (also the perfecters of modern day Beer) "pansies". Might I mention that soccer (the European's primary sport of choice) has more fan deaths per year than football, curling, NASCAR and golf combined.

What causes these deaths Mr Arnold? Certainly not tea and crumpets. The extreme love of two of man's greatest accomplishments: beer and sport. So next time you chose to write an article about beer, perhaps you should mention some (read: Heineken, Grolsch, anything from Germany and Czech Republic). Rory Arnold's knowledge of beer is like the link between the WNBA and excitement: it just doesn't exist.

Matthew Guilherme
1B Management

Future Submission Deadlines

Mar 7, 6:00 for publication on Mar 12, 2008
Mar 21, 6:00 for publication on Mar 26, 2008
Send your submissions to iwarrior@engmail.uwaterloo.ca

THE IRON WARRIOR

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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.

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Engineering Music Exchange

SUNNY NG
3B COMPUTER

School rivalry is nothing new between two of the best engineering schools in Canada. I am of course referring to the University of Waterloo and University of Toronto. The rivalry may come in the form of formal competitions such as the annual Ontario Engineering Competition and Canadian Engineering Competition, where students compete by putting their engineering skills to work, including consulting, technical speaking and debating.

The rivalry may also sometimes be not-so-formal, such as antics in the past that may or may not include actions that may or may not be considered pranks which may or may not involve vandalizing or stealing each others' properties that may or may not happen to be mascots.

Between the above-mentioned two extreme types of rivalry, another form of rivalry is about to begin. Yes, we engineers are known for our academics and partying, but what about other things? Surely, we all have our own hobbies and interests, so we must be good at other things as well.

One of the things I can say we are really good at is making music. Weird? I know. Here at UW Engineering, while it may have been more active in the past in B-Soc than in A-Soc, we have had our own jazz band since Winter 2005. The engineering jazz band known as With Respect to Time (WRTT) welcomes anyone to join, preferably, but not limited to engineering students. Involved engineering students get together on a regularly basis and do what they enjoy doing, which is to make music in a fun environment. It's a great way to continue playing music while in school. WRTT has weekly rehearsals every Sunday night in the SLC multipurpose room in addition to sectionals for wind instruments- it actually is a big commitment! With various performances throughout the term, they all lead up the big end-of-term charity gig, scheduled for April 8, 2008 at Hagey Hall.

The music scene at U of T isn't too shabby either, their engineering society currently host a slew of musical ensembles including Skule Stage Band, Skule Jazz Combo, Skule Brass Quintet, Skule Orchestra and Skule Stage Band Blue (aside: Skule is the name of U of T's engineering society). The latter four were formed within the last four years. They also hold events throughout the year including the annual Skule Music Concert in November, which showcases all the ensembles.

With both schools' music scenes beginning to mature, it is only time until the ensembles from each school get together for some friendly rivalry. The time is now, for the first time ever, the two schools will host a series of Engineering Music Exchange events to celebrate the artistic talents of engineering students.

On Friday, February 29, 2008, WRTT will be hosting the Skule Stage Band and Skule Stage Band Blue for a performance at the Student Life Centre Great Hall from 6pm to 8pm. If you ever doubted engineers' artistic talents, come on out, they'd love to prove you wrong! The best thing about this is that it's free; it's perfect if you're looking for something to do before heading over to POETS for MOT.

On the following week our own jazz band With Respect to Time will be performing at U of T's engineering pub, Suds, at 6pm, hosted by the two Skule stage bands. Be sure to check that out if you happen to be in Toronto next weekend.

For more information about With Respect to Time and their upcoming gigs, check out their website at www.engjazzband.com.

Feds Election and Referendum Results

STUART PEARSON
1B CIVIL

The results are in for the 2008 Federation of Students elections and referendum, announced on Friday, February 15th. In an extremely close race, Andres Fuentes edged out Fatima Ahmed for Vice President of Education. The position of Vice President Internal was won by Andrew Falcao over Steven Hayle. Additionally, Chris Neal was voted in as St. Jerome's Councillor, and Sam Andrey, Rosalyn Chiu, Yuwei Liang, and Humberto Vigil-Gutierrez won Science Councillor positions.

The President and Vice President Administration & Finance positions were acclaimed by Justin Williams and Del Pereira, respectively. Similarly, the Engineering Councillor positions were already acclaimed by Jeffrey Aho, Abhilash Jayakumar, and Han Xu. They will sit on the Student Council and act as a voice for Engineering students concerning issues such as tuition and university policies. The new Feds executive will begin working together on May 1st.

The referendum concerned the removal of a fee for the campus radio station CKMS, and the addition of a fee in support of the World University Service of Canada Student Refugee Program (WUSC). Of the 26,608 students on campus who were eligible to vote in the referendum, between 12-13% actually voiced their opinions in the vote last week, a significantly higher proportion than those voting for the executives. The turnout is perhaps indicative that people actually took a serious interest in the issues at hand.

The removal of the $5.50 CKMS fee from tuition statements was voted for by 2280 to 1081. A total of 1863 votes were required for the fee's removal to be approved, so the motion was successfully passed. Opponents of the station's continued funding cited poor management and lack of organizational transparency as their main issues of contention with CKMS. The radio station currently relies on the fee for the majority of its funding, but they are determined not to let this spell the end.

The $1.00 per term WUSC fee was voted for by 1999 to 1145. It is refundable and contributes towards the sponsorship of studies at the University of Waterloo for two students annually, chosen from refugee camps in third-world countries. The money is to be distributed through a system designed at the discretion of the Feds, beginning in the Fall 2008 term. During initial debates only one side (in favour of the fee's addition) made a case- no committee in opposition of the fee was ever formed. The 'Yes' committee for the fee shied away from being labelled as a charity, considering that all of the money raised is going back into the University of Waterloo.

Jeffrey Aho, one of the Engineering Councillors, expressed some disappointment that Engineering did not field any executive candidates this year despite being the largest contributing faculty to Feds. However, he is quite confident that VP Admin & Finance Pereira and President Williams have what it takes to run the corporation. Aho believes that VP Education Fuentes has the political capital to deal with some issues, although as far as Engineering is concerned he will need to be held accountable when dealing with the Differential Tuition issue. The position of VP Internal is the one that interacts most with student societies, yet Andrew Falcao's platform neglected to address any issues specific to Engineering. Additionally, Falcao did not attend any EngSoc meetings during his campaign, unlike the other candidates, and he missed the Societies' forum. As a result there was no chance to ask him any questions related to Engineering.

CKMS Referendum: (13% turnout)
Yes - 2280 ($5.50 fee to be removed)
No - 1081
Declined - 47

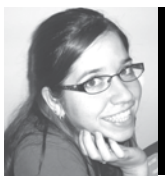
WUSC Referendum: (12% turnout)
Yes - 1999 ($1.00 fee to be added)
No - 1145
Declined - 50

VP Education: (10% turnout)
Andres Martinez - 1163 (Elected)
Fatima Ahmed - 1133
Declined - 242

VP Internal: (9% turnout)
Andrew Falcao - 1184 (Elected)
Steven Hayle - 969
Declined - 242

Founders of Engineering: Edith Flanigen

Chemist, Inventor of Zeolites and Artificial Emeralds



MICHELLE CROAL
2A CHEMICAL

In the Spring term, *The Iron Warrior* had a series of articles on the lives of famous contributors to the backbones of engineering concepts and applications, such as Edwin Armstrong and Sir Sandford Fleming.

Taking a different spin on this topic, I wanted to discuss a female engineer that has had a significant impact on the engineering industry. However, the biggest problem with this is that other than Marie Curie, women have only really begun to take industrial and engineering jobs since World War II, and thus their discoveries and projects may not be as well recognized or renowned as those of their male counterparts from 100-200 years ago. Also, it was more frequent to see women in chemistry or other similar technical fields, and it is only in the last 20 years or so that we are seeing the numbers of women in engineering increase.

Edith Flanigen was born in 1929, in Buffalo, New York where she spent her childhood. After high school, Edith and her two sisters all majored in chemistry at D'Youville College. She later earned her master's degree in inorganic-physical chemistry from Syracuse University. Shortly after graduation, Edith started working at Union Carbide, one of today's major producers of ethylene and polyethylene.

In the Linde Division of Union Carbide, Edith first worked on silicone chemistry, but later in 1956, she was assigned to lead a team on synthetic molecular sieves, zeolites. Molecular sieve zeolites are used in separating materials on the molecular scale; the porous crystalline compounds contain molecular sized pores, into which desired molecules can be adsorbed while any larger than the pores are excluded.

Since natural zeolite minerals are very rare and had to isolate, Edith Flanigen's extensive work on synthetic zeolites at the commercial scale over 30 years led to her being awarded the Perkin Medal in 1992. This was the first time in history that this award had been given to a woman. Flanigen's dedication to her research in this field led to over 200 different compositions and structures of molecular sieves, many with large scale industrial applications. Zeolites are used especially in the petrochemical industry, where they act as catalysts in petroleum cracking processes, reducing energy costs and industrial waste. (Just think, anything plastic that you touch is derived from the petroleum industry, and thus Edith's developments in zeolites) Also, zeolites are used producing pure oxygen, cleaning nuclear waste, purifying refrigerants in refrigerators and air conditioners, and even in laundry detergent to remove environmentally polluting phosphates.

In the 1960s, Edith spent time on a synthetic emerald project, derived from research into masers, (the microwave precursor to lasers). A reliable source of high quality crystals was required for light concentrating, without the expense and commitment required by mining projects. The Linde Division of Union Carbide had already been involved in synthetic sapphires, and from that basis, Edith Flanigen and her colleague developed a process for emerald synthesis. In case you're wondering, emerald is a silicate crystal, with beryllium, aluminum and chromium in its molecular formula. It has a hardness of 7.5-8 on the Mohs scale, compared to diamond, which has a hardness of 10. Edith's emeralds were of such high quality that for 10 years they were sold as precious gems in the jewelry line Quintessa Collection.

In 2004, Flanigen was awarded the $100,000 Lemelson-MIT Lifetime Achievement Award for her work on zeolites and molecular sieves. She is currently a consultant for UOP, a joint venture between Allied Signal and Union Carbide and she is a member of a team designing a math and science school inside the National Inventors Hall of Fame.

Although trained as a chemist, Edith Flanigen's contributions to the field have significant applications in the engineering industries, and she should be considered and important contributor to the advancement of the field.

ESSCO First-Year Integration Conference

STUART PEARSON
1B CIVIL

In the wee hours of the morning of February 2nd, several engineering students made the trip down the 401 to Windsor for the ESSCO (Engineering Student Societies Council of Ontario) First Year Integration Conference. Hosted by the University of Windsor at a hotel in downtown Windsor, the conference was designed to introduce first-year students to ESSCO and the opportunities available to them. It gave the delegation of seven first-years accompanied by VP-Externals from both A & B EngSocs the chance to meet other engineering students from across the province, share traditions and have lots of "hot, sweaty fun".

So what the heck is ESSCO? ESSCO is the Engineering Student Societies Council of Ontario, formed in1987 as a forum for the engineering societies at different schools across the province to discuss the issues affecting engineering students. The council acts as a link between students and the PEO (Professional Engineers of Ontario) and OSPE (Ontario Society of Professional Engineers).

They also run outreach programs including Engineering and Physics Day at Canada's Wonderland, National Engineering Week, and support the development of Women In Engineering groups and programs.

Delegates from Waterloo "A" and Waterloo "B" at the Conference

Why should anyone bother getting involved in ESSCO? It lets you work on your leadership skills, networking and professional development (way better than PDEng!), and it looks snazzy on your resume. You get a real sense of accomplishment, and of course there is plenty of hot, sweaty fun to be had at the numerous conferences that are held every year.

Delayed by terrible roads and an ungodly amount of snow, our delegation left early Saturday morning instead of on Friday afternoon. As a result, we missed the first few sessions, but were still able to enjoy most of the conference.

ESSCO 101 introduced first-years to the role of the council and encouraged students to get involved. Participants were encouraged to think about the full potential of over 15,000 engineering students united under a common goal- imagine constructing a colossal snow castle or even hundreds of people dyed purple. The idea of mass public nudity was even toyed with although (fortunately) rejected. First-years also learned about the fun side of ESSCO, including Ric Flair, all things pink and of course some more of that hot, sweaty fun.

Additional presentations were held to introduce students to the roles of PEO and OSPE. The PEO are responsible for licensing and regulating the standards of professional engineering practice. OSPE acts as the voice of professional engineers, working closely with the provincial government to ensure that the opinions of the engineering community are paid attention to, as well as providing services for its members.

A talk regarding CFES (Canadian Federation of Engineering Students) was also given. CFES is an engineering student society that operates on a national level, functioning much like ESSCO but on a larger scale. Annual conferences are held, and there are even opportunities for involvement on an international level. With links to student societies in Europe, the US, and even New Zealand, there are chances to get involved abroad, such as a seminar on Structural and Architectural Glass being held in Ghent, Belgium. Additionally, CFES runs the Canadian Engineering Competition, taking place this year in Waterloo from March 6th to 9th.

Saturday night gave us a chance to bond with our fellow engineering students from across the province. The evening included dinner and a Windsor Spitfires hockey game, followed by a taste of Windsor's nightlife at the Chubby Pickle Saloon.

All in all, it was a weekend of very little sleep but plenty of enjoyable and interesting experiences.

EWB in Malawi: Coping with the Rainy Season

KIMBERLEY THOMAS
'07 ENVIRONMENTAL

The rainy season is upon us in Malawi. The fields, dry and barren just a few months ago, are now green and productive with tall stands of maize, the staple food crop. Despite the crops presently maturing in the fields, this is the time of year when rural farmers all across the country find themselves hard hit by food insecurity.

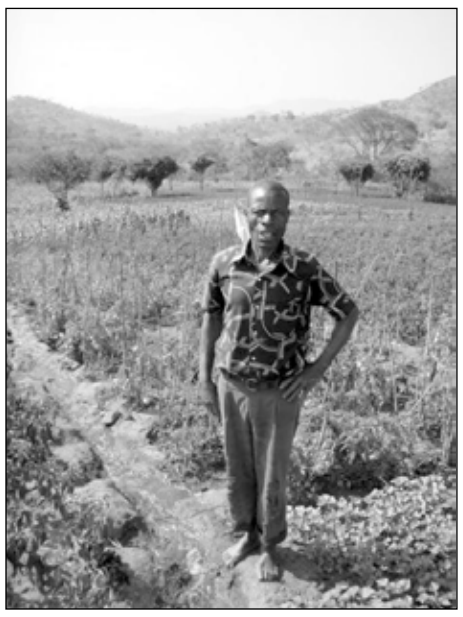
Last year's food stores are depleted and this year's crop is not yet ready for harvest. That's why this time of year is also known as the hungry season.

Sixty percent of Malawian small holder farmers live under the poverty line. Many of these farmers are food insecure for up to 6 or 7 months of the year, meaning that they often go without eating or will only have one or two meals per day. Most farmers get by using income earned by labouring in the fields of others. As a result, many small holder farmers have chronic labour shortages on their own farms during this peak work period. They produce less food on their own land and are sent deeper into a cycle of poverty.

Irrigation projects are promoted in Malawi to increase dry season productivity. Under irrigation, farmers are able to grow high value crops for both sale and household consumption. The goal is for farmers to become food secure, have increased access to cash and improved nutrition through a more diversified diet.

In my work with Engineers Without Borders, I've been partnered with a Malawian NGO, Total Landcare (TLC) which promotes small scale irrigation technologies. We deal mostly with treadle pump and stream diversion irrigation. Treadle pumps are little Stairmaster-like contraptions which pump water from a well or river before a stream diversion system uses gravity to divert it into a hand dug canal. Water is directed to a high point on a field where it flows by gravity through a series of channels to planting basins.

In my role as a Monitoring and Evaluation (M&E) Officer, I'm interested in exploring what is really happening on the ground. Are we having the results we



expected and intended? Are there ways we can improve the positive impacts that we're having? I recently spent some time in the field interviewing irrigation farmers on their work during the past irrigation season.

One such farmer was Grace Ulaya. She has a household of 5, and supports a total of 8 people. She started treadle pump irrigation last season, and grew maize, tomatoes, onions and beans. She sold half of her harvest, and kept the rest to feed her family. In the past, her family was food-insecure for 5 months, and they covered this shortfall through labouring. Since starting irrigation with TLC in June of 2007, her family is now food-secure. Her family has been able to further improve their livelihoods by using profits from irrigation to engage in other income generating activities; her husband buys household items from the capital city for sale in the rural areas around their home, and she has constructed a chicken coop and will soon start raising chickens for sale. Once they finish paying off the loan for the treadle pump issued to them by TLC, they will start purchasing other livestock, such as goats.

While Grace's story is indeed one of success, there are ways that we can improve and adapt our irrigation program to further increase the impact that we are having. I am working to achieve this by improving the capacity of TLC's M&E system. This is just one example of the type of work EWB does overseas. For more information on EWB, check out a UW chapter meeting (look for posters in the hall!) or the website (www.uwaterloo.ewb.ca).

For more details on what I'm up to, check out my blog: www.kim-thomas.blogspot.com.

PDEng Independent Review Update

JEFFREY LIPNICKY
VP EDUCATION

In my second instalment on the PDEng Independent Review, I will provide you with more up-to-date information on how the review is progressing and how it will look.

Last Wednesday, I attended a meeting with the PDEng Steering Committee members to review the progress and assist in brainstorming for the PDEng Self Study. During this meeting, the preliminary brainstorming was presented by PDEng staff and critiqued by the committee members. The PDEng staff was very responsive to the comments of the committee and incorporated many of them into the brainstorming documents.

The main focus of the documents was on the elements identified by the Dean of Engineering (Adel Sedra) in his commissioning of this review. They include, in no specific order:

- Program Objectives
- Program Administration
- Relationship to Others (within Engineering)
- Curriculum Content
- Additional Opportunities
- Program Delivery

These components were identified by the Dean, but not specifically defined. The interpretation of each component has been completed by the PDEng staff (and committee members) where appropriate.

The PDEng Staff have discussed and identified a number of concerns and issues with the program and courses. Many of these issues are consistent with those concerns raised by students at previous input sessions held. However, the Self-Study document is not meant to specifically address these concerns, but rather the concerns of the PDEng Staff. That being said, I do sit on this committee and the PDEng Staff respect my comments and suggestions to ensure that the work being carried out does not contradict the commonly held student opinions.

The concerns of the students will come through a separate avenue. The Associate Dean Undergraduate Studies (Wayne Loucks) will be gathering our feedback on these 6 components in the near future. The specific medium of data collection (surveys, questionnaires, interviews, etc.) and timeline has not been disclosed, but as soon as I am made aware, I will pass that information on to you. This data collection is expected to be initiated in the next few weeks, so be sure to keep your eyes and ears open.

One other item that I would like to clarify is the materials the external review committee will have access too. I have been assured by the Acting Director of the PDEng Program (Jeremy Steffler) that the review committee will have complete access to the PDEng course content, materials, and staff in conducting their review. When the external reviewers come for their site visit (anticipated to be in May), they will be given access to these materials and personnel to fill in any gaps that the Self Study or Student Feedback might have left.

At press time, this information is complete and accurate. I will continue to update you, the students, on a regular interval (at the very least, every Iron Warrior issue). Again, if you have any questions, comments, or concerns about the PDEng review, or any other topic related to PDEng, please do not hesitate to contact me directly (asoc_vpedu@engmail). I hope that this information is helpful in filling in the blanks about the Independent Review and puts you at rest knowing that progress is being made.

At the 2008 Canadian International Autoshow

JACLYN SHARPE
3B MECHANICAL

If you missed the 2008 Canadian International Autoshow, you didn't miss much. After wandering around the three buildings housing the Autoshow for 6 hours the main idea that could be taken away was that hybrids are in fashion, even if saving the environment isn't. Even the concept cars were so stylised as to seem outlandish, or too mundane to be worthy of the title. And the trend of incorporating all sorts of electronic gadgets into cars is not going to ebb anytime soon.

The theme this year was "The Turning Point", in other words "green cars". This was apparent in the fact that a good proportion of automakers presented hybrids; unfortunately these were mostly hollow gimmicks. Only a handful of Automakers were showing reasonable hybrids, compact cars that are designed for efficiency, with actually saving the environment in mind. Toyota, who has been a leader in hybrids, with the Prius, first produced in 1997, was one of these. Toyota brought three hybrids, including the "Hybrid-X" concept car. Chrysler, Dodge and Ford on the other hand brought seemingly paradoxical SUV Hybrids, with the Aspen, Durango and Escape, respectively. To no one's surprise none of these did well in fuel economy, though the Escape blew the competition away getting 6.6 L/100km city driving, and 7.0 L/100km highway driving (compared to 10.3 and 7.7 respectively for the standard model).

Though the automotive industry appears to be big on flaunting their "green" image, many of the displays contained no useful information at all for interested consumers. Lexus had a big sparkly display, covered in flashing lights that was supposed to illustrate their hybrid drive. As fun as it was to watch, the display was apparently intended to distract from the atrocious fuel mileages of their hybrids.

Honda was one of the few automakers acknowledging consumers who want small affordable cars with good fuel efficiency. In the middle of their display was a gold first generation civic, next to its current day successor. The display was in celebration of the Civic reaching 10 years as Canada's best selling car.

One thing to look forward to at any autoshow are the concept cars. Unfortunately the concept cars unveiled at this year's autoshow were totally useless. According to Wikipedia the whole point of a concept car is "to gauge customer reaction to new and radical designs which may or may not have a chance of being produced". However, we got what appeared to be a bunch of exercises in graphic design, not automotive design. Few of which I can see as viable options for future production. Take a look at the Ford "Airstream" for example; it's a chrome tube with swivelling bucket seats and bench seating in the rear. That may have been futuristic in the 60's but at this point it's just irrelevant. The few exceptions to this, for example the BMW's "Concept X6 ActiveHybrid" were tucked away, out of the limelight where they were all too easy to pass over. Hyundai presented what looked like a two door SUV that was reportedly design after a backpack. The "Hellion" has a ribbed design and looks like

Hyundai's 2008 concept car, The "Hellion"

it's ready to pounce; it is exactly the kind of wacky yet plausible design one expects to see at a show like this.

One prediction that I will make is that cars are going the way of the cellphone, and will soon be doing everything for you. Forget driving, you don't even need to navigate anymore. It's all about listening to the Satellite Radio and using the built-in GPS system to navigate for you. And of course there will be DVD entertainment to keep the kids busy and out of your hair. With consoles reminding me more and more of Blackberrys, I found myself drawn to the manual windows and mirrors in the Volkswagens. Now there's a car you can drive… and possibly even afford.

ENGINEERING SOCIETY EXECUTIVE REPORTS

Presidential Report

TYLER GALE
PRESIDENT

One-hundred students represented the faculty of engineering undergraduates on Thursday of reading week at the lecture by Bill Gates. These students were selected by the engineering society on the basis of their program (first year students enrolled in computer engineering and related programs were given priority since they are the target audience), and by responses to the question in the online form. 230 students submitted the online form, which is a quite high number considering the talk was taking place during reading week. Most of these students were enrolled in computer-related programs.

There are a few dates coming up that many may find important. This Friday is the MOT pub night, starting at 9pm in POETS, as usual. Council meeting #3 is tonight, at which time donation proposals and Paul and Paula Plummer Award nominations will be the feature presentations. Council meeting #4 will be next week Wednesday, and will feature nomination presentations for the Paul and Paula Plummer Award.

So what is the Paul and Paula Plummer Award anyways?

The Paul and Paula Plummer award is the highest award of the Engineering Society, presented annually at the Engineering Grad Ball. It is typically awarded to graduating students who have made a distinct impact on the society, and shown genuine caring student life, spirit, culture, and the society itself. The award has also frequently been presented to members of the community in addition to graduating students – it is not reserved for any specific demographic of people. Typically the award is presented to between three and five individuals by each society, but there is no official maximum or minimum limit. If you think someone is particularly deserving of a "P & P," be at council meeting 3 tonight to make a nomination, and meeting 4 next week to make a presentation about them. All voting members of the Engineering Society will have the opportunity to vote for winning nominees, however the final decisions rest with the engineering society presidents.

WEEF Report

BRANDON DEHART
WEEF DIRECTOR

I hope you all had an amazing Reading Week and have recovered from any midterms you had before it. I'm sure most of you also have more coming up so I will wish you good luck on those as well. Since I'm currently on vacation in BC I'm going to keep this short so that I can go back to hitting the slopes, enjoying the sun, and generally being far happier than Ontario allows.

As some of you may or may not know, and as all of you *should* know, on February 6 1990 the Waterloo Engineering Endowment Foundation was voted into effect. That made a few Wednesdays ago WEEF's 18th birthday, and there was a celebration including free ice cream cake in POETS to celebrate the fact. I would like to thank all those that came out to help show your support and I have already started planning an awesome 19th birthday for WEEF on Friday, February 6th 2009!

Some great news: After much deliberation and discussion, we have decided that we will be offering "I Support WEEF" patches for sale in Novelties so that you can add them to all of the bags, backpacks (packsacks for you Northern Ontarians), and coats that you want to keep your EngSoc patches company. They look wicked and we're just finalizing pricing and sizes before they will be available to all of you!

Just another reminder to all of you that proposals for WEEF funding are still open! You can find the format online at www.weef.uwaterloo.ca! Not part of a student team? Not a lab instructor? It doesn't matter! The whole reason WEEF exists is to benefit YOU!

If you think your labs have out of date equipment, if you think your education is suffering because of broken down classrooms, or even if you want to start up your own initiative to create the next greatest invention! Submit a proposal, and a council of WEEF Representatives (one from every engineering class on campus) will judge it against all other proposals that have been submitted. If your presentation can convince them of the need for your proposal, then that's that!

I think that's about enough for you folks this time. I'll see you next time; same WEEF place; same WEEF channel.

VPI Report

LEE ANNE BELCOURT
VP INTERNAL

Now that we are all refreshed after a solid week of fun, the time has come to show off your hidden abilities at TalEng on January 27th at the Bomber. Even if performing is not your thing, it promises to be a humorous and impressive evening.

The snow may not be able to decide if it wants to stay or go here in Waterloo, but we are going to take advantage of the beautiful sights of Blue Mountain for a day of skiing on Saturday, March 8th. Sign up sheets are in the Orifice and tickets will be superbly priced.

Scavenger Hunt applications are now up on the website. If you are interested in the chance to put your great ideas into action and get some planning experience, I expect to see you signed up in a hurry!

MOT is also a part of this jam-packed week, being held at 9pm on January 29th, at our POETS. Also, keep an ear out for details on upcoming events like Genius Bowl and an Athletics dodgeball tournament. There will be lots of upcoming volunteer opportunities to win P**5 points as well through events like Shadow Day and Explorations.

That being said, if you need posters put up to advertise one of your events, just e-mail task_team_a@engmail.uwaterloo.ca and the super poster team will be able to help you out. I hope everyone is glad to be back because spring is coming and the next few weeks will be filled with great times all around.

VPEd Report

JEFFREY LIPNICKY
VP EDUCATION

Welcome to the third bi-weekly Vice President Education Report. I hope that you have enjoyed your time with me thus far, and will continue your stay for the remainder of your time here in UW Engineering. I will do my best to continually raise the creative bar for myself, and this issue I will be writing my report as a children's story.

Once upon a time, in a land not so far away, grown children went to class and learned all day. During the second month of their term, they had a week off, leaving the VP-Education with little to say. He searched and searched for items of interest, but the pain of midterms past hindered his view. After minutes and minutes of hard contemplation, he finally discovered some valuable information to share with his constituents.

In the infamous land of PDEng, not so far removed, the local persons have been hard at work studying themselves under the watchful eye of outside observers. Contained in these pages are the words of my friend, outlining the developments and the new trends. The PDEng Knights have toiled and preserved, while providing the visiting students with a shining sword. The Supplementary Skills Workshops were completed of late, and students have been given a chance to set their marks straight.

And over the horizon, like my knight in shining armour, came two glimmering, shimmering, critiquing steeds. The first involves courses, and those lovely white and blue forms. There will be a party where they are stuffed coming soon, with food and fun for all. The second carries hope of employment and is armed with a red pen and resume prowess. Both events are coming soon, so open your ears. Be sure to eat your broccoli to help make sure you can hear.

And from the clouds descended a wonderful sight – a bank full of exams and work term reports to help make us bright. The bank is always open, looking to help, giving students a chance to better themselves. The best way to make a difference is submit those exams you just wrote, to help the young'ens who will follow. We do not wish to bestow the same pain and anguish on them, so do a solid and send those exams and work reports in.

That ends the wonderful tale of Issue 3. As the sun sets behind the rolling hills and towering trees, I wish you all a good day, and make sure to continuing being keen.

The End.

VPX Report

DAVE HALFORD
VP EXTERNAL

I hope that everyone had an awesome reading week. I only have a few things to say this week.

Firstly I would like to congratulate the Innovative Design Team of Andrew Zwart, Simon Lancaster-Larocque, Matt Rendall and Kenneth Lee who placed first at the Ontario Engineering Competition. I would also like to congratulate the Parliamentary Debate Team whose names I don't have with me due to a last minute substitution, for their second place finish at the competition. Both of these teams will be representing Waterloo 'A' at the Canadian Engineering Competition to be held at Waterloo later this month.

Secondly, I will be announcing the final plans for the joint Architecture / Engineering event that will be held on March 14th at this week's Eng Soc Meeting. I have already seen an outline for this event and I'm really excited with the work that has been put into it and expect it to be a really fun night. Bus Push will be the following day, March 15th and will be benefiting "Sleeping Children Around the World", a charity which provides bed kits for children in developing countries around the world. I have extended an invitation to Architecture for this event and they are planning on attending. I am also planning on extending an invite to members of our local PEO chapter to participate in this event.

That's about all that I have for now, good luck to all of you who are still writing midterms. Take care.

VPF Report

ADAM MELNIK
VP FINANCE

Greetings Engineers! I hope you either spent Reading Week getting tanned and dealing with memory recall or holed up in your room with your computer churning out documents to share via Microsoft Groove. In light of Bill Gates' visit to campus during reading week, I would like to take this opportunity to advertise that Microsoft Vista Business is still available FOR FREE at CHIP! I highly suggest utilizing this Groovy piece of technology to facilitate all group work projects as I was certainly enlightened over the break. Regarding Bill Gates' visit, you should all take a moment of your time to visit http://communications.uwaterloo.ca/events/billgates/ and check out a video of his exceptional lecture.

Congratulations to fourth years! IRS was awesome!! As a 'personal helper-not-at-all-a-slave', I can say that there was no shortage of robots, butterflies, and other kicking costumes/trouble on campus. Work hard, play hard. Way to keep the precedent alive!

On the business scene, the term Budget is due to be approved February 27 during Meeting #3 where Donations Proposals will also be presented and approved. Hope to see you all there! Keep your heads up for technological improvements in the Orifice! News computers, to be used primarily by Engineering Society Executives and student Directors, will soon be available in the Orifice.

While in the TSN camera eye keep your heart full of soul and finish the term with some pizzazz – we're over the hump!

POINT VS. COUNTERPOINT

POINT

Are Toronto's Afrocentric Schools the Correct Solution?

COUNTERPOINT

On January 29th, the Toronto School Board Trustees voted 11-9 to approve the opening of an Afrocentric school in September 2009, targeted at black students.

In this issue's Point Vs. Counterpoint feature, high school friends Jeff Kao and Todd Miller debate whether the Board's decision was a wise one vis-a-vis helping Toronto's at-risk students.

JEFF KAO
4B SYSTEMS DESIGN

A common response to Toronto's recent Afrocentric school decision is knee-jerk opposition. After all, it's been a long ongoing struggle to eliminate racial discrimination; wouldn't this be a huge step backwards?

There seem to be so many reasons to oppose this school. Critics contend that it sets a slippery slope precedent, promotes segregation, and is simply unfair. However, there's less controversy to "black school" than the name belies. We must look past the emotions a label evokes and debate the actual merits of the proposal.

Luckily for both supporters and critics, the details can be easily found within 20 seconds of a Google search. A quick look into history affirms that an Afrocentric school will not set our education system on a slippery slope; alternative public schools addressing unique needs have long existed. In Ontario, there are schools that cater to: LGBT students; First Nations kids; special needs and gifted children, among others. It is a fact that about 40% of our black students don't graduate from high school, and clear that our current public education system does not address the unique needs of at-risk students of African descent. Just like the other alternative schools that came before it, this school addresses a unique, unfulfilled need.

Segregation is another popular criticism that appeals to our lofty and sometimes vague ideals of racial equality. But the reality is, many at-risk black students already do live in class-segregated communities, regardless of whether we choose to recognize it. It is a vicious social cycle, and neither race nor ability, prevents kids in these communities from succeeding in school.

This Afrocentric school is not meant to address race, but seeks to help kids deal with an often difficult upbringing. It is an education that acknowledges those differences, as opposed to ignoring the problems that do exist. The school will be open to teachers and students of all races. Furthermore, many black families will send their children to regular public schools which are more appropriate to their particular needs.

No, the world isn't fair, and it's hard for many of us to understand the truly unfair environment in which these at-risk students live, or the determination that it takes to succeed out of it. Yes, this decision is political, and hopefully it will help produce future leaders with the understanding to bring these communities out of that vicious cycle.

These ends do not justify the means, but the means here is not racial segregation; it is an education that addresses needs unique to at-risk children who happen to be of African descent. It will give them a similar support as for other communities who benefit from an alternative public education.

"It is a fact that about 40% of our black students don't graduate from high school, and clear that our current public education system does not address the unique needs of at-risk students of African descent. Just like the other alternative schools that came before it, this school addresses a unique, unfulfilled need."

If we truly want to end racism and segregation, let's judge this decision on the basis of more than the label of "black school". Instead of watching at-risk students fall through cracks in the public school system, appealing to a vague discomfort at the very mention of race, or standing in inaction while we wait for a perfect solution, we should view the experimental school as a tiny step in the right direction.

In the end, this school is really not all that controversial. It will be funded like any other school, and comprise a minimal portion of the Toronto School Board's budget. Ultimately, its success will be in the details: how well the school is run, and how individual students' needs are addressed. And with the amount of attention paid to the school, let's hope for the sake of the students, that the disproportionate political scrutiny will drive it to succeed.

Editor's Note:
Point Vs. Counterpoint is a feature meant to stimulate discussion on thought-provoking topics. The views and opinions expressed here do not necessarily reflect those of the authors, *The Iron Warrior*, or the Engineering Society.

TODD MILLER
4B MECHANICAL

1968 was marked by the slaying of three black students and the wounding of 28 others at the hands of state police at an anti-segregation protest in Orangeburg, North Carolina. Now on the 40th anniversary of this tragedy, history threatens to repeat itself.

On January 29th, 2008 the TDSB voted 11 to 9 in favour of forming an Afrocentric school aimed at helping the city's 'at risk youth.' Ironically, this decision comes one week after Martin Luther King Day and 40 years after his assassination. "I am getting tired of the fight," remarks Orangeburg survivor and Toronto resident, Ken Jeffers. "In 2008, we're still fighting about this crap: for human dignity."

Recently, the issue of government funded, faith-based schools effectively sank John Tory's prospects of becoming Ontario's Premier. It is clear that dividing our young based on either ethnicity or belief does not reflect the wishes of the general public. "It does not fit the vision we want for Ontario's schools," stated Dalton McGuinty. He was quick to promise that the Ontario government will not fund this project and will not hesitate to act if it becomes a growing trend. I applaud Mr. McGuinty for saying what we were all thinking. So far many members of the black community, including city councillors who opposed the bill have been labelled as succumbing to irrational fears and prone to 'knee-jerk' reactions. This has caused an increase in tension and conflict as members of the community feel their arguments are being dismissed.

There is no evidence to suggest that the First Nations schools funded by the federal government have had a positive effect on their drop out or unemployment rates. The 2006 census showed a 50% drop out rate amongst the demographic; up from 48% in 2001 and the highest in Canada. Aboriginal unemployment is also 3 times the national average despite these specialized schools. Additionally, an Afrocentric curriculum may not necessarily help engage Toronto's youth; many of us identify more with our Caribbean heritage. 3 of 7 black people in Toronto consider themselves to be of Caribbean descent as evidenced by the city's annual Caribana parades.

The lack of interest amongst troubled youth is the latest chapter in the 'blame game' for not living up to expectations. This statement was made last year by actor and comedian, Bill Cosby, who was lambasted for his public criticism of African-American youth for their falling literacy rates and increased violence against one another. The aim of the K to 6 program is to provide better black role models for our young. Failure is not in our under-funded, under-compensated and under-appreciated teachers.

The current social system makes it very difficult for low-income families to pursue higher education. This system robs families of subsidized rent and other government assistance when their children seek part-time jobs to pay for tuition. I know this not from hearsay, but from experience; my family's municipally subsidized rent quadrupled when my brother, John, began working to pay for tuition at U of T. Situations such as this can often be discouraging to students aspiring for post-secondary education. The prospect of a university education becomes seemingly impossible, thus increasing the dropout rate. More scholarships and government grants to low-income families of all ethnicities are needed. Make it easier to get an education and more people will seek it.

We also cannot ignore the fact that media plays a large part in forming young minds. I propose government money could be put to better use by funding television programming that paints the black population in a more flattering light. I say this because I have a 6 year-old niece who knows Ciara's "One-Two Step" better than her ABCs. Coming from a low-income single parent family, she would be considered at risk under this new policy and destined for one of these schools. The positive role-models of Cliff Huxtable, Phillip Banks and Dwayne Wayne from a Different World are no longer in syndication. These programs highlighted the pursuit of higher education amongst African American youth and inspired me to aim higher.

Not all black students in Toronto will be eligible for these schools; only the 'at-risk' ones. Now the issue of admission criteria arises. How do we accurately gauge a kindergartener's risk of dropping out of high school 15 years later? Is it a matter of social class or family demographic? Will attendance be mandatory for those applicable candidates? How will the increased time and resources demanded of the curriculum affect an already fragile family life? How do we address culture-shock and promote tolerance when these students are exposed to other ethnicities? The questions and conflicts that arise from this proposal are endless.

Multiculturalism is the cornerstone of Canadian society. We promote the ideals of respect, rationality and tolerance above all. The notion of Afrocentric schools threatens these ideals. Even if the program successfully reduces the drop-out rate, it sets precedence to isolate other ethnic groups and religious groups perceived to be at risk of failure or discrimination. With rising tensions in Middle East and the prolongation of Canada's mission in Afghanistan, could Muslims become our next target?

Frosh Weeks Around Ontario

STUART PEARSON
1B CIVIL

One of the highlights of ESSCO's recent First Year Integration Conference was a round-table discussion of the different frosh weeks held for engineering students across Ontario. ESSCO takes a serious interest in how each university runs their orientation week. In 2004 they conducted an official report on the state of frosh weeks across the province and preservation of remaining traditions.

In recent years, there have been grave concerns over the cancellation or stripping down of certain events and traditions. Think back to your frosh week. Did it not seem infinitely better than the events being run by the other faculties? That's because engineering students fight tooth and nail every year to keep what traditions we still have.

One of the best ways to keep these traditions alive is to share them with other schools and keeping interest alive and introducing some fresh ideas to the table. Who (aside from perhaps the administration) wouldn't like to see a little bit more purple walking around during the first week of September?

At ESSCO's First Year Integration Conference, a discussion of each school's traditions and favourite frosh memories was held, and several schools showed videos of their orientation weeks. After everyone had their turn, it was widely agreed that Waterloo seemed to have one of the best Frosh weeks, largely thanks to the presence of EDCOM.

To everyone who will be frosh leader this coming fall, remember that you have an important role in keeping our traditions and the spirit of engineering alive. It is only through your enthusiasm that we can preserve customs and rituals for the enjoyment of future students and keep frosh week from turning into merely a glorified barbeque, as has happened at several other schools.

University of Windsor

Frosh are given jumpsuits, are covered in oil, and have the opportunity to shave their heads ("EngCuts"). Similarly to Waterloo, they have a junkyard wars competition, but they also include a trip across the border to Detroit to watch a football game. A pig roast is held, and it is not uncommon for pig parts (brains, innards, and more) to appear in washrooms or the Dean's office following the barbeque.

Queen's University

The most famous of Queen's orientation week traditions is undoubtedly the Grease Pole. Frosh are taken to a location off campus and dumped into a massive pit. At the centre of the pit is a giant pole slathered in grease. The pit is ringed by alumni, some more than 70 years old, who casually sip their beer while watching the frosh squirm away. The students are not allowed to leave the pit until someone reaches the top of the pole, something that has taken up to 8 hours in the past.

University of Ottawa

Frosh are forced to march together through the streets of Ottawa wearing coveralls and hardhats, after being covered in a mix of mud, eggs, and other unknown substances, followed by a dip in the Rideau Canal to wash it all off. On one occasion they even stole the aforementioned Queens' Grease Pole- although they had to saw it in half first in order to fit it in their truck.

McMaster University

A fake test is held for the frosh, supposedly to test their knowledge of math required in first year, but actually containing third or fourth-year calculus. This naturally induces severe panic attacks in most of the frosh, who are allowed a good half hour to suffer before being told that everything is just a joke. One year they thoughtfully erected a giant concrete spatula in the middle of their Arts quad, just to remind the artisies what they have to look forward to once they graduate.

University of Toronto

When they're not busy trying to steal our beloved Tool, frosh at U of T get purpled and parade through downtown Toronto, harassing Ryerson engineers and mobbing the Eaton Centre before cooling off in the fountains at Nathan Phillips Square.

Carleton University

A group of alumni and upper-year students known as The Brotherhood of SOOPP (Secret Order Of the Purple Panther) are involved in procuring all sorts of mischief during frosh week and perpetuating the school's rivalry with the University of Ottawa. Previous exploits have included mass shaving of eyebrows and stealing every single toilet seat on campus.

Ryerson University

Much like here at Waterloo, the Ryerson administration frowns upon the practice of purpling frosh, citing concerns about hazing and peer pressure. Several years ago, a chemical engineer not content to let the system crush his dreams decided to procure his own purple dye, rather than use Gentian Violet, a safe medical antiseptic that is used for purpling at most schools. Only after bathing several friends in his bootleg dye did he realize that his mix was potentially carcinogenic. Whoops.

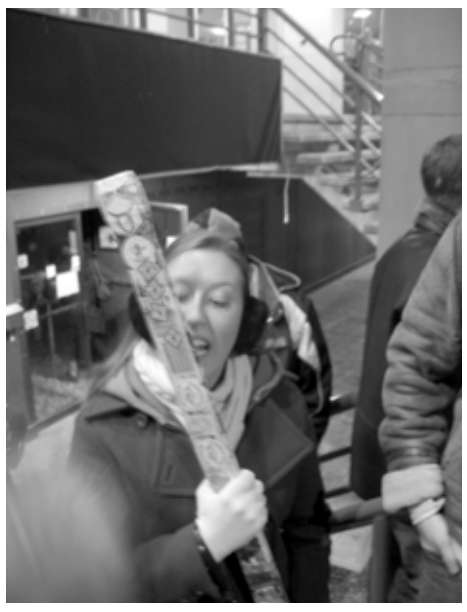
University of Western Ontario

Western allows partial purpling of its students, and traditionally frosh paint the green copper roofs of one of their buildings bright orange. Usually acrylic paint is used so that they can clean everything up after frosh week is over. However, one year, they used oil paint instead and found it impossible to take off. Whoops. Again.

University of Guelph

In what can only be described as a flattering (but slightly pitiful) imitation of our very own Ridgid Tool, Guelph's engineering society has a mascot named (quite creatively) the Guelph Stick. The Stick is a wooden door jamb—picture a rather chunky metre stick—that is covered in stickers and packing tape. It is tradition for incoming frosh to take turns licking the stick provocatively from end to end—woe betide the last person in that lineup.

At January's CFES congress in Edmonton, someone from the University of Windsor stole the Stick off a baggage conveyor belt at the airport. The Stick was finally handed over at FYIC, whereupon one of the Guelph delegates promptly licked it from end to end. Unbeknownst to her, the University of Windsor had dipped it in the Detroit River before giving it back. I'm just glad that I never touched it...



The Guelph Stick

What's Up, .docx?

PAUL FUGERE
2A COMPUTER

What's this file format that's creating a disturbance on campus? Some professors are posting their assignments on the UW Angel Course Environment (UWACE) in this new format. Does the University have a policy regarding file formats for documents? Does this file extension impede student access?

What exactly is .docx? It is a file format for Microsoft Office 2007, specifically known as Word Microsoft Office Open XML Format Document. With the new Microsoft Office, it uses XML architecture and Zip compression to reduce the size of the files. This makes it easier to store more documents; however it does have some problems.

The new format is not backwards compatible. Microsoft Office 2007 saves all files in the .docx format by default. These files cannot be opened with older or previous generation document viewers without intervention on the user's part. This is also a problem for users who do not use the Windows operating system, such as people using UNIX or Mac.

Luckily, there are a few other solutions to this riddle rather than buying a version of Microsoft Office 2007 or switching your operating system. For Windows users, simply go to your favorite search engine and search for "FileFormatConverters.exe" and find a link to go to the Microsoft website and download the file. This allows you to use .docx files on your current version of Word as well as other Office tools such as PowerPoint. For UNIX and Mac users this requires a bit more effort, because they have to find a third party application converter.

Right now, there does not seem to be an official UW policy regarding file formats for undergraduate courses, at least in the Department of Electrical and Computer Engineering. "I expect most faculty would want students to have relatively easy access to posted material," George Freeman, ECE's Associate Chair for Undergraduate Studies, told *The Iron Warrior*. "The bottom line is that I would expect people to be reasonable. If the document is not provided to students in order for them to modify it, I would use [Acrobat's Portable Documant Format, .pdf]. Otherwise, I would try to ensure compatibility."

Not every UW student has the Microsoft Office 2007 on their computers at home, and some may not even have a compatible operating system. While there is no enforceable policy, most professors are quite reasonable and if approached in a polite and professional manner, are likely to accommodate students' requests. Considering that there is no apparent difference other than file size, unless there is an issue with document sizes on UWACE, modifiable documents should be uploaded in a more accessible format like .doc, the previous Microsoft Office file format.

1994-2008: The Rise and Fall of Netscape

SUNNY NG
3B COMPUTER

If you have ever gone on the world wide web prior to 1998 or you are simply a big computer geek, the name Netscape should give you a sense of nostalgia. Recently, Netscape's parent company AOL announced that it will cease all support of the latest version of its browser, Netscape Navigator 9 on March 1, 2008. At its popularity peak, Netscape once held over 80% of the Internet browser market share. What happened to the once-almighty Netscape and what led to its painful demise?

Netscape was originally founded in 1994 by Marc Andreesen and Jim Clark as Mosaic Communications Corporation in Mountain View, CA. It was later renamed to Netscape Communications Corporation to avoid confusion with NCSA (National Center for Supercomputing Applications) Mosaic, the first popular web browser, of which the original Netscape Navigator's code was based on. The software was renamed from Mosaic Netscape to Netscape Navigator. The code name of the browser was Mozilla, which derived from the term "Mosaic Godzilla" or "Mosaic killer."

With its extensive features and licensing terms, Netscape Navigator was able to secure most of the Windows market through avenues such as licensing to Internet service provider. The browser was made available in other operating systems as well, including Mac OS, Linux, OS/2 and various flavours of Unix. Netscape was also full of innovation as they were responsible for some technologies that are still used today, such as on-the-fly display of webpages, cookies, frames and JavaScript. Unfortunately, they were also the ones that invented the oh-so-annoying <blink> HTML tag.

Cashing-in on the Internet revolution and its flagship browser software, Netscape Communications went public in 1995. Its stock was to be offered at $14 per share, but was soon decided to be offered at $28 instead. After its first day, the stock reached $75. In 1996, its market share in Internet browser usage reached 80%.

However, not all was well in the land of Internet browsers. Microsoft soon decided that Netscape's success could threaten the position of its operating system Microsoft Windows. As a result, what was known as the browser wars began when Microsoft obtained the license to source of Spyglass Mosaic and started to develop Internet Explorer in 1995. It was not until version 3.0 released in 1996 when Internet Explorer finally caught up to Netscape Navigator in terms of features. As subsequent versions of Microsoft's and Netscape's browsers released, Netscape's offering began to suffer from feature-bloat. Netscape began bundling more features such as a mail application, news reader and a webpage editor in order to attract more users and the browser was renamed to Netscape Communicator beginning in version 4.0. Unfortunately, this move backfired on Netscape. Netscape Communicator 4.x was criticized for being crash-prone, buggy and slow, as it was unable to keep up with Internet Explorer 5. For the first time, Netscape began to lose its market share and suffered a loss in revenue which led to layoffs in 1998.

Netscape's downfall continued as Microsoft bundled Internet Explorer to its Windows 98 operating system, convinced Internet service providers and computer vendors to bundle and created an agreement with Apple to set the default browser of its operating system to Internet Explorer. In response, Netscape decided to offer future versions of their software free of charge and initialized the open source project Mozilla by releasing the source code to Netscape Communicator in hopes of leveraging the power of open source to improve their browser in 1998. However, it was determined that the 4.0 browser was too difficult to develop on, instead the code for the next generation browser was developed from scratch. By 1999, Internet Explorer has taken over Netscape as the most used Internet browser. Later that year, Netscape Communications was acquired by AOL for $4.2 billion.

Newer versions of the Netscape browser were released after delays due to the rewrite of the code. Netscape 6 was released in 2000. Due to its rushed schedule, it had to utilize an unstable build of the Mozilla code. As a result, it turned out to be a disappointment and failed to capture much of the market. At that point, Netscape no longer had the same significance it once had when it was the leading browser, and because of that, the release failed to make any sort of impact.

Following the release of Netscape 7, AOL closed down its Netscape division in 2003, while many of Netscape's programmers moved on to the Mozilla Foundation. From version 8 on, AOL decided to simply base Netscape off of Mozilla Firefox, the popular browser produced by Mozilla. For the first time since version 3, the browser was released as a standalone application rather than an Internet suite. As well, AOL made the gutsy but controversial move of not only including Mozilla's Gecko rendering engine, but included Internet Explorer's Trident engine as well. The final release of the Netscape browser was Netscape Navigator 9 released in 2007, which was a continuation of version 8 with enhanced features. Due to its low market share of 0.6%, AOL decided it would abandon the Netscape browser and drop all its support on March 1, 2008, and started recommending users to switch to either Flock or Firefox.

The branding of Netscape is slowly disappearing from the web as well. Netscape.com once Netcenter, the start page of many is now simply a branded-mirror of AOL.com. Its social news site, similar to digg.com, has been rebranded and moved to Propeller.com. Its server products have mostly been bought up by Red Hat back in 2004. What is remaining of Netscape now is a low-cost dial-up Internet service. Shocking, I know. Apparently people still use dial-up nowadays!

Netscape, what a fall from grace that was. Their inability to adapt to the changing market and their arrogance towards competitors ultimately led to their downfall. They have now become another classic example of what could happen to a technology company, although they have managed to survive longer than most dot-com companies.

But at least their demise led to the development of Mozilla Firefox, which most of us computer geeks have learned to love. Well, except me. I'm a Mac guy, so I prefer Safari.

-With files from Wired, The Register, CNet, Netscape Communications Corporation Press Releases, Netscape Blog

Microsoft Founder Talked About Helping "Bottom Two Billion"

PHILANTHROPIST
Continued from Page 1

"The transistors that we're being given aren't going to be running at higher clock speeds," Gates remarked, forecasting the future.

"The 3-to-5 GHz type speeds we have are likely to be about the most unless there's some surprise breakthrough, and so we'll be given multi-cores and for the first time, we have to write our software so it can run across all of [the processors]."

Gates expounded on his vision of natural user interfaces by describing the proliferation of displays, and that screens will be cheap enough to warrant projecting information on "every horizontal surface we can think about." He guessed that the more profound change will come in the way we interact with devices with speech recognition and the use of touch becoming commonplace.

Information processing in the scientific context was also touched upon. A dazzling display of the power of software was made by showing a cubic millimeter of a mouse's brain that was scanned and compiled into a 3D image library. Various mappings of the brain were shown that were based on a computational analysis of the image library.

Gates next shifted the focus of the talk to a more socially conscious context. He broke down the six billion people of earth into three groups: the top, the middle, and the bottom. His focus was on enhancing the lives of the two billion people of the bottom group that do not have the means to drive economic change in their favour. He outlined the disparity of the situation, saying, "As you get to that bottom tier and you're talking about environments without electricity, often without a school room . . . no access to roads that is a much tougher problem. Yet in a sense making innovation for those people is more important than for the top two billion."

To illustrate the helplessness of the bottom tier, Gates used the example of malaria versus baldness research. Despite the fact that a million children die each year due to malaria, till a few years ago, baldness prevention research received over ten times more funding than malaria prevention research, displaying that research demand is driven by the top tier.

Gates admitted to not being fully aware of the plight of these people during his college days. "Have a much better awareness during your university years of the situation of those people than I had," he advised students, recommending that they learn about one particular aspect in-depth and make an impact on it.

The problem with simply scaling down the methods of the top tier to help the bottom tier was made clear by Gates. "It's always good to get the price [of personal computers] down, but that's probably most interesting for that middle two billion. It's great – we should keep doing that. We need a 10-cent PC," he said. "If they spend any money, it should be on the software," he added coyly, which drew a round of laughter from the audience.

An example of great work that is already being done to help the bottom tier by Microsoft is the Digital Green program. Farmers are recorded on DVDs demonstrating best practices in agriculture. The videos are screened and edited, and taken back to all the farmers so that they may improve their techniques. "We were able to increase the adoption of new techniques by a factor of 3 over the previous approach and to lower the cost of that system," Gates reported. What this means in terms of livelihood is very dramatic. . . . These farming techniques often can double the output of a small land holder."

After his talk, Gates sat down with Dr. Thomas Coleman, Dean of Math, to take questions from the audience.

After his talk, Dr. Thomas Coleman, Dean of Mathematics, joined Gates on the stage for a question-and-answer session. The questions allowed Gates to convey words of advice to students. Among his recommendations were to get a broad education including social sciences and focus on a few key areas of interest and develop an in-depth understanding. However, he showed a positive bias towards mathematics: "Math is the most fundamental – no, honestly, it's not a setup question. . . you can understand a broad set of things, frankly, is if you understand math."

Gates also commented on the concept of entrepreneurship, saying that he would not like to go back to the early days of Microsoft. "The notion of small companies and some definition of entrepreneurship really over-romanticizes the small company." Instead, the Microsoft founder is happy to have the immense financial resources that are available to him to tackle problems such as AIDS and malaria where the fruits of the labour might take a decade to achieve. On the other hand, Gates said, "When you're young, in a sense, you're not risking anything," encouraging the entrepreneurial spirit of the University of Waterloo.

Gates closed his talk with inspirational words. "I'm actually envious of you, to have the background you have, to be at this great university, and have the opportunity to really drive all these changes I talked about. So it'll be exciting to see what you'll be able to do."

The entire presentation can be found online at http://www.communications.uwaterloo.ca/events/billgates/.

Waterloo911!'s Mock Diner a Hit with Judges

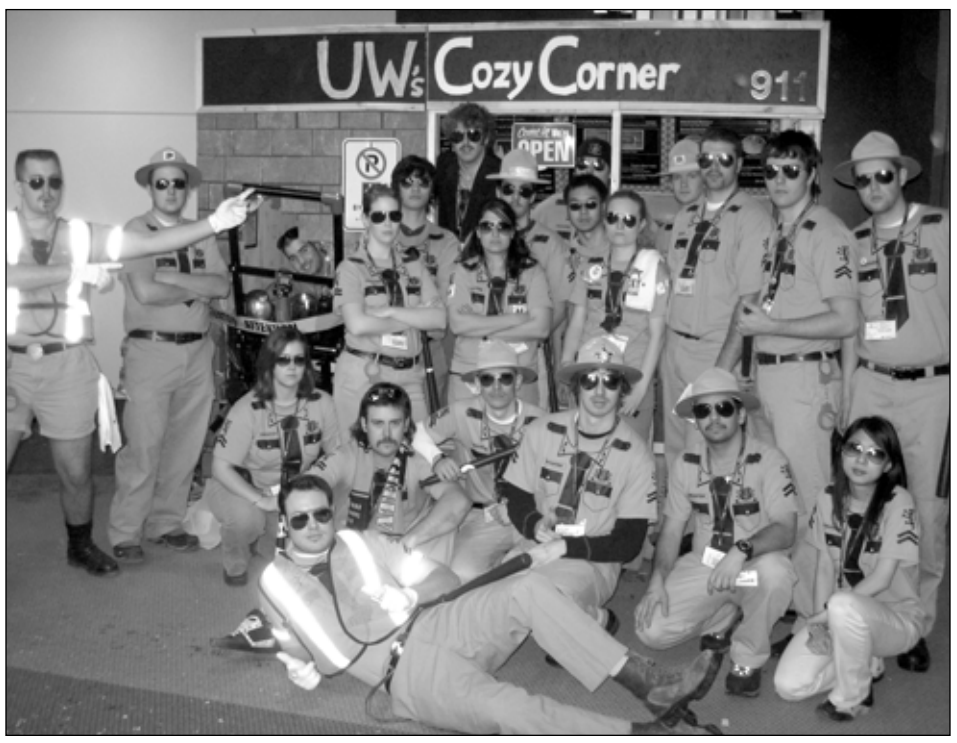
VICTORIOUS
Continued from Page 1

During the judging portion of the technical exhibit, it was clear that what was truly impressive about Waterloo911!'s sled was its thin concrete slab and slab reinforcement. A slab only 25 mm thick is unheard of in previous GNCTR competitions. What allowed for such a thin slab was the use of carbon fibre reinforcement. This technology was only just recently developed at the University of Waterloo by Civil Engineering professors K. Soudki, J. West, and A. Plumtree. By using the technology with the permission of the aforementioned professors, Waterloo911! scored 1st for their reinforcement and 2nd for their concrete slab.

Finally, after all the hype from the aforementioned days, the races were held at Mont Bellevue. The first two heats were for fastest time and breaking distance, while the final run was a slalom course to judge turning. Waterloo's first run, while ridiculously fast, was not hit by the speed gun. Waterloo's team estimator and physicists back calculated that during the first run the sled hit speeds as high as 55 kilometres per hour. The author of this article was on the sled during this run and I honestly don't remember what happened during the run. I blacked out either due to excessive g-forces or in fear.

Unfortunately, during the first run the pneumatic brake malfunctioned and the sled relied on 3 rows of hay bales and a quarter pipe at the end of the track to stop the sled. The second heat was clocked 46 kilometres per hour and the pneumatic brake engaged properly.

By the third run, due to the previous brake malfunction, the compressed air supplies were exhausted. However, the cojones of Waterloo's Supertroopers are unparalleled and they boarded the sled knowing that they would again need to rely on the bales of hay and the quarter pipe at the bottom of the hill. The final turning run was a success as Waterloo's turning system went through all three gates, even hitting the inside of the 3rd gate like a world class slalom racer.



The evening following the day's races had the awards banquet held in the upscale ball room at the Delta Sherbooke Hotel. Teams dressed in formal attire and sat down to an impressive four course meal. In between courses, awards were given out to their deserving teams. Waterloo received awards for best technical exhibit, best technical report, and best aesthetics. The aesthetics award was awarded for outstanding team uniforms both on and off the race course and also for the overall look of the sled.

As all the awards were given out the anticipation began to build as the overall competition awards were given out. Ryerson University was awarded 2nd overall and École Technologie Supérieure (ETS) came in 3rd. As those in attendance simulated a drum roll on the dining tables, it was announced that the University of Waterloo came in 1st overall for the competition. The first overall trophy was graciously accepted by team co-captain Zach Ellis, and as his teammates joined him onstage, he thanked the organizing committee and the other teams for making the week both a challenging and fun event.

Following the closing of the awards ceremony the ballroom was transformed into a dance hall where the teams would give a final send off to a memorable week in Sherbrook. Rumours are currently circulating that the Waterloo911! team danced until 6am Sunday morning celebrating their win, and these rumours are completely true.

YouTube Video Review

Warning: May Contain Anna Kournikova

KEVIN CEDRONE
4B MECHANICAL

The Iron Warrior's more astute readers you may have noticed that I wrote three articles in the previous issue. You may ask yourself, "Exactly how desperate are they for content?" or maybe, "Where does he find the time?" Well the answer to the former is left as an exercise for the reader based on the number of articles I wrote for this issue. As for the latter, one of the techniques I use to maximize productivity is structured procrastination. Whoa, whoa- do I come off sounding like a marketing major with buzzwords like "productivity" and "maximize"? I assure this article is about your friend procrastination. This is something all of us engineers share but over the last few years in engineering I have learned to control and exploit my occasional tendency to put off work.

Basically, I set my work up in blocks about 10 minutes long. After 10 minutes I slack off for 2 minutes. That means I do 50 minutes of actual solid work (give or take for transition time) for every hour I spend working. Time yourself the next time you're working. I will eat my hat if you spend less than 10 minutes browsing Facebook or distracted by a sudoku. I did not devise this method or even coin the phrase "structured procrastination". It works for me because 10 minutes is a long enough period of focus to take a decent swipe out of a combustion assignment problem, that is, accomplish something useful and 2 minutes is just about right to watch a YouTube movie and get my fix. 16/4 may work better for you but drifting down 5/1 tends to end with me creeping out high school acquaintances on Facebook.

So to get you started down the path of maximal productivity I am recommending the following YouTube videos to optimize your productivity.

Terry Tate, Office Linebacker

This is a series of skits originally produced for Reebok. Terrible Terry Tate is an NFL Linebacker working in at the offices of Felcer & Sons. This gem of a series might help you on co-op. For example, if you empty the communal coffee pot, proper etiquette dictates that you should undertake the task of making more. Terry transmits this more succinctly with a spear tackle and "You kill the joe, you make some mo'". Indeed, Terry's conduct might teach us all a valuable lesson regarding equality. As Terry puts it, "Hey, I'm a sensitive m----- f------. I'm an equal opportunity hitting machine, my work knows no gender, race, or creed, son!" Call me simple but I have yet to grow tired of jokes about TPS reports, or sudden brutally violent chop block tackles.

Evolution of Dance

This is one of the most popular videos of all time on YouTube. At six minutes in length it does not fit within the confines of my structured procrastination program unless you save up a number of slack-breaks but this compendium of Caucasian dance hilarity is worth a half hour of uninterrupted labour. This video has a Wikipedia entry where you can find a complete list of the songs performed which includes Elvis' "Hound Dog", Kung Fu Fighting, Michael Jackson's Thriller, a credible Mr. Roboto, Sir Mix-A-Lot's "Baby Got Back" and more recently Eminem's "Lose Yourself" and Outkast's "Hey Ya!". Maybe my own dancing will one day be imitated on YouTube. I fear that nobody except Julia Louis-Dreyfus will be able to imitate my unique whole body shudder, flurry of elbows, kicks and double-thumbs up with the appropriate complete lack of coordination. It feels good to be distinguished.

"Here It Goes Again" OK Go

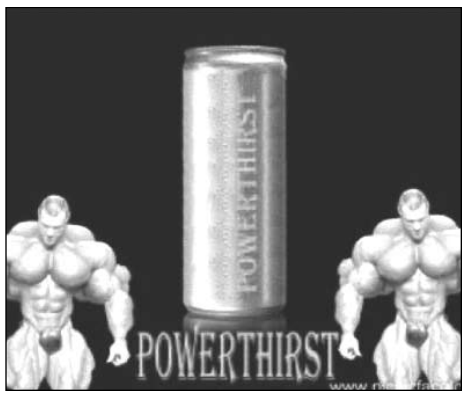
I am partial to the rock stylings of Chicago's OK Go. Their rock has a catchy pop component and is usually upbeat enough for a good workout at the gym. The music video for their 2006 single "Here It Goes Again" was released on YouTube where it became a viral marketing smash hit. The video features a rather elaborately choreographed dance on treadmills meriting a 2006 YouTube Award in the Most Creative category and a Grammy in 2007. I think even my mom ended up talking about this video, such was its intense penetration of pop culture awareness. Oh, speaking of mothers...

Mr.T - Treat Your Mother Right

This video was part of a larger production called Be Somebody... or Be Somebody's Fool! The video is older than I am but the timeless message of respect for mothers is as valid today as ever. Mr.T's fashion choices are a good deal more questionable and I am still struggling to decide whether the lyrics (including a rap-acrostic of the word 'mother') or his backup singers are more hilarious.

PowerThirst

This video is a Canadian-made parody of the claims and gimmicks used in energy drink ads. This video and its sequel Powerthirst 2: Redomination are distilled, industrially pure, nuclear-powered hilarious. Even now I make random, loud (and often uncalled for) exclamations like "Fizz bitch!", "400 babies!", "Fighter jet made of biceps", "Rocket Edition!" or "When God gives you lemons, find a new God!".



What you must do now is clear. Re-read the last dozen or so words in the PowerThirst review. Dig out the most pressing incomplete assignment in your possession. Work with complete focus and dedications for 10 minutes. Crack open a browser and reward your efforts. Lather, rinse and repeat as required until IRS.

Becoming an Undergrad Entrepreneur

TREVOR SMOUTER
2A ELECTRICAL

Engineering undergraduate students eventually encounter a decision they have to make. Either start grad school, find a job putting your skills to work making somebody else rich or become an entrepreneur and invest in yourself. Two years ago I decided the latter. I registered EMR Laboratories Inc. and started building it from the ground up.

Starting a business while still in school makes sense. Once you graduate, it's time to start working; that's easier to do if you already have a business to jump into. Starting your own company is no small feat; it takes a lot of hard work but can be immensely rewarding. Putting the time in now and building the structure is easy if you have a couple years' worth of co-op terms to do it. However, first consider that to build up a big company it takes a team of people. You can't do it on your own; very few people do, but school is a great place to build up your team. Join clubs, get involved and find out who the bright, self-motivated and hard workers are. You want them on your team and you have to have something to offer that appeals to them.

It usually is one entrepreneurial person who starts the ball rolling, and entrepreneurship is a skill that you might possess. If so, don't wait for people to help you build it, once the ship is sea worthy is the time to start recruiting sailors. Register a corporation - in my opinion, it's the smartest way for an engineering student to go. It's far easier to build a structure right the first time than to try and patch the holes later. Also, a corporation is the perfect type of business to use if you want to offer partners a piece of the action: its legal structure is designed to allow different people to invest in and own a part of it. That being said, I myself have spent thousands of hours building up my corporation and it's all mine. Someday soon, however, I will have to give some of it up to others in return for their hard work and I'm prepared to do that.

What does it take to build a company? I know many people who make money through their own business, but I wouldn't necessarily say that they were building a business unless they could leave and have the business still function; that's where teamwork comes in. In any case, first, you build the ship. Pick a name and register a corporation. You can do it over the internet for about $500, but I recommend hiring a lawyer which will cost you about $1500, as this way, everything is done right and you also have someone with experience to back you up. Often, it's great just to be able to pick up the phone and get proper answers to your business questions, and, contrary to popular belief, it doesn't cost you money to ask your lawyer for a quick piece of advice, as they usually only charge for services. Over the first year of starting your corporation you will register your business, open a business account, figure out how to track your business's financial information and deal with an accountant for corporate taxes. You will also learn something about what it means to be the controller of a separate legal entity with all the powers and rights that a normal person has.

It doesn't sound so difficult to do but it does take a lot of work. Even without having any paying jobs in the first year, just setting up the structure of the business is hard. I read books about incorporating and starting a business, spent time with accountants learning how to perform proper book keeping and spent time with other entrepreneurs learning good business practices. I'm finally starting to focus more on my business' work rather than the business itself. Now I also have something to offer individuals who might not be great entrepreneurs but wish to be their own boss like I do.

Entrepreneurship at UW

PAUL MORIN
3N COMPUTER

The University of Waterloo has one of the top engineering schools in the country and the region itself is an obvious hotbed for technology startups. Bill Gates speeches aside, let's take a look at what the university has to offer in terms of educating and motivating undergraduate students into becoming successful entrepreneurs.

Under the co-op department, Enterprise Services does a great job providing students with some of the resources required to get their companies off the ground. If your application is accepted, they provide legal and accounting services and can even match any seed money you contribute (to a certain extent).

In terms of curriculum, believe it or not, there is only one course offered to undergraduate engineering students which pertains directly to entrepreneurship (ECON 220). This course highlights qualitative principles such as strategic and ethical challenges facing business owners. A course like this is practical but is this all that we have to tailor to the Sergei & Larrys in the engineering undergraduate student body?

With a little bit of legwork and luck, you may be able to learn from the experts. Do the special paperwork to get into MTHEL400 offered in the winter term for "math students only". They occasionally let a few engineers in. This course is primarily based on content from guest speakers which happen to be founders of successful Canadian tech companies such as Sandvine, GuestLogix, NexJ, and DWL. Sitting in a small classroom and listening to startup success stories firsthand and interacting with the people who made them happen has to be the most practical education the university has to offer to any aspiring entrepreneur. From how to deal with early-day struggles to when to raise venture capital, concrete paths to extreme success are laid out in front of you.

Courses like these should be offered every term and open to all students. As an incubator to the Canadian tech sector the school needs not only to act as a business start up mechanism, but should also provide for more accessibility to entrepreneurial education at the undergraduate level.

Future of Local Strip Clubs in Question

ABHILASH JAYAKUMAR
2A MECHATRONICS

This article is going to be in the form of good cop/bad cop. First off, Mr. Bad Cop:

Kitchener's two strip clubs could be driven out of business if city council adopts a proposed ban on table dancing. This ban is largely based on a law that passed in Ottawa in 2004. Before I continue, I would like to clear a common misconception about the what 'table dances' are. Our always faithful Wikipedia defines it as an erotic dance performed at a patron's table, as opposed to on a stage. But in reality the dancing is performed on a portable platform placed on the floor beside the patron's table.

City staff brought up the proposed bylaw before the councilors on the 28th of January in an effort to eradicate almost all contact between dancers and patrons. Under this bylaw only "non-erotic physical contact as may be found in any business setting" would be acceptable. This bylaw bans not only table dances, but would also ban mud & jelly wrestling. This also means the end of private or even semi-private dances. If it passes, lucky KW residents would walk into fine adult entertainment clubs and expect firm handshakes or even a pat on the back from exotic dancers.

"There is no doubt in my mind that the business will crumble," says Bill Papazotos, the co-owner of The Doll House, said in an interview with The Record. "It's the main reason customers visit these establishments." On another instance Mr. Papazotos also said that the passing of this ban would "prove that the adult entertainment industry is getting picked on." But when the city councilors decided to increase the annual licensing fees for both the local strip clubs by about 500% from $800 to $4200, can anyone disagree? And could it be a coincidence that the city is increasing the fees while also considering a roundabout at the intersection of Bridgeport and Lancaster, which is also the location of The Doll House.

Now for a cameo from the Good Cop:

This proposal from the city staff didn't come as a surprise to the owners of either club. The raging war between strip clubs and the Kitchener city council was aggravated last December when the clubs breached multiple city bylaws and were forced to be shut down for 7 to 10 days. Amongst the reported violations were blocking off the VIP area out of viewing range and allowing different levels of 'physical contact' between patrons & dancers.

Mayor Carl Zehr has asked for the city staff and the council members to provide with definitions saying "Words are important. The more the clarity we have, the better it is. And there has to be some leeway here so that we don't prohibit this activity [the table dancing ban]."

The main argument put forth by the city council is that table-dancing and contact dances are a major health risk. With the removal of VIP lounges, table dances are the main form of physical contact in strip clubs. The proposed bylaw bans that as well.

In an interview with The Record, the city's manager for licensing, Pat Harris had the following to say, "There is a lot of activity that goes on there that is against the by laws. The city is not saying that it's indecent, the city is saying that we don't want that activity in out adult entertainment parlours. It's not a morality issue. It is a health and safety issue."

The Bad Cop's final words:

Okay, there were a few glaring mistakes in the statement made that I am going to spend the rest of this article ripping on:

Firstly, how the council keeps tabs on all this 'activity?' Well, I'll tell you how, they send bylaw enforcement officers to strip clubs (since fall 2006, to be exact). Even RIM (who had the highest market capitalization of $68.8 billion), who offers free employee lunches every Friday at East Sides, has to bow down to this!

"We felt that there was a lot of activity here and that we had to be more proactive" Harris said. Well duh, if the bylaw enforcement officers were Doll House regulars it only makes sense that they witness every bylaw infringement that the club commits.

Secondly, the part about the health issue – totally bogus. Now someone please correct me if I'm wrong, but shouldn't there be an exchange of bodily fluids for the spread of sexually transmitted diseases? And in strip clubs, where the patron is fully clothed, how does this become a health and safety risk? Even a public health nurse agrees, saying (to the Record, of course), "The concerns of the city officials are misplaced if they are worried about the spread of sexually transmitted diseases through dancing."

And last but not least, this was nothing but a fine selection of words on the city's part because in 1999 the country's highest court made a ruling (oh yes, the Supreme Court got involved in this too) stating that lap-dances in private cubicles are not 'indecent.'

So how did the provincial government get around the federal government? The answer is simple: the Supreme Court makes the decisions involving criminal charges and not municipal law. Thus the municipal governments free to pass bylaws to control the behaviour in their local strip clubs even if the federal Criminal Code isn't directly violated. For example, whena the courts ruled lap-dances to be legal, Kitchener city council passed a bylaw that prohibits any contact between dancers and patrons. And what do you know, this bylaw indirectly bans lap-dances!

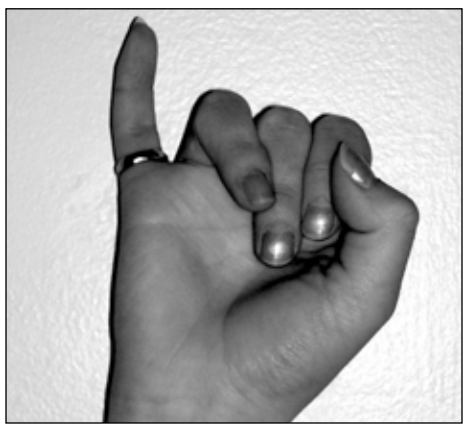
How to Touch The Tool

AMANDA HOFF
3T MECHANICAL

So, IRS has recently passed and most of the fourth-years have been recently Ringed. Congratulations!

For many, touching The Tool for the first (or second or third) time is one of the most satisfying feelings in the world. It's only natural for fourth-years to be excited by their newfound ability to approach The Tool and lay a happily Ringed hand on the shiny chrome surface. However, there is a certain procedure and etiquette that should be followed throughout this process to ensure the safety and happiness of all.

First of all, you must understand that the Toolbearers are there to protect The Tool from *all* who may wish to touch it. Yes, that means you too. Your Ring is small, and no matter who you may be or know, you do not have a giant neon sign flashing "Ringed" above your head.



Therefore, you must broadcast the appropriate signal to the Bearers in order to obtain unrestrained access to touch The Tool: Raise your ringed hand high and easily within the line of sight of all of the Bearers, with your pinky up and clearly visible, as shown in the picture preceding this paragraph.. Do this from a safe and unthreatening distance, and wait for acknowledgment from the Bearers before you approach. If you are at MOT, EOT, or another event where the Bearers are entering into a large crowded room like POETS, wait until they are upstairs and settled before you approach, as otherwise you are virtually impossible to distinguish from other members of the crowd.

Once the signal has been given, approach The Tool carefully. Do not lunge or throw yourself at The Tool or the Toolbearers, as this may result in your, their, or an innocent bystander's unfortunate demise. Grasp The Tool as shown in the picture below (different hand shown).

You may grab the chromed wrench firmly with one or both hands, tap your ring on the surface, or touch it in any other publicly appropriate manner; however, do not try to take it away from the Bearers. In case you haven't noticed, two very large individuals are chained to The Tool. Unless you are big enough to take them as well (while fighting off the other guards and the rest of the EngSoc crowd present), this is not an advisable course of action.

Finally, be sure to enjoy your moment of glory. You've earned it!

Political Correctness Behind Slave Auction Outrage

KEVIN CEDRONE
4B MECHANICAL

On February 12th, *The Record* published a front-page article entitled "Slave auction combined bad timing, insensitivity", asserting that a "slave auction" held in February, during Black History Month, is in poor taste and indicative of racial insensitivity.

I would like to address these claims and discuss what I see as a growing trend towards PC-hypersensitivity. Let me begin by saying that racism is absolutely unacceptable. Racism is the result of a repugnant ignorance of equality. Sometimes racism is the result of intentional ignorance; a deliberate albeit mistaken belief in inherent superiority. Other times ignorance manifests itself through prejudices acquired unintentionally based on less than ideal societal norms. The only force which can oppose ignorance and racism is understanding. We must consciously and actively pursue an understanding of the physical, cultural, and intellectual qualities which make us different but equal individuals.

The first step towards understanding is awareness. I will admit that perhaps the word 'slave' can be replaced with 'servant' or 'helper' for future auctions but Waterloo Engineering students were not aware of or upset by the potential misinterpretation of the term 'slave auction'. The GradComm Slave Auction is a tradition at the University of Waterloo with a history as long as Black History Month has existed in Canada. Junior student engineers volunteer themselves to aid 4th year engineering students who are celebrating the day of their Iron Ring Ceremony. The volunteers' services are auctioned off to 4th year students to raise funds for the graduation committee. *The Iron Warrior*'s own Michelle Croal was asked to volunteer as a slave but declined the invitation owing to conflicting midterm obligations. Her ability to decline is exemplary of the volunteer nature of the event. GradComm slaves volunteer to help out – they are not abducted, or dressed up in blackface and shackles. The only thing this event has in common with actual slavery is the word, and its unfortunate, untimely use during Black History Month.

The Faculty of Engineering is one of the most diverse faculties at UW and its racial harmony exists based on the tolerance and understanding we extend to each other.

In this context, the term 'slave' is based on the connotation of slave as "a machine or component controlled by another machine or component," not a person who is legal property of someone else, forced into servitude. Perhaps the fact that this alternate definition is somewhat deprecated outside of Engineering explains the media outrage and simultaneous apathy within Engineering during the weeks of advanced publicity for the event.

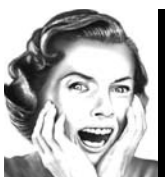
More disturbing than the use of the word slave itself is the thought that this issue warranted national media attention only because it took place during Black History Month, that it may have been ignored during any other month. February is when the racial awareness of the media at large is at a state of heightened sensitivity. In effect, *The Record* and its reporters and editors decided it was more important to pay lip service to racial issues than to actually investigate the auction, its intent, or its reception within Engineering.

The Faculty of Engineering is one of the most diverse faculties at UW and its racial harmony exists based on the tolerance and understanding we extend to each other. Todd Miller, a fourth-year Mechanical Engineering student, who is also black, laughed at the irony of the event being held during Black History Month. Nonetheless he participated in the event by buying a slave-volunteer to assist him in throwing an IRS champagne breakfast, another long-standing UW tradition. I would expect most UW students to regard this event in a similar fashion, with Todd's tongue-in-cheek type of humour demonstrating the lighthearted nature of this fundraiser: "It's role reversal, bitches!" Todd continued by saying, "The whole idea of the auction was to be a fun fundraiser – let's not ruin this."

Todd is more generous to *The Record* than I am. This article does little to express my incredulity at the reactionary sensationalism that this issue has generated. Taking offence at every use of the word 'slave' does not demonstrate racial sensitivity.

Indeed, blowing the objections of a few unbalanced readers out of proportion to craft an entertaining but disingenuous polemic based on such a harmless event does a disservice to actual racial awareness. The event was intended to be good-natured and not intended to offend. That was clear to everyone in Engineering at UW which is why I hope that everyone can one day share in the tolerance and understanding we enjoy here instead of the superficial and hypersensitive outlets across Canada.

The Importance of Intent



ADAM SCHUBERT
3B ELECTRICAL

Does anyone care about intent anymore? Seriously, this past week (week ending February 15th) I have been nothing short of appalled at how little time people take to determine the intent of actions.

Take for example the whole debacle about GradComm running a "slave auction" during Black History Month. Someone saw that the two were running concurrently (the two have been running concurrently for at least sixteen years, by the way) and decided to become incensed at the atrocity being committed. Never did this person look at the intent behind the "slave auction", nor did anyone question this "incensed" person's intent.

Supposedly their intent would have been to protect the sensitivities of those who have a vested interest in Black History Month, but anyone who has been such a person has said that the slave auction did not offend them in the slightest, and hence did not interfere with their rights and freedoms. So what was this irate person's intent? Perhaps their blog hadn't been receiving enough hits as of late? Perhaps they were personally offended, in which case this bad publicity would be vengeance?

And don't go telling yourself that I'm the bigot here, because the intent of this article (in case you've read this far) is to ask you to think about the reason behind people's actions rather than simply reacting to the results. Knowledge of actions leads to an intelligence, but understanding the reasons behind actions leads to wisdom. The fact is that slavery has tragically affected *every* race I can personally think of, but most recently the black race. So why is "slavery" any more of a charged word at this time of year? If it's offensive to use that word now, it should be equally offensive at any time of year.

No one has even looked at the intent of Black History Month. And no one questions charity slave auctions, and as I, the current Charity Commissioner for the Canadian Federation of Engineering Students can tell you, many of them happen at all times of year because people see the word 'charity' and realize the intent – they realize that no one is about to be whipped, beaten, or harassed into doing anything they don't want to do.

And what really grinds my gears is what happens after this incensed writer demands to know how this atrocity happened from the Faculty of Engineering. What is the intent behind the Faculty's denying ever seeing posters of the sort in the hallways they traverse every day of the week and hanging their students out to dry? Shouldn't the Faculty's job (or intent, rather) be to look after its students, including their right to hold fundraisers for activities that encourage school spirit and improve overall student life? Instead it seems the Faculty's intent is to escape any criticism while it works towards finding investors for upcoming building projects. If the faculty really *is* ignorant about the goings-on of its students, it should realize this as a real problem and make this a priority for once.

Look at IRS this year and the pranks and tomfoolery that followed. The intent of a good prank is never to be destructive or offensive, but to be humorous, clever and witty. The fourth-year Electrical and Computer class charged into one of my lectures and proceeded to read to Professor Jim Barby the famous butterfly story that the professor uses to help his students understand why they're about to suffer insane amounts of homework. It was witty; it made even the professor laugh. Furthermore, it makes Professor Barby feel good that he taught them a valuable life lesson. It was never offensive to him, and I don't think he took it as such.

Let's look quickly at Professor Barby's intent. Many students give him a bad rap for being a stickler for rules, but personally, I like him, because he puts everything up front. Sure you end up working until the wee hours of the evening a lot more than you want to, but his intent isn't to make you suffer – it is to make sure that you finish his class having learned to truly understand the material you should understand, and that intent is obvious to those who care to look. The other reason I like him as a professor is that his intent is to make the students learn, where so many other professors' intent is to get their lectures over with so they can get back to their research. Our school could stand to have more Jim Barbys. And no, my intent is not to kiss butt.

Back to the subject of IRS. People throwing objects or other people through windows, and drinking on campus and breaking bottles over Mary Bland (even accidentally), are people who seem to have missed what the intent of IRS is. These people's intent *seems* to be to be obnoxious and to demonstrate superiority over other people. I say "seems" because it is not my place to judge anyone, and not understanding the intent of IRS could be any number of people's fault.

This leads me to the other thing that really grinds my gears: fourth-years banging their pinky fingers on non-fourth-year students' foreheads. Have any of the people doing this asked themselves what the intent of this action is? It is to degrade people for being either younger than you, or in my case, for being less intelligent than you. The common response to this argument is "just let the fourth-years have their fun" to which I will always respond, "Bigotry is bigotry and should never be tolerated." I will not hesitate to disown anyone, and I mean anyone, if they even attempt to do this to me, because it is a sign that that person doesn't respect me, that they think themselves superior to me – and why would I want to be friends with that person anyways? I would encourage others not to tolerate this action, because the only person you the reader are better than is a bigot.

Okay, so now am I making a big deal out of nothing? Well, let's see. I'm harping on that writer for making a big stink out of the GradComm slave auction because I can see no reasonable intent other than self-centred intent. Do I dislike being hit in the forehead? Yes. So is my intent to look after my beautiful forehead's well being? No. I've already stated the intent of this article. But the intent behind a fourth-year hitting me in the forehead is so that they can tell themselves they're better than me. So now it is them that are treating me like a slave. I may not be a model scholar, but my freedom extends as far as anybody else's.

Better Know a Dozen

KEVIN CEDRONE
4B MECHANICAL

Rory Arnold has graciously volunteered his regular Better Know a Beer column in order for me to document the event and the various beers used to toast the grand occasion of the Iron Ring Ceremony.

The Iron Ring Ceremony is a solemn occasion in every Engineering student's career. While explaining the purpose and meaning of the Ritual of the Calling of an Engineer, Professor Aplevich quoted Winston Churchill, "Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning." On the day of their Iron Ring Ceremony, fourth year engineering students on the verge of graduating take to the halls and celebrate the occasion in a highly professional fashion completely commensurate with the solemnity and importance of the ring ceremony.

Students demonstrate their excitement and pride at having reached this milestone by dressing in costumes far outside the T-shirt and jean norm of engineering student dress. Soon-to-be ringed engineers visit lectures of their junior colleagues, eager to pass on hard earned knowledge acquired over the past 4 years.

In that tradition, I would like to pass on some of the knowledge I acquired (what I remember of it) on the day of my Iron Ring Ceremony.

Tecate

Named for a small city in Northwest Mexico, this phenomenal beer is available for the low price of $1.85 for 500mL tallboys at the LCBO. I find Tecate easier to chill than other beers because of the superior heat conduction of aluminum relative to glass bottles. I suggest enjoying this in the traditional Mexican fashion adding a slice of lime, and a little salt on top of the can. The tallboy can itself is quite versatile, suited to shotgunning, sipping or pouring to a glass, truly a beer after Macgyver's own heart.

Canadian

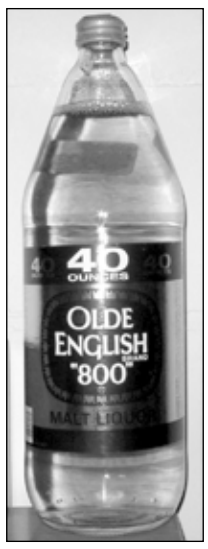
This is a good academic beer. I recommend this beer engineering students looking to meticulously study practical real-world examples of fluid mechanics. Funneling a bottle or two of Canadian provides insight into the behaviour of polyphasic flows, and the bonus is that ingestion is rapid enough that you won't actually have to endure its skunky taste.

Rickard's White

This is a relatively new beer but it has established a favourable reputation with a few of my friends. This Belgian-inspired White Ale is served with a slice of orange. I was expecting something more assertive like Rickard's Red, which is my summer patio default brew. I was not impressed by this beer.

Olde English

Olde English is not a beer at all; technically it is a malt liquor. The 8% alcohol content packs a punch, and 40oz volume means fewer trips to the ice box but this vile beverage was included for purely historical reasons only completely understood by my trusty sidekick Chris Beneteau. We theorize that Olde English 800 is in fact a mixture composed of trace beer residue and the chemicals used to cleanse the fermentation tanks between batches of beverages which may actually be considered potable.



MGD

I set MGD with the unenviable task of of cleansing the stale aftertaste of OE 800 from my palette. MGD is a cold filtered pale lager with a considerable amount of flavour. Unfortunately I forgot that MGD uses a pry-off top and massacred the palm of my left hand trying to open the bottle. Worse still, that's my foosball goalie hand! Luckily the beer itself was cold enough to soothe the pain and I was still able to make a decent showing playing foosball in POETS.

Fruli

I was introduced to this strawberry-infused beer by the inimitable Don Fraser at KO's during my 2B work term as a WEEF TA. This beer is a relative lightweight at only 4.1% ABV but its sweet taste and smooth finish did much to erase the skunky aftertaste of the days earlier fluid mechanics experiments.

Mort-Subite Framboise

In keeping with the theme of fruity beers, Mort-Subite Framboise is a raspberry-flavoured Lambic beer hailing from Belgium. According to my girlfriend who introduced me to Mort-Subite, lambic beers are fermented with wild yeast strains instead of more closely controlled cultures of brewer's yeast used in traditional lagers and ales. Mort-Subite comes in a cork-sealed bottle and part of me wonders if there is a connection with this potential projectile and the name Mort-Subite which means "Sudden Death" in French. Once the cork projectile has been safely (or hilariously) dealt with, one finds that Lambic beers have a dry, enjoyable and somewhat acidic flavour not unlike cider.

Corona (Coronita)

This relatively light tasting lager is a great beer. Maybe the best. Indeed, Corona's motto, 'La Cerveza Mas Fina' (The best beer) is printed on the side of every bottle. The Corona I enjoyed at IRS were actually Coronitas. At 250mL each instead of the usual 330mL, the rather aptly named "Little Coronas" seem to stay cold to the last sip, owing to the more favourable volume to surface area ratio.

Negra Modelo

This Mexican beer is brewed by the same company as Corona. This beer comes in foil-wrapped irregular wide-bottom bottles and Sir Mixalot jokes aside, this dark and somewhat bitter beer is delicious. Like Corona it is also served with a slice of lime whose sour note balances the bitterness resulting in a fine finish well worth the premium price.

Moosehead

Moosehead is a classic unpretentious beer. It is a contender for best beer in a green bottle and best swag in a two-four. Moosehead was founded in 1867, the same year that the BNA gave status to our great nation. Owing to foreign ownership of Sleeman, Molson and Labatt it seems Moosehead is now Canada's largest 100% Canadian brewery. Every sip of this fine all-malt lager is a tribute to our great country.

Keith's

Lo these many years in Engineering, Alexandar Keith has become a dependable friend and confidant. Alexander has been there to mourn my defeats and celebrate my triumphant victories. I can attest that it is enjoyable by the pitcher and by the bottle and although India Pale Ale purists will argue that it is not faithful to the original IPA recipe and formulation, I can think of no better beer with which to toast this momentous occasion.

Cheers!

What I Learned During Reading Week

MICHELLE CROAL
2A CHEMICAL

On unpacking boxes at my parents' new house: It's pretty mind-boggling how much stuff you can collect in a short life of 19 years! In my brand new bedroom, I arrived to find: a box of my favourite children's story-books (many of which I recognized instantly and still remembered the plots to, down to the details of the illustrations), five journals (oh teenage angst, if only I could pick that lock, what amusement would ensue!), at least four large Tupperware containers of photos (I didn't even make it to look through them), just about every single drawing my brother and I did between kindergarten and grade three (Mum, did you *really* need to keep these?), and last but certainly not least, a red leather motorcycle jacket belonging to my father from 20 years ago (Michael Jackson, anyone?). The basement in the new place looks like that of a thrift store, furniture and boxes piled as far as you can see. Excuse: We were living overseas, while most of this was in storage; I haven't seen it in 10 years.

On rice pudding and Wong Fu movies: Rice pudding is easy and tastes delicious! It has four ingredients, and can be made really late at night, while watching movies and the Lunar Eclipse (from inside – it was way too cold out to actually stand outside and watch celestial bodies move at the speed of, well, celestial bodies).

On not having a computer: It's pretty lame. I've spent a lot of time in the Fulcrum Lab this week (although, today I'm in Pulley for a change of scenery and a temperature difference of about -20°C). You'd think I'd be all productive, because of the lack of distractions that exist at home, but instead, I find I've only eaten an entire box of woven wheat and listened to CDs (punk rock, Savage Garden, that one from my high school boyfriend… see above). I now recognize the four other people who've been hanging out in Fulcrum all week, and I could probably recite the inspirational graffiti from the women's washroom (isn't "inspirational graffiti" an oxymoron?). Anyway, don't get me wrong – I got two lab reports some other stuff done, but that brings me to my next point.

On certain courses in Engineering: There are some courses that are just impossible. "You go to class and it's crystal clear," they say. Sure, if the crystal is made of mud. The textbook doesn't make any sense either, because the notation is 100% different from the instructor, which can be worked around (supposedly) but just makes things awkward. You read the question on the assignment, and it makes no sense. After reading it another three times, you realize you need Excel, bringing me back to the point above. You can email the professor, the TA, your roommate, six friends, and possibly even Santa (everyone is connected these days), but chances are that it still won't help. It's frustrating, and it certainly makes me question my choice of major, but the bottom line is that the assignment still needs to be done. I guess the only thing to do is just plow through and hope like heck you get an extension (and that this material isn't on next week's midterm).

On having a week off and still doing way too much work on the last weekend: I tried. I honestly did try to get things done this Reading Week. I didn't go to Mexico or Whistler, because I really wanted to get things done. This week has really just shown me once again that the amount of work that needs to be done is inversely proportional to the amount of time in which to do it. In Engineering we know this, and for some reason we pride ourselves on our ability to ignore the need to sleep. Anyway, my "real work" awaits me, so I hope your Reading Week had a halfway decent work-to-play ratio, and that you're not completely depressed about the return to school!

Halloween in February: Fourth-Years Celebrate IRS

THE IRON WARRIOR
NEWS BUREAU

The University of Waterloo gets a taste of Halloween every February, on the day the fourth-year Engineering students are to receive their Iron Rings. The tradition sees the students dress up in amusing costumes and get together for parties in the morning with their classmates. They then make their way to campus to visit old professors, often to the confusion of Frosh sitting in class, who are experiencing the event for the first time.

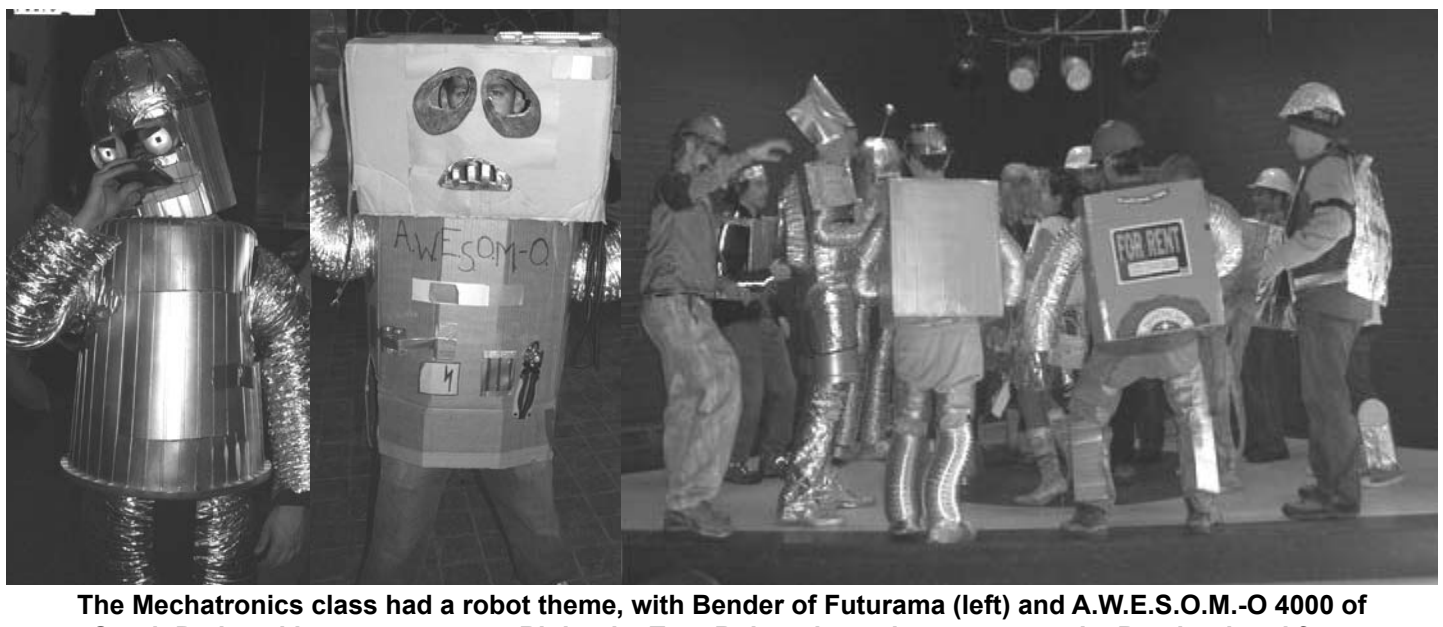
The culminating event of the morning and afternoon is the countdown to noon, which takes place in the Carl Pollock Hall Foyer outside POETS. Hundreds of fourth-years gather to watch the clock count down to zero.

The celebration subsides shortly after as the students get ready for the Iron Ring Ceremony in the evening, which is a formal event where they take the Obligation during The Ritual of the Calling of an Engineer and receive their Iron Rings. The Iron Ring Stag is held afterwards, and gives students a chance to unwind and celebrate for the first time with their Rings.

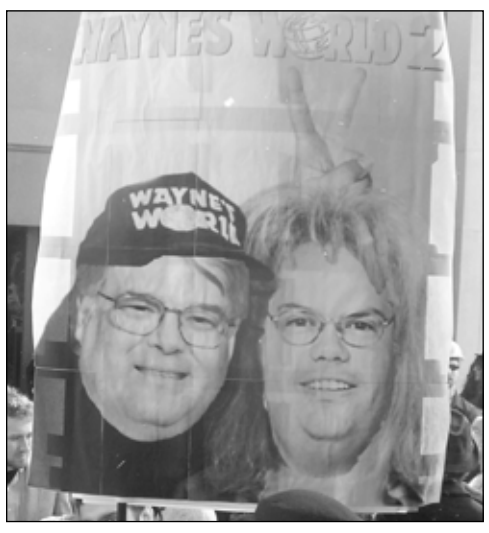
This year, the festivities took place on February 15th, the last day classes were held before Reading Week. The Iron Warrior was there to capture the festivities in the morning and through the afternoon. A photo montage is shown on this page showing some of the highlights and colourful costumes.

Congratulations to the Engineering graduating class of 2008.

A mob gathers in the CPH Foyer in anticipation of the countdown clock hitting zero.



The Mechatronics class had a robot theme, with Bender of Futurama (left) and A.W.E.S.O.M.-O 4000 of South Park making appearances. Right, the Tron Robots have dance party at the Bomber breakfast.



"Party on, Bill!" – ECE Prof Wayne Loucks
"Party on, Wayne!" – ECE Prof Bill Bishop

ECE students dressed up as butterflies show Prof Jim Barby that they finally got their wings, inspired by his ECE 241 butterfly story, which they read to the class.

Four By Four

ALEXANDER GRANT
2A SYSTEMS DESIGN

Fill in the blanks with the letters below to make four four-letter words across as well as four four-letter words going down.

	O		
O		E	
		A	T

Letters:

C D
E E
H I
N P
P R
T

Last Issue's Crossword Solution

A&E CHALLENGE UPDATE

Congratulations to Kristen Antaya (1B Fine Arts) for being the first to complete the Iron Crossword in the February 6 issue, which had a special Greek twist. Honourable mentions go to Bryan Sachdeva and Joshua Daigle (3B Computer).

This week's challenge is the combination of both the four-by-four puzzle and the Sudoku on the left. Drop off your completed solutions to the drop box outside the Iron Warrior office (CPH 1323B). Good luck!

Eng Sudoku

Difficulty: Hard

	6	4	8					
8	5	3			4			
	2			7			8	4
	4		2					
5	8						6	9
					6		4	
6	7			3			1	
			4			7	2	6
					7	9	5	

Snow Plows

A HAIKU BY MICHELLE CROAL
2A CHEMICAL

Constant beeping trucks
You'd think they could stop a while
Just let the snow fall

profQuotes

"They are coming."
- Wei-Chau Xie, CIVE 127 (in response to distant chants of IRS)

"You guys are Civils – we kill trees. We pave over the world!"
- Bob McKillop, CIVE 121

[Looking at course note overheads, noticing a large gap between two sentences.] "Oh, there's a gap there. I don't know why that gap is there. I must've been smoking something. I don't know what I was smoking. Moving on..."
- Metin Renksizbulut, ME 557

"What is happening? I'm still not too familiar with Canadian education system."
- Galina Morozova, CIVE 153 (in response to IRS morning revelry)

"You don't seem confused actually, you seem... empty."
- Cécile Devaud, ME 362

"Do you guys know what a convolution is?"
Class: "No."
"That's OK, half an hour ago neither did I."
- Bill Owen, ME 360

"How did they come up with this solution? An engineer was sitting in his office and twiddling his thumbs and says, 'Well, let me try a few things.' So you blow a few opamps, a few fuses, maybe a few fingers... That's just the way it is."
-Ajoy Opal, ECE 443

"I only got half an hour of sleep last night. Don't worry though, I've got a Rockstar."
- Duane Cronin, ME 322

THE IRON INQUISITION

"What does IRS mean to you?"

David Morris, 2A Electrical

Jason Shirtliff
4B Computer
"Intelligence. Responsibility. Sobriety."

Amgad Habib
4B Electrical
"Freedom!"

Dr. Adel Sedra
Dean of Engineering
"A very important day in the lives of graduates, and a day of celebration... sometimes too much celebration."

Chris Metaxas
4B Civil
"Grab your funky headgear and let's go party."

Monkey-Bot
4B Systems Design
"Grawwwwh."