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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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WEC Challenges Students: Winners off to OEC

ANGELO ALAIMO
4A ELECTRICAL

On Friday night, over 160 competitors and volunteers converged on campus to participate in the spring iteration of the Waterloo Engineering Competition. Undergraduate competitors, in teams of four, are given a previously unreleased engineering problem and are challenged to come up with a solution within the night.

In Junior Team Design, students had to create a device in four hours to deploy an emergency road across an "earthquake-damaged" roadway. The challenge proved doable but difficult for participants, especially since the road was required to deploy with only a single touch from a team member.

In Senior Team Design, the problem statement took a more light-humoured approach as each team pretended to be "fresh out of Waterloo Engineering" grads with a heavy student debt. The goal was to create a contraption within 6 hours capable of retrieving riches from the side of mountains in order to repay their loans. Many teams, citing problems with the materials given, were able to have a contraption which moved, but few were able to retrieve many gems.

Lastly, in Consulting Engineering, teams were "hired" by the Government of Ontario to investigate ways to reduce energy consumption from commercial and industrial buildings. It was a very open-ended and difficult topic for the competitors who were required to generate a 15+ page report and a 15-20 minute presentation within 5 hours.

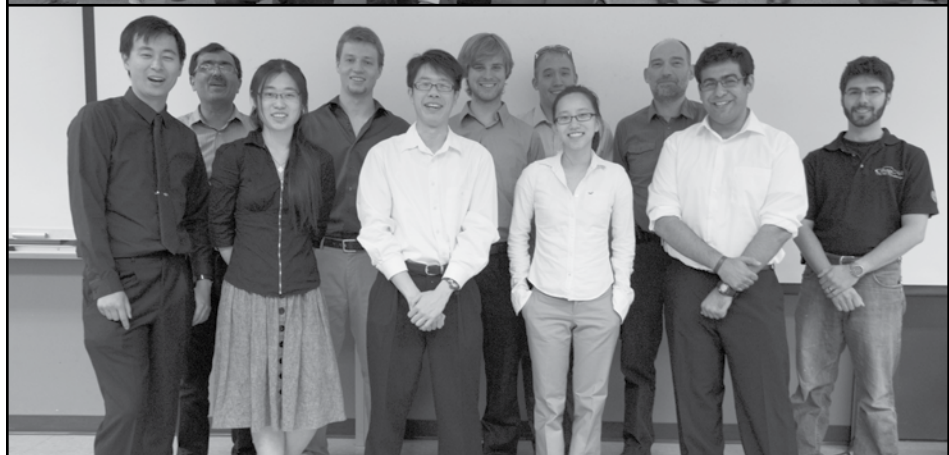
After completing their projects late Friday night, competitors were further re-

quired to prepare their results overnight for their presentations the next morning. Everyone seemed to have dark rings under their eyes due to lack of sleep as the teams returned to RCH at 7:00 am.

Presentations in front of faculty and industry judges finished up around noon, and the winners were announced shortly thereafter. The teams that placed first in each category will represent the University at the Ontario Engineering Competition in Toronto next February, where if they place in the top two positions, they will progress to the Canadian Engineering Competition next March in Vancouver.

Congratulations to this term's winners: In Senior Team Design, Shahid Haider - Systems Design Engineering, Benjamin Tan - Systems Design Engineering, Yiling Wang - Systems Design Engineering, Martin Lui - Systems Design Engineering. In Junior Team Design, Kumar Singh - Electrical Engineering, Ayush Kapur - Mechatronics Engineering, Drupandh Manjunath - Chemical Engineering. In Consulting Engineering, Amir Taleghani - Civil Engineering, Caitlin Speicher - Civil Engineering, Matthew Casswell - Civil Engineering, Stuart Pearson - Civil Engineering.

The Waterloo Engineering Competition is held twice each year in the spring and fall terms. The competition is organized by undergraduate engineering students from the Engineering Society with sponsorship from the Society itself and the Sandford Fleming foundation. The Waterloo Engineering Competition is the University's qualifier to send competitors to the Ontario Engineering Competition to compete against other engineering schools from across Ontario.



Angelo Alaimo

The winning teams of the Waterloo Engineering Competition. From the top: Consulting, Junior Design, and Senior Design categories.

From Build-a-Bear to Build-an-Organ

FARZI YUSUFALI
2B NANOTECHNOLOGY

With the recent push towards tissue engineering and related research, it is surprising that no significant breakthroughs have been made despite the amount of attention the field is getting. This was the state of affairs until a revolutionary surgery was successfully completed last month that showcased the power of regenerative medicine.

Swedish surgeon Paolo Macchiarini from Karolinska University Hospital in Stockholm successfully transplanted an artificial, tissue-engineered trachea into a man suffering from the later stages of tracheal cancer. The trachea was constructed entirely in the lab using a scaffold made with a porous polymer. The tracheal tissue was grown from the patient's own stem cells that were kept inside a bioreactor. This controlled the surroundings of the cells and promoted cell growth. The patient receiving the new trachea has made a full recovery and has been discharged from hospital as of July 8th.

The scaffold used to house the cells that eventually became the new trachea was built by a research team led by Alexander Seifalian, a professor at the University College London. The "InBreath" bioreactor used to house the cells was provided by Harvard Bioscience. The cells taken from the patient's bone marrow were placed on the polymer scaffold and kept at an optimal temperature and environment within the bioreactor. The scaffold was rotated for a period of two weeks within the bioreactor so that the cells would grow into the fully-functioning organ.

For the first time, stem cells have been used to grow replacement organs for use in the body, which has been the aim of regenerative medicine since research in this field began. While an organ has been engineered from essentially scratch, the organ's function was only structural since the trachea is essentially used as a channel for air. Therefore, building more complicated organs would be far more demanding in comparison to this successful endeavour.

Some advantages to regenerative medi-

cine are as follow. For one, regenerated organs could be grown at a much faster rate than the time it takes to find a suitable organ from a donor. Also, since the engineered organs are usually made with the target patient's own cells, rejection should not be a major issue, meaning the need for immunosuppressant drugs would be greatly reduced.

To create the scaffold, the team at the University College London used a polymer structure with millions of tiny pores to allow the patient's stem cells to hold on to the structure. First, CT scans were taken of the patient's trachea. Using these scans, a glass mould was made. Strips of polymer were then wrapped around the glass structure to resemble the structural cartilage rings of the trachea. Next, the model was dipped into a liquid mixture of the polymer mixed with salt. To set the liquid polymer on the mould, the contraption was washed in a solution that dissolved the salts, thereby causing the polymer to congeal into a spongy mass that resembles the shape of the trachea.

Once the scaffold was built and the cells

were seeded onto it, the tissue was kept in the shoebox-sized bioreactor in much the same way one keeps chicken on a rotisserie. To seed the cells, a solution of stem cells and nutrients from the patient would be poured onto the trachea scaffold, after which the scaffold was rotated to keep the cells sterile and warm. Along with the nutrients included with the stem cell solution, it was imperative that hormones and other biological chemicals were included to help the cells differentiate into tracheal cells. The entire effort would take two weeks with only just two days required to actually grow the cells into the full tracheal tissue.

Needless to say, this surgery is a breakthrough in the field of regenerative medicine, which has been suffering from a number of general setbacks in terms of general research goals. After this massive breakthrough in tissue engineering research, all we need now is to wait for someone to grow more complicated organs and progress towards being able to grow needed appendages at a moment's notice.

Letter from the Editor

Reflections on Lessons Learned



**MIKAYLA
MICOMONACO**
EDITOR-IN-CHIEF

This term has gone by amazingly quickly. Suddenly, I find myself facing my last issue of the term (not to mention my 4th year project deadline). In my last Editorial of the term, I'm taking the time to reflect on the things I've learned from holding this position.

One of my major challenges this term has been censorship. In this case, the censorship isn't others censoring me, but my own decisions when it comes to choosing what I will and will not publish. Those who know me know that I'm a fairly opinionated (ok, very opinionated) person. In my position, as Editor-in-Chief (EIC), I've had to read and publish opinions which were drastically opposed to mine.

I've also had to cut articles, defer articles to a future issue for lack of space and request rewrites of particularly incoherent articles. These are decisions that come with the job of EIC of any newspaper, but it's always difficult to ensure that I'm making the right editorial decisions or if I'm letting my personal views have too much impact on the choices I'm making.

It's a hard balance to reach. On one hand, I don't want to drive away my contributors and, on the other hand, I want to produce a quality newspaper; therefore, articles must be kept up to a certain standard and must feature appropriate content. While I can be a fairly good judge of quality writing (as my copy editors can do wonders with articles), sometimes the line between content that is inappropriate and content that just I disagree with is hard to find.

Thankfully, I have my advisory board

and staff as a resource to temper my opinions. There are articles found within the pages of the five issues of this term which never would have seen the light of day had others not pushed me to print them or to give an author a second (or third) chance to rewrite an article.

Another challenge has been working with a variety of people who have very different priorities than me. While I do have my staff writers, I still get a lot of content coming from people not directly involved with *The Iron Warrior*. They don't necessarily respect my deadlines and because I can't really cut all the late content, there isn't much I can do to keep them from being late. In the past, these kinds of contributors have tended to be very late, putting pressure on the entire staff during production weekends.

This term I have tried to be much firmer about deadlines than other Editors have been in the past. I moved the deadline up to noon from 6 pm; while this was an unpopular move, it seems to have dramatically increased the number of articles we see by the end of Friday night.

I've cut content for being too late which have, in a couple of instances, cost me future submissions. With that in mind, it's also meant that we're not scrambling for content Saturday night, which then leads to finishing the paper at a reasonable time on Sunday. I will admit to being too hard on people sometimes, but without the ability to enforce my deadlines in any meaningful way, the only way to ensure content comes in close to or on-time has been to be really adamant about the deadline. (I might have threatened to have a wall of shame in the office of all the people who have been late, but I never actually did it.)

Overall, managing this paper has been a big learning experience. I've had to deal

with not only fellow students, but also with administration and advertisers (many thanks to my amazing advertising manager, Kate Heymans). On one hand, I'm a student trying to get through 4A, and on the other, I'm running the newspaper. I've had to vastly improve my time management skills in order to balance two very demanding responsibilities. I've also had to improve my people skills. I'm not naturally someone who deals well with managing groups of people; I'm much more comfortable sitting in a corner of the office with a laptop and yelling at them about their grammar. Learning how to manage people and to get them working without driving them away has been a valuable lesson and I think I did a fairly good job at it.

And look what was accomplished. I'm very proud of the issues that have been produced this term and of my team who have made it possible. Although, at the very beginning, I was worried over my choice to take this position, I have to say that I have no regrets. I've learned a lot. I've also had to, if not accept others' ideas, certainly pay more attention to them than I had in the past. According to Kate, I've also become a better manager over the term and it's nice to hear that others see that this experience has helped me too.

If you're not involved in any student initiatives on campus, I'd highly recommend it. It's a chance to do something other than school and an additional chance to develop the soft skills that they keep talking at us about. We're always looking for more help at *The Iron Warrior*, whether it is writers, proofreaders or layout editors. If not, there are countless other student teams and clubs on campus which are also looking for people. If working with a newspaper doesn't appeal to you, why not find something that does?

amazing advertising manager. She was incredible at pestering people over ads, and I could never have done this without her tireless efforts.

Thanks to Roy and Angelo. Your willingness to pass on advice and suggestions from your experiences as EICs was invaluable.

Thanks to Mary Bland, for all the finances work you do for *The Iron Warrior*, and your patience with my many questions and requests.

Finally, thanks to Kate for keeping me sane. This may not be an official IW position, but it's a vital one. Thanks also to Kate, Chris, Hans, and Roy for conspiring to ensure that I'll pass 4A. I may not appreciate being mutinied against, but my marks (and my lab partners) do.

Staff Appreciation Corner

I've had a great term as Editor-in-Chief, and this is definitely thanks to the awesome staff I have. While I might tease them and call them my minions, the truth is that I couldn't have done any of this without them.

First, I would like to thank everyone who wrote articles. In particular, I'd like to thank Dushanth Seevaratnam for writing all the random topics that were shoved at him, and Farzi Yusufali, Anjali Gopal, and Alex Hogeveen Rutter for frequently writing articles on demand – especially when I ended up publishing them in the next issue anyways.

Thanks to Christy for taking minutes at the meetings. Also, thanks to Stuart Linley for the crosswords, and Andrew McMahon for helping out with circulation.

I would like to thank anyone who ever showed up to a production weekend, even if it was only for a couple hours. In particular, I would like to thank Mike Smart and Chris Letnick, who, despite being new to the paper this term, have put an incredible amount of effort into helping with production weekends.

Krishna Iyer has been has been a great (although annoying) layout editor. Thanks for coming in, and for doing proofreading when we've shoved that at you too.

Many, many thanks go to Kate and Hans. Between them, they have been my copy editors and circulation managers. They've done a great job ensuring that not only the issues are grammatically correct, but also that they're distributed far and wide.

Even more thanks to Kate for being an

Orientation Week Issue Deadline: Saturday, July 30th

Send your submissions to iwarrior@engmail.uwaterloo.ca

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THE IRON WARRIOR

The Newspaper of the University of Waterloo Engineering Society

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

The Iron Warrior encourages submissions from students, faculty and members of the university community. Submissions should reflect the concerns and intellectual standards of the university in general. The author's name and phone number should be included.

All submissions, unless otherwise stated, become the property of The Iron Warrior, which reserves the right to refuse publication of material which it deems unsuitable. The Iron Warrior also reserves the right to edit grammar, spelling and text that do not meet university standards. Authors will be notified of any major changes that may be required.

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Letter to the Editor

The Outsiders Must Also Make an Effort to Get Involved

ANGELO ALAIMO
4A ELECTRICAL

Re: An Outsider's Look into the Engineering Society

I can still remember my first Engineering Society meeting back in 2A; drunk, heckling 4th years at the back of the room, attendees blurting out inside jokes while others are speaking, and being given the finger the first time I ever spoke at the meeting. Doesn't sound very inviting now does it? No, it definitely wasn't for an easily intimidated 2nd year and because of it, I felt like an outsider.

In fact, my experiences at my first meeting somewhat mirror an article in *The Iron Warrior* (Volume 27 Issue 10 - July 20, 2006) written by Peter Szabo entitled, "The Story of an Engineering Society Rep: Why I Love EngSoc." For those of you who don't know this particular backstory, this article, and another published in the same issue got the newspaper pulled from the stands. A follow-up issue was published the following week giving those who pulled the newspaper a chance to respond.

My first experiences with the society weren't the most pleasant, but I continued

to attend meetings in my academic terms and still do to this day. Although I was intimidated and felt like an outsider at first, as the academic terms went by, I became more involved and my feeling of being an outsider began to change. I was the Editor-in-Chief of *The Iron Warrior* in my 3A term last spring, and held my first directorship this term under the Engineering Society as the Competitions Director. Contrary to belief of my classmates and some people who know me fairly well – I haven't been heavily involved with the Society.

As even more time went by, I began to understand more of what the Society does and how the executive represents their members. In last issue's letter from the editor, the Editor author admitted she, and those around her do not really know exactly what the executive really do but if more people knew, they may find there is more to the Engineering Society than what meets the common eye.

As somewhat of an outsider to the Engineering Society at a point in time, how did I begin to understand about how the executive and society impacts me? I was surprised to find out the information had been right with me since

my first interaction with my frosh leaders. Remember "The Book" you received in your frosh kits? Well, go find it, open it up – all the information about the society is in there. Don't have that book anymore? <http://engsoc.uwaterloo.ca/>. All the information one seeks about the society is there as well – I dare you to read it; get informed.

The Executive and the Society do make sincere attempts to disseminate this information to its members. Remember that old simple adage – You can lead a horse to water, but you cannot make it drink? The same applies to this situation as well. People themselves need to make the effort to get involved, and read this information on their own as the Society can only do so much on their part to get the word out and it would be impossible to reach out to all members, but alas as mentioned, they do make a sincere attempt.

Some advice. **To the "outsiders"**: The "insiders" that "outsiders" see within the society are just as intimidated by an "outsiders" presence at a society gathering. Be proactive and initiate a conversation yourself. **To the "insiders"**: see someone

new at a meeting or an event? Go talk to them, be nice, and limit the inside joke's around the person, or else it creates an unwelcoming environment.

Also, remember my first paragraph where I practically stated that Society meetings are essentially 4th year drunken, inside joke blurting, finger giving messes? Well, things have changed, thankfully. There is no drinking anymore, council follows Robert's Rules of Order, and people are much more respectful and productive. The finger thing still exists, and it means you are too quiet and need to speak up. To outsiders at their first meeting, they of course don't know what it means, and it's quite often I see "outsiders" horrified looks when people give them the finger.

In all, the society requires people to put the work in themselves to get informed and get involved. Here are some good links to get you started - <http://engsoc.uwaterloo.ca/representation>, <http://engsoc.uwaterloo.ca/about>, <http://engsoc.uwaterloo.ca/services>.

Thanks,
Angelo Alaimo
4A Electrical Engineering

Letter to the Editor

From Your Incoming A-Soc Executives

**LEAH, MIKE, LISA, DAVID,
ANGELA, DEREK**
INCOMING A-SOC EXECUTIVES

Re: An Outsider's Look into the Engineering Society

The Editorial written in the July 6th, 2011 edition of *The Iron Warrior* raised some concerns about the Engineering Society and the image they portray to the general engineering student population. The concerns expressed in the article centre around the image portrayed by the Society and the inclusiveness of the events which they run.

The recently elected Executive were presented with a challenge on how they planned to create a more inclusive EngSoc and encourage more people to participate. Outlined below are a few comments we have in response to the challenge but feel that a letter to the editor cannot fully convey our sentiments.

The Engineering Society is a group of student volunteers. Their mandate is to support the undergraduate engineering students in academic and social ventures. Trying to provide something which interests all 5900 diverse students is a major challenge which the society strives to accomplish on a daily basis.

The Engineering Society has a great deal of useful services and events which benefit the Engineering Undergraduates at Waterloo, but many of those students see the Society as a clique who drink and party all the time. This attitude towards the Society is a definite problem that needs to be addressed. It stems from a combination of perception and psychological human factors, but also in the way the society is structured.

EngSoc runs a number of social-based events each term which range from small engineering competitions, all night variety evenings and "Of Term" pub nights. Un-

fortunately due to the "vivid" principle in social psychology the "drinking" events are the only ones people can remember when thinking about EngSoc social events, despite only 5 of 15 typical events even serving alcohol. It is easy to forget about Resume Critiques or the exam bank which are utilized by hundreds of students each term.

The new Executive have already developed some strategies in order to change the perception of EngSoc. These changes include more extensive Class Rep training and support and more effort in separating events run by other groups that are commonly associated with the Engineering Society like Pub Crawls and DUSTED. We have also discussed strategies on how to alleviate the anxiety associated with coming to a new event and meeting new people. We hope to this is something we will also extend to the members more involved

in EngSoc so that they may be more inviting to newcomers.

If there is a concern that you, or anyone around you has about the Engineering Society, please feel free to contact any of the Exec or drop by the EngSoc Office (CPH1327) as we are always open for feedback. Even if you have had a bad experience in the past, turnover is quick and the Society changes from year to year based on the people involved so give us a second chance. Please know that we are aware of the problems facing the society and are actively working on improving this image. We feel that these things take time and if the last 10 years have shown us anything, times are changing. EngSoc will continue to increase their representation, inclusiveness and services in the years to come.

Incoming EngSoc 'A' Executive,
Leah, Mike, Lisa, David, Angela, and Derek

Planet Earth's Newest Country: South Sudan



**FARZI
YUSUFALI**
2B NANOTECHNOLOGY

As of July 14th, the world recognized South Sudan as Africa's newest country when the United Nations General Assembly unanimously voted to address this country as it's 193rd member. On this day, many rejoiced the formal declaration of independence from Sudan as the final outcome of the peace deal drawn in 2005, which ended the longest-running civil war in African history. At midnight on July 9th local time, South Sudan became an independent state after a referendum held in January yielded a result of nearly 99% of voters opting for independence from the rest of Sudan.

This nation's official name is "The Republic of South Sudan" and the capital and largest city is Juba. South Sudan is formed from ten of the southern-most states that

were originally part of Sudan. The population of South Sudan consists of approximately six million, of which the majority practice indigenous religious beliefs with a large minority practicing Christianity (unlike the predominantly Muslim population in Sudan). The diversity within the population is very high both linguistically and ethnically, though the largest of the ethnic groups are the Dinka, Nuer and Shilluk.

The total area inside the South Sudanese borders is 619,745km² with the majority comprised of grasslands, swamp and tropical rainforest along both sides of the White Nile. The formal government system in South Sudan is a "federal presidential democratic republic" of which Salva Kiir Mayardit is the country's first elected president. The economic condition of this country is fragile at best due to the non-existent infrastructure, high mortality and illiteracy rates and adverse poverty as a result of the long-running civil wars following Sudan's independence from Brit-

ish rule in 1956. Due to Sudan's attempt to establish an Islamic identity following independence, the southern authority figures in the area mutinied, beginning a civil war between the Sudanese government and the Sudan People's Liberation Movement (SPLM) and its own army forces. Before autonomy following the 2005 Comprehensive Peace Agreement, at least 1.5 million people have lost their lives while 4 million others were displaced to neighbouring regions in the crossfire.

The humanitarian situation in South Sudan is dismal with a high mortality rate of 112 per 1000 and a maternal mortality rate of 2054 per 100,000 live births. The health care in South Sudan is essentially three surgeons serving the entire nation and, in some regions, one doctor for every 500,000 people. The prevalent livelihood of South Sudan's citizens are mainly subsistence agriculture. The region internationally exports timber, petroleum, silver, gold, copper and other such natural resources; however, given the country's

condition, South Sudan is still heavily dependent on agriculture. It is important to note that South Sudan is an oil-rich state and South Sudan and Sudan are, as of now, splitting oil revenues in half between them.

The country's most significant success in recent years to sustain life and prosperity in the nation was to develop an integrated system for planning and budget preparation headed by strong leadership within the Ministry of Finance. Since then, the government has been able to better manage the finances of various projects and have increased the number of government staffers with crucial skills like basic IT.

While South Sudan had finally gained independence from Sudanese rule, the next couple of years will indicate the future progress of this infant country and, ultimately, the survival of this nation. With some strong leadership and a firm rule, it may yet be possible for this region and its people to rise above the struggles that have plagued it for so long.



Atlantis Marks NASA's Final Space Shuttle Launch



JACOB TERRY
1T NANOTECHNOLOGY

For the last time, a space shuttle, the Atlantis, launched from Cape Canaveral early this month, marking the end of 30 years of the Space Shuttle program. The final space mission, STS-135, launched successfully on July 8th at 11:29 am and connected with the International Space Station on July 10th.

The space shuttle was originally designed to be inexpensive and safe, with the ability to be relaunched 64 times per year at a cost of \$54 million per launch. In practice, the shuttle was launched less than five times per year and cost approximately \$1.5 billion

per launch. The high cost and experimental nature of the space shuttle program were important factors that prompted NASA to look for successors and bring an end to the program.

This space mission is notable not only as the final space shuttle flight, but as the first mission since 1983 to fly with only four people. This is because no space shuttles were available for standby in case of an emergency rescue mission. Instead, if the shuttle was damaged, the astronauts would move into the International Space Station and return individually through Soyuz capsules over the course of a year.

For mission STS-135, Atlantis delivered the usual modules that the other shuttles brought up, which are described in previous articles of *The Iron Warrior*. Some unique

equipment on this flight were the Robotic Refueling Mission and TriDAR.

The Robotic Refueling Mission (RRM) was a mission designed to demonstrate how shuttles or spacecraft could, in the future, be refueled completely through robotic means. NASA is hoping they can transition this technology from research to commercial use.

TriDAR is a sensor package designed for use as a rendezvous and docking sensor, and is funded partially by the Canadian Space Agency. It's unique in the sense that it uses a laser-based 3D sensor and thermal imager to measure distance, instead of reference markers on the other spaceship.

It is also interesting to note that the shuttle brought up an iPhone 4 and two Nexus S phones for use in experiments. The iPhone

4 was brought up to measure the effects of radiation on computer memory and run tests on the accelerometer, gyroscope and cameras in space. The Nexus S phones were brought for use in SPHERES, which are small eight-inch satellites used to test experiments in small environments. The phones give the SPHERES cameras, sound recording and increased processing power.

After Atlantis' returns, NASA is not expected to commission a new spaceship until 2016 at the very earliest, instead they are opting to make deals with the private sector and they are purchasing Soyuz spacecraft from Russia in the interim period. Now that the space shuttle program is complete, we will have to wait to see what new discoveries can be made with whatever spacecraft replaces space shuttles.

Engineering Students Reach Out to the Community



ROY LEE
2B NANOTECHNOLOGY

Ever heard of celebrating Christmas in July? The Village of Winston Park, a care facility for seniors, had a small event for their residents on July 8th, 2011. A small group of University of Waterloo undergraduate engineers volunteered their time early that Saturday morning by helping set up the decorations, running the event stands and serving food. The celebrations involved cheering Christmas music, decorations in red and green, and even Santa Claus showed up to set the mood.

Overall, the event was successful, with

many seniors having a good time and enjoying their ice cream, cupcakes and the various vendors. The barbecued sausages were a great success, with the proceeds adding to the fundraising effort for the Alzheimer Society's Walk for Memories, bringing the total fundraising to over seven hundred dollars.

Our engineering students ended up surprising the staff at the Village of Winston Park for being engineering students. No, we are not in a program that requires a certain number of volunteer hours or even pursuing a degree related to health services. We are merely students interested in getting involved in our community.

For the students that volunteered, the event was an opportunity to give back to the community and improve the engineering

image perceived by the Waterloo community. As a combined effort from the outreach director and the charities director of the Engineering Society, the event is the start of a new effort to get our name out there as caring students.

Next time you find yourself with a bit of extra free time, consider sharing it with others in the community! It doesn't take that long to get involved: just get a group of friends together or initiate a new directorship through the Engineering Society. The list of benefits is long, not just for those you choose to help, but also for you. The more you get involved, the more people you meet. Organ-



Ben Siddique

Engineers volunteer at BBQ

izing events can even be amazing resume fillers. Engineering Students don't just work hard and party hard, we're also there at the crack of dawn the next day to change the world for society.

Ocean Species

Out of Sight, Out of Mind, Out of Time



ALISON LEE
2B NANOTECHNOLOGY

Most of us are aware of the environmental threats facing polar bears, tigers, pandas, and other large land animals, but we tend to forget about the species we cannot see as easily. The International Programme on the State of the Ocean held a conference this past April and came to the conclusion that ocean species are becoming extinct at a very concerning rate. This is not the result of any particular recent human action, but rather due to multiple, slow-acting (largely human-related) factors that have been in action for decades.

Not to state the obvious, but an ecosystem's diversity is essential for it to adapt to a changing environment. Biodiversity ensures that if one variant of a species is wiped out, then similar organisms will rise to serve the same function in the ecosystem, resulting in minimal disruption of the many interconnected living cycles. Basically, if ocean species are quickly dying out, the consequences to us may not be immediately apparent, but they would be severe.

The first of three main culprits of oceanic extinction is warming. What's especially difficult about this is that, as polar ice continues to melt, the rate of water warming also increases and is very difficult to reverse (remember that water has a high specific heat capacity). Water warming is devastating to cold-water species such as many corals, which can no longer be hosts to a microclimate of tiny organisms. Previously colourful coral reefs are turning white, a

sign that its pigment-rich resident microorganisms have left or died. This means a lack of food source for larger organisms, and the effects travel up the food chain.

The second culprit, ocean acidification, is largely because of rising CO₂ levels in the air, which then dissolve in the water to form carbonic acid — also contributing to coral bleaching. Suggestions to mitigate ocean acidification include better control over greenhouse gas emissions and improved natural carbon sinks like living plants around ocean areas. Unfortunately, like the rate of ocean warming, the rate of acidification is increasing as well.

The final major factor of ocean species extinction is chemical water pollutants that deplete the oxygen concentration in the water. This causes marine dead zones where aquatic organisms no longer have enough oxygen needed to survive. Coastal regulation of chemical and other waste dumping varies nation to nation, but they are generally poorly-enforced. Waters that are busy shipping routes especially suffer from chemical contamination. The oceans are massive bodies of water, but dilution can only go so far; the oceans are complex with thermal layering and concentration gradients, so chemical contamination has more localized and severe long-term effects than one might expect.

The point of all of this is not to perpetrate more doomsday preaching, but to remind people that an "out of sight, out of mind" mentality to environmental protection will come back to bite us. As our ocean (and land) ecosystems become less resilient to change, the gravity of this issue should concern anyone who relies on natural resources being abundant and available. Yes, that includes you.

Nortel Patents Auction for \$4.5 Billion



ANDREW MCMAHON
1B ENVIRONMENTAL

During the internet boom, Nortel was the largest company in Canada, employing 95,000 people worldwide, with a stock value that accounted for one third of the Toronto Stock exchange. After filing for bankruptcy on January 14, 2009, it has been trying to sell off all assets, generating upwards of \$7.6 billion. Some of its most valuable assets are its patents and pending patents which cover technologies including mobile communications, social media and internet search.

A group named Rockstar Bidco, which includes Apple, Nortel, RIM, Sony, EMC, and Ericsson, bought Nortel's 6,000 patents for \$4.5 billion on June 30th. The sale resulted in a huge blow to Google and its Android mobile operating system. Google made the initial bid for the patents at \$900 million, but the previously mentioned group made an offer five times that amount in later bidding rounds.

The group of tech giants is being accused of unfairly excluding Google. Google would undoubtedly use the patents to protect its open-source Android mobile platform. However, large companies like Microsoft, Apple and RIM do not want this to happen. Apple is presently suing HTC, Samsung and Motorola over technology in their Android phones, and Microsoft is suing Motorola over its Android line.

Google CEO Larry Page denies suspicions that Android is under attack from the increasing pressure of IP litigation. He stated that the company would rather come up

with their own patents as opposed to buying them from bankrupt companies. Despite the efforts of its competitors to slow down the growth of the project, Google claims to activate 550,000 Android devices daily and has about 250,000 apps on the Android market.

The seemingly unstoppable force of Google is actually somewhat behind in the intellectual property department. Google has only 600 patents to its name in the US, which is nowhere near the almost 4,000 owned by Apple and 17,000 in Microsoft's name. This lack of patents has left Google susceptible to legal actions against them as they try to push their open-source Android software. The importance of this bidding war became apparent when Google upped its bid to 4 billion after 18 rounds of bidding. Nortel's patents, which include Long Term Evolution Wireless technology, could have shielded Google from some of the lawsuits they currently face.

Google has plenty of money and an abundance of brainpower, but it has to come up with a way to level the field in terms of wireless technologies. Presently, they are at risk of being backed into a corner by the legal aspect of the industry. Lawyers seeking to exploit patent law, which is not yet geared to the rapidly-changing tech sector, could potentially do some real damage by slowing the growth of the tech-giant.

The relevance of these patents from Nortel, a company that has been bankrupt for some time, shows how ahead of its time some of the research at Nortel was. One cannot help but wonder how influential this Canadian telecommunications company would be today had John Roth not drove it into the ground in '00-'01 during the bursting of the internet bubble.

Dean of Engineering Nomination Committee

TREVOR JENKINS
3N MANAGEMENT

As you may or may not know, Dean Adel Sedra is quickly approaching his maximum term limit as dean here at Waterloo Engineering. As a result, the University has convened a Nomination Committee to help select his successor. The committee is composed primarily of faculty from both within and outside of Engineering, as well as two staff and two student representatives (one undergrad, one grad). As the undergraduate representative, my job is to ensure that student's concerns, opinions, input, feedback and thoughts are heard and taken into consideration throughout the search and election process. I am responsible for making sure that students' voices are heard.

A memo was sent out to all members of the Engineering community on June 29th asking for input from students, staff, faculty, and anyone else who was interested in giving their input to the committee. Since this new dean will ultimately have big shoes to fill following Dean Sedra's term of tremendous growth, it is critical for students to give their input and feedback as it will be very important in shaping and directing the search.

I strongly encourage you to send your

comments in writing to any of the following three people:

- Trevor Jenkins, undergraduate representative at t.ek.jenkins@gmail.com;
- Erin Windibank, the Associate University Secretary at erin.windibank@uwaterloo.ca;
- Gerri Woodford, executive search consultant supporting the committee from Janet Wright & Associates Inc, at gwoodford@jwsearch.com.

All comments are due no later than July 31st, 2011 and will be held in confidence within the committee.

Some questions to think about include:

1. What are the issues, challenges and opportunities facing the Faculty of Engineering?
2. What are your aspirations for the faculty in the next five years?
3. What advice do you have for the search committee as to the background, credentials, qualifications and leadership style that should be sought in the next Dean?
4. Do you have any suggestions as to individuals to whom the committee should speak to about this opportunity?

Feel free to contact me with any further questions, comments or feedback you may have throughout the process. Good luck with exams!

Cardboard Boat Racing



**ADMIRAL
KYLE POHL**
ENGINUITY DIRECTOR

Ahoy ladies. Those up in the Mobius strip knew and attended the recent event to be the latest to shake the very foundations of our fine academic establishment. To those still out to lunch for chicken sandwiches and orange-mocha-frappuccinos, I'm talking about the world famous Enginuity Cardboard Boat Race that happened on July the 7th. Not only did 68 of your fine peers risk life and pocket change to compete in this event, over a hundred decided that their life could include a bit more of people yelling at them through megaphones, spewing lewd lines and sick-nasty beats.

People ask me often, "What is up with this?" After I good-naturedly slap them upside the head, I proceed to tell them how I came up with this whole boat racing she-nanigan to looks of increasing dread. One day, my dad sat me on his lap. He said to me, "Son, you can't race a dead cow." Taking this as a sign, I began preparing for what one day will become a grand boat race. Seeing how people around me have long since perished from overexposure to my brilliance, I take pride in my rich upbringing and continue fantasizing about hilarious contraptions made of common household building supplies.

Considering the fact that last paragraph makes me sound like some kind of stoned vagrant with a Napoleon complex, let's look at how this race went. Fifteen teams raced each other in three heats over three lengths of the pool. For the most part, they were allowed only duct tape and cardboard to do this. The use of said duct tape was restricted

using complex volume integrals and more than one encounter with a violating team resulted in a dance-off. The details of the race are not important. What was important was how people took time out of their schedule to come do an event no one has seen in Engineering in decades. Two hundred people had the confidence in this fledgling event to come out and take a look. Now that's heartening.

Ignoring the fact that the scoring system was flawed, the judges biased, the course dull and the trophy quaint, this event was freaking awesome. People had fun. People were smiling. The lifeguards did not look like they were about to burst a blood vessel somewhere in the temple region. The spectators were mildly amused and that's better than not amused. What can we take from this? I'll tell you:

Life never gives you what you want. Some people want fame, some want fortune. Some want world peace, some want world domination. I wanted a cardboard boat race. With this in mind, I squeezed a hundred bucks out of the Society and went to town with this event. I went so hard, I impregnated that town with the promise of not just boat races, but a flood of other wacky and wonderful events. Fettuccini battlebots, cardboard boat balloon battles, these are the kind of things I want out of my Engineering undergrad degree. And since I know no one else shares my specific brand of spastic behaviour, I will make it happen.

But I digress; this entire article is just me patting myself on the back. What I really want to convey is just how easy it really is to make stuff happen. I'm also calling out to all you folks who complain about how boring campus is, and then do exactly nothing to fix it. You're boring. Not me. I run boat races.



Cardboard Boats Racing to the Finish

Michael Seliske

From Prohibition to Huge Flashy Parades

KAMYAR GHAVAM
ECE GRAD STUDENT

It was not long ago that a gay pride parade would have been unthinkable. On November 2nd, 1969, Craig Rodwell (1940-1993), an American gay rights activist, held the first known gay pride parade in New York City. To this day, the LGBTQQ community still faces many difficulties, and their activities are prohibited in some countries. For example, Turkey was the first Muslim country in which a gay pride march has been held. The first march was in 2003 and took place in Istanbul with 30 people. By 2011, the gay pride march increased to over 10,000 participants.

Toronto: the Safe Haven

In the past few decades, Toronto has been a leader on promoting LGBTQQ tolerance in North America. Its activists scored a major victory in 2003 when same-sex marriage became legal in Ontario, making it the first jurisdiction in North America to do so. Toronto's Pride Week is now a yearly, ten-day-long event at the end of June. It is one of the largest LG-BTQQ festivals in the world. The centre of the event is at the Church and Wellesley Village, along Yonge, Gerrard and Bloor Streets. As one of the world's longest-running organized Pride celebrations, 1.3 million people attended Toronto's Pride Week in 2009, making it a prime location for the 4th world pride parade in 2014.

Toronto's Pride Week evolved out of protests in 1981 and celebrated its 25th anniversary in 2005. In the 2005 parade, Bill Blair, the Toronto Police Chief, became the first police chief in Toronto to take part in the parade. He marched alongside politicians of all parties, including Mayor David Miller. The 2011 Toronto Pride Parade brought out more than one million attendants. David Miller, former mayor of Toronto, Brian Burke, General Manager of the Toronto Maple Leafs, Michael Thomp-

son, member of city council, Rick Mercer, comedian, and many other Canadian officials and celebrities marched in the parade. Mayor Rob Ford did not attend the event and spent the time with his family for the Canada Day long weekend.

Contradiction with Laws?

The parade is a good opportunity to represent one of the minorities in the population. For many people in the LGBTQQ community, the parade is a way in which people can fight for their rights. However, there is one questionable aspect for me. Why should this event contain such explicit nudity in the heart of Toronto when there are many children participating or attending the parade?

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One Last Memo from This President's Desk



**TIM
BANDURA**
OUTGOING
PRESIDENT

Wow, it's finally over. 15 months and it's my final report (finally). Let's start with the past and upcoming business.

With a majority of campus on break, there have not been many meetings. On July 4th and 5th, I attended the Educations & Promotions Committee hearings. If there are extenuating circumstances affecting a student's performance, they can file a petition. Results of successful petitions can include changing a failed term to one that can be repeated with no penalty. Why is that significant? Well, from the Undergraduate Calendar, "the term No Penalty may be appended to the decision to repeat a term. In this case, the requirement to stay out for two terms before repeating the term is waived and the term is not counted as a repeat term with regard to the number of times a term can be repeated or in the calculation of the total number of terms of full-time study in the program." If you have any questions, you can ask the Engineering Counsellors, your

academic advisor, or your EngSoc Presidents. All of these people represent you on the committee and will present your case. PLEASE come talk to us (or Engineering Counselling) if you feel this applies to you.

Last Tuesday, I attended the final COPs (Committee of Presidents) meeting for the term. We dealt with concerns on receiving student fees and hammering out the basis for a new society agreement. With my term ending, it is up to Alessia and Leah to complete the society agreement before next spring. This agreement will set the relationship between FedS and each society, and define the interactions between each body. It will cover issues such as student fees and insurance coverage for events.

Our final Council meeting is Wednesday, July 20th. Come out to see the new Exec sworn in and to take part in the Spring 2011 family photo. It's a potluck, so bring in a dish! The meeting starts at 5:30 pm in PO-ETS, and directors are asked to show up at 5:00 pm. EOT is on Friday, July 22nd from 8:00 pm until 10:00 pm. The theme is "Too Soon." Hope to see you all as we reveal the winners of P**5, the premier of the TSN video, and to celebrate the end of term and relax before finals.

And with my closing paragraphs, I want to give a number of shout-outs and thanks. I want to thank Mike Seliske for being Speaker this term. He's done a great job keeping Robert's Rules and our meetings going and on-track. Also, the food was incredible this term! Another shout out to PO-ETS Managers Amanda LeDuc, Ben Selby, Cameron Winterink, and Derek Thompson. Thanks so much for keeping POETS open and the shows showing. And the 1B VIP day was a terrific idea! Thank you to my fellow Exec. It's been a long road and we've pulled through. Thanks to Robin Jardin and Meg Bauman. Your help with the Dean's Office is invaluable and it's great to have contacts through you. Finally, my big-

gest thanks go to Mary Bland, our business manager. Without her, our finances would never be done and the CnD would be out of stock on a daily basis. Without her, I'd never have someone with years of experience in EngSoc to bounce ideas off of. Mary Bland, you are irreplaceable and we love you.

Congratulations to Leah Allen, the new Engineering Society A President! I've worked with Leah over my term, and I have absolute confidence in her ability to lead EngSoc through the next 16 months. Leah has the passion and empathy to deal with the times ahead. Good luck in your term.

Good luck to all of you in your exams and work terms!

New President... WHA?



**LEAH
ALLEN**
INCOMING
PRESIDENT

Hey Engineers!

I hope you are all doing swell. First of all, let me tell you that I am so excited for the next 16 months! After having a few meetings with the new executives, I know that we will be a fantastic team and we have a lot in store for you!

So what have I been doing since I got elected?! So far, I have been transitioning with the current President, Tim Bandura, to learn and understand every single task of the President. The new Exec have selected Commissioners and they will be ratified at the EngSoc meeting TONIGHT (which is a

potluck BTW), so you should attend!

With that being said, DIRECTORSHIP APPLICATIONS ARE NOW OPEN! What is a directorship you ask?! Well my fine friend... it's a volunteer position to run a service or an event within the Engineering Society! It's a great way to get involved in the Engineering Society, especially if you have never held a position before! **What positions are available and how can you apply?!** Head to the Engineering Society website (engsoc.uwaterloo.ca), and on the front page, there is an article about directorship applications with links to the directorships page and to the application form. When are they due?! They are due by August 4th at MIDNIGHT, so hurry up and apply!

That's all for now. I can't wait to see your lovely faces again in the Winter!

New External Initiatives



**MICHAEL SELISKE
LISA BELBECK**
INCOMING
VP-EXTERNALS

We would first like to say thank you to all the undergraduate engineering students for putting your faith in us as your next VP-External. Mike will be taking the position for the initial eight months, and Lisa will be taking over in the final eight months, but we plan on working together during the entire term to serve the students better. We have already had a busy start, and we are working to get some of the initiatives mentioned in our campaign off the ground. Some of these initiatives require YOUR help, so we encourage you to apply for directorships, which can be found under the VP-External

portfolio. Some of the new directorships we have started are: PEO Engineering Competition, Habitat for Humanity, and CFES complementary education courses. They are all new directorships that will give YOU the chance to run new events. These require working with the community, other schools and international partners. Please check the EngSoc website for more information about directorships. Mike and Lisa are already meeting with various groups within the faculty in order to efficiently work with them in the future and are already discussing various outreach initiatives. If the first few weeks of this position are indicators of how the next sixteen months are going to go, then we are very VERY excited to work with the rest of the Exec team in running and improving one of the biggest and best Engineering Societies in the country.

Preparing for a Busy Term



**DAVID
BIRNBAUM**
INCOMING
VP-FINANCE

Hi, I'm David Birnbaum and I am going to be your VP-Finance for the next 16 months. I am very excited to be representing you in the Engineering Society, and I look forward to getting to know many of you. I have already begun working on several ideas, and will continue to do so during my upcoming off-stream term. These items include the following: 1) Researching new items to put into Novelties; I will not only be continuing to look for new t-shirt designs, but also completely new items to put in everyone's favourite store. 2) Working with the Capital Fund Committee to bring you all the improvements you want to Eng-

Soc and the school. 3) Working with the directors and commissioners to begin developing a budget before the term starts, so it is accurate and concise as soon as possible. Once we are all back in January, I will continue to improve Novelties, making it more visible with frequent sales and promotions. I plan to work closely with the directors and commissioners throughout the semester to keep a tight budget, enabling all events to run smoothly. I expect to open both capital fund and sponsorship applications earlier in the term, so that all teams and groups will have more time to hand in a succinct proposal, and hopefully receive their funding sooner. Don't forget that directorship applications are now open, so apply on the EngSoc website if you're interested. I am thrilled that I will get the chance to work with you all, and I anticipate great times over the next 4 terms.

My Last External Report...



**LEAH
ALLEN**
OUTGOING
VP-EXTERNAL

Hey Everyone,

This report is going to be bittersweet as I have many updates for you, but they are coming to you in my last report. Since the events are wrapping up, I have a lot of thanks to say to people.

Canada Day was run a few weeks ago and the event was a hit with the families of the K-W region. The TOOL made an appearance and had everyone posing in front of it and some engineering alumni touching it! Thank you so much to Eric Evenchick, Adriana Cameron and Kristine Campbell for running the event.

Float day was a great success! All supplies were donated by EngSoc and it raised \$450.00 in donations that will go to Free the Children!! Big thanks to Lisa Belbeck for spearheading the event, and thank you to all the volunteers for running it.

Charity events have been flawless this term!!! From pancake breakfasts, to bottle drives, to Charity Grillfest... they were all smashing. Thank you to the Charity Directors (you know who you are), it was such a pleasure working with you this term.

Waterloo Engineering Competition was held two weekends ago and the event challenged minds of all years and disciplines. The winners of each category are featured

in this issue and congratulations to them from the Engineering Society. The event ran with no hiccups and that was a result of all the work Angelo Alaimo (WEC Director) put into the event. I would also like to thank all the volunteers who helped out with the event and the Ridgid TOOL for making a special appearance!

I would like to commend the Student Life Directors, Ashley Goddard, Andrea Wong and Linz Buckingham for their hard work on Student Life 101. They planned the engineering portion of this newly vamped event, and even though they ran into some road blocks, they kept trucking in efforts to properly promote EngSoc and student teams to all the incoming first years.

Lastly, I would like to point out that the Women in Engineering Day that was run yesterday was all the work of the WiE Directors. This is the first time we have run an event like this, and we would appreciate your comments on how it can be improved if we decide to run it in the future!

I would finally like to thank ALL of my directors this term as they have all done an amazing job.

On a side note, directorship applications are now open for the Winter 2012 term. Directorships are a great way to get involved in EngSoc, especially if you have never held a position before. Please see the website for more details (engsoc.ca).

As always, if you have questions or comments, please do not hesitate to contact me.
<3 Leah

HELLLOOOOO ENGSOCS!!!



**MARC
TAN**
OUTGOING
VP-FINANCE

The Engineering Capital Improvements Fund (ECIF) committee met on Wednesday, July 13th and we are presenting our allocations at tonight's EngSoc meeting, so come out tonight to find out what is being allocated. Also, council must ratify our proposal, so definitely be there!

Coverall Day was a great success; we sold 15 coveralls, which is amazing! I also finally got our society allotment after walking to FedS and giving their VP-

Administration and VP-Finance a "wonderful" talk, so I can pay people again, like Mary! Anyways, thanks everyone for the last 16 months, and I'd like to wish David Birnbaum good luck on his next 16 months since he's going to need it. I also want to say good luck to all the new incoming Exec and to have a fun ride! I'm not applying for any directorships, so too bad, you won't get to see my beautiful face organizing stuff anymore. Also, thanks to my directors, you did what I couldn't!

FINALLY GET YOUR RECIEPTS IN BEFORE EOT, OR ELSE!!!!!! (I won't give you money back).

GOOOOBBYYYYYYYEE ENGSOCS!



Debt Load Survey Results and Letter to the Dean



**ERIC
COUSINEAU**
OUTGOING
VP-EDUCATION

Well here goes my last Exec report. My term as VP-Education ends August 31st, and Derek Thompson will be taking the reins after then! Congratulations Derek, and best of luck with your next 16 months as VP-Education (don't worry, I'll help you get started)! As my term is wrapping up, there isn't too much to report on since all the committees have adjourned for the summer.

Course critiques are just about wrapped up now, and we're having our reading party tomorrow. The reading party is where volunteers sift through all of the submitted critiques and ensure that any inappropriate or spoiled (written in pen) ones are removed. Come to **CPH 3607** after 4:30 pm on **July 21st** to help out!

Debt load surveys finished up on July 6th, and the results are published on page **eight**. We had an amazing **45%** response rate, and this survey included increased limits on debt load. A few highlights: Average work term salary is **\$678/wk**, **9%** of students expect have more than **\$40k** in debt by time they graduate, and **25%** of students already have over **\$20k** of debt.

There should be a draft of a **letter to the Dean** regarding differential course fees that has been sent through our mailing list for feedback. As I said in earlier issues, the

Dean expressed interest in bringing this letter to university administration and discussing the issue of engineering students paying more for the same courses as students from other faculties (when taking a course part-time). By the time you are reading this, the letter will hopefully be on its way to the Dean, or soon to be.

I wanted to include a little bit of **general opinion on the Engineering Society** in light of all the recent debate. My opinion is that the Society exists to serve and represent its members. We currently do this in three ways: **events, services, and representation**. It is my opinion that EngSoc spends too much of its time hyping up its events, and not enough time hyping up its services and representation. I always hear people say that they don't use any of EngSoc's services, or attend any events. I normally respond to this by asking them if they use the CnD (everyone does, it's so cheap), and if they are aware of how we represent them (they usually aren't). Check out this page for more info about how we represent students: engsoc.uwaterloo.ca/representation. While I recognize that running events is important for EngSoc because they give attendees a social outlet and directors leadership experience, I think that more effort should be put into improving our other two facets. This is because it is our services and representation that affect more students. A few things that come to mind that present opportunity for EngSoc to do this are the new Capital Improvements Fund, and the new Exec structure. With a certain portion of

our income being allocated to making lasting impacts for engineering students, we should begin serving a wider range of people. The new Exec structure should help move the busy-work down the hierarchy and leave the executives more time to pursue initiatives. It is these initiatives that move the Society forward. I guess you can **summarize** my opinion by saying that EngSoc should be doing more than it currently is to serve its wider membership, but positive changes are underway that will help take us there.

Well that's pretty much it for my time as VP-Education. Other than a few small things here and there, my job is largely done. Thank you everyone for giving me this opportunity to serve you. I learned a ton and certainly grew as a person. I feel that my communication skills are much better now because of it, and I am certainly more confident in giving presentations.

Anyways, thanks for reading, I now pass you off to Derek Thompson who will be informing you of such matters in the future.

And So It Comes to an End



**SEAN
WALSH**
OUTGOING
VP-INTERNAL

Yes, I'm afraid so. This is my last executive report for *The Iron Warrior*. Don't be too sad... just remember all the good times! Like when I wrote an article to the tune of "So This Is Christmas..." Don't believe me? Go look for it in the IW archives! Also take solace in the fact that following me will be your new VP-Operations, Angela Stewart!

Before I ride off into the sunset, I leave you with a recap of the past 2 weeks! They were filled with the first ever Cardboard

Boat Race, our termly EngPlay, Beach Day at Grand Bend, the Second Coffee House, Semi-Formal and the Engineering Golf Tournament! All were incredible successes and I hope you were a part of them! Thank you to those Directors for putting their time and effort into making these events happen.

Before I go, I would also like to mention a great thanks to all of the directors who I have had the pleasure of working with. You all did an amazing job; it was a pleasure to work with you. I wish Leah and all of the new executives good luck in their upcoming 16 months! I'm sure we can expect great things to come from this group of dedicated people!

See you on the other side!

Internal to Operations



**ANGELA
STEWART**
INCOMING
VP-OPERATIONS

Hello bright shiny people!

I'm Angela Stewart and I'll be your VP-Operations under a trial run for the new executive structure. All your favourite EngSoc events/directorships that were previously under the VP-Internal portfolio will continue and have now moved over to the VP-Finance and the Student Life Commissioner. Where VP-Internal was more of an event management position, the VP-Operations' role is defined as one of representation and management of the operations of the Society. This includes managing all official communications and advertising from your student society, developing and improving student events and services, and working as a representative of the Society to various groups around campus, similar to FedS. I'll also be supporting my brilliant commissioners and directors.

Speaking of directorships, do you want that elusive "proven leadership experience" employers always seem to be asking for? Do you have an idea for an event or service you think will improve life for Waterloo Engineering students? Do you want a budget and a league of dedicated volunteers to help you pull this off? If you said yes to any of these, apply to be a director for the Engineering Society. Online applications are available on the EngSoc website and will close August 4th.

Take a break between studying and check out the Engsoc website (www.engsoc.uwaterloo.ca, under the Directors tab) to check out the different directorship positions. Have an idea for an event or service that's not listed here? Apply to make up a new directorship! Directorship positions look great on a resume, helps you develop leadership and management skills, and are a ton of fun.

The next 16 months are going to be quite the adventure and I'm very happy to get to represent you and work with an amazing team of volunteers.

Education for You



**DEREK
THOMPSON**
INCOMING
VP-EDUCATION

Greetings engineering students! With finals looming in the not too distant future, I don't plan on taking too much of your time at this point. I would like to introduce myself as your next VP-Education for the Engineering Society. Over the course of these next 16 months I plan to act as your voice for any academic issues that may arise. That being said, I am excited at what the future may bring for our school and faculty.

There has already been a flurry of activity from the incoming executive, myself included. Commissioner interviews have

taken place, directorship applications are being read, and my first exec report is being published (that would be this one)!

During my term, I plan on keeping a blog and Twitter feed which will be used to outline the current issues being covered at the meetings I attend. This should allow students who wish to keep up on any changes to their education to do so easily. This should also greatly decrease the size of any reports I make since I can refer to these easily attainable documents. Summary for the win!

Should you have any questions, concerns, comments, or rudimentary designs for an underwater flying space capsule, you can contact me at thompson.dbp@gmail.com. I am excited to work with you and the rest of the new exec team. Here's to a great 16 months!

Winding Down WEEF



**PRAVEEN
ARICHANDRAN**
OUTGOING
WEEF DIRECTOR

WEEF has had a fantastic Spring term. As we wind down for the term and move into finals, I'd like to thank you all for your support and hard work! WEEF is run for the students, by the students, and the phenomenal impact that we have been able to have as an endowment foundation would not be possible without you. You are amazing!

This term we had about \$190 000 in requested funding and we were able to allocate \$60 000 towards the improvement of undergraduate engineering education here at UW. We saw participation rates reach a solid 80% and we held an election for our next WEEF Director. We are also on track to reaching our \$10 million milestone in the Fall! A big thank you goes to our WEEF Assistant Directors and Funding Council class representatives for both helping with

meeting logistics as well as for contributing to the meaningful discussions that ensured the effective and efficient allocation of the available funding.

We will be holding our Spring Board of Directors meeting on Thursday, July 21st. At this meeting, we will be finalizing Spring 2011 allocations and also ratifying Brock Kopp as the new WEEF Director. Once the funding approval process is completed at this meeting, Spring 2011 funding will be available to groups who received it. We encourage you to make your purchases as soon as possible in order to ensure that the WEEF effect is felt by students immediately.

This will be my last WEEF report, so I would like to thank you for giving me the pleasure of serving as your WEEF Director. I'm looking forward to transitioning with Brock and wrapping up for the remainder of the term. As always, questions and comments are welcome to myself or Brock at weef@engmail.uwaterloo.ca.

Good luck on your finals and see you in January!

Changes for WEEF



**BROCK
KOPP**
INCOMING
WEEF DIRECTOR

Hi Everybody!

While I won't be directing much until January 2012, I just wanted to take this chance to say hey and give you a quick run-down on what's happening in my life.

As you may or may not know, I must be ratified by the WEEF Board of Directors in order to officially become a WEEF Director. This meeting is happening July 21st. If you would like to come out to an hour-long, fun-filled meeting on WEEF administration, let us know (weef@engmail.uwaterloo.ca), but otherwise, I'm sure Laurin will have a quick summary for you next term.

Praveen and I are working together right

now to start my transition and it's going well so far. I will be working on updating the WEEF website over the next few months to make it more dynamic and focus more on what WEEF is doing for YOU. I will also make sure the Town Hall meeting will be ready to go early next term for you to come out to with any questions or complaints about WEEF. In the mean time, if you have any questions or comments, let us know at weef.uwaterloo.ca.

Finally, I want to thank Praveen for all the work he has done for WEEF over the past 16 months, and for answering the many questions I will surely have in the future.

Food for thought: <http://tinyurl.com/WEEFtech>

Well that's all for now. Keep your stick on the ice.

Cheers,
Brock Kopp

Senate Reform Bill Needs a Sober Second Thought



**MICHAEL
LAANVERE**
1B MECHANICAL

Stephen Harper introduced his Senate reform bill which plans to make the upper chamber a more democratic entity. While that may sound like a good idea, it deserves a sober second thought like all other legislation brought to the Senate.

This legislation outlines two major reforms to the red chamber: provincial elections would occur to elect senators and senators will be limited to serving for 9 years. The first problem is that this contradicts the constitution. The constitution says that senators serve until they are 75. This was changed by amending the constitution, which previously said they serve for life. The new bill should also have to go through the amendment process – not just breeze through parliament because of the Conservative majority.

Constitutional contradiction aside, this bill does not seem like a good idea. Right now, the Senate is actually productive, which is something that people forget. The Senate revises and amends every piece of legislation passed by the House clause-by-clause. Look at the recent Canada Post legislation: senators had representatives from the government, union, and company speak and be questioned. The law was still passed, but at least it was thoroughly scrutinized and all parties involved got a chance to plead their cases and answer questions from the senators.

Elected senators will cause a huge gridlock in the legislative process. If senators are elected, they would start being more aggressive, causing bills to take exponentially longer to pass if some senators disagree with the House. Another problem is that our system would start to become the mess that they have in the United States where legislation is sometimes impossible to pass because the upper and lower houses are ruled by different parties. How could a

law ever be passed if the House of Commons was controlled by the Conservatives while the Senate was controlled by the NDP? Nothing would ever get done!

Having senators with limited terms is not only unconstitutional, but also illogical. Among the reasons why senators stay for so long is their experience and it keeps them unbiased. This is the sober second thought that the senate is all about. It lets people with years of experience in various backgrounds make sure that the legislation is sensible. It allows every bill to be thoroughly scrutinized by unbiased people with different experiences, not just lawyers and political scientists. Having term limits will cause senators to start scrambling for a job when their limit is almost up, which could cause them to vote a certain way in

order to please potential employers.

Overall, the Senate reform bill proposed by Harper is not the best thing for Canada. The Senate has served Canada for 144 years and everything seems to have turned out fine. That's not to say there have not been a few things that I'd like to see changed, proportional representation of the provinces, for instance, but this bill is not the proper way to go about it. It's probably going to be taken to court by Quebec because it violates the constitution where, hopefully, it will die. There is talk now of a referendum, and if that happens, please think twice about the repercussions of Senate reform before you vote on it. It's the least that can be done for an entity where "Sober Second Thought" is the slogan.

U.S. Debt Crisis



**CHRISTY
ROUAULT**
1B ENVIRONMENTAL

America's whopping \$14.29 trillion dollars debt ceiling is, for the tenth time in the past decade, going to fall short if nothing is changed by August 2nd. With a deficit of \$1 trillion expected this fiscal year, it is hard to imagine exactly how that much money will translate into spending cuts or tax increases. The United States' debt has been rising for decades now, and as they rebuild their economy after the recession, they are in no position to begin reducing it anytime soon. To reach President Obama's proposed budget for 2012, the ceiling would have to be lifted by \$2.2 trillion. For the Republican budget, it would have to be raised by \$1.9 trillion. If the ceiling is not lifted, federal spending would have to plummet dramatically or taxes would have to rise significantly, or they will be forced into a default.

With the Republicans pushing for spending cuts and the Democrats pushing for tax increases, it seems obvious that the Republicans are using the debt ceiling in their favour. Historically, the debt ceiling has been used for exactly that: a negotiation tool to change or protest existing policies. In this particular case, there seems to be more than enough reason for the Republicans to be outraged over the proposed budget as it does not provide a credible path to balanced budgets. Medicare and unemployment benefits could be the first to take a

hit. It seems that Obama's push to the left with maintaining current services will not be possible unless funding comes from taxpayers' pockets. Tax increases have been aggressively opposed by the Republican Party in budget negotiations, forcing President Obama to make difficult decisions, especially with his approval ratings standing so low.

The effects of such an influential country defaulting could be disastrous not only to the US, but also to countries who invest, trade or collaborate with them. Unlike the last case of a default, which was Peru in the year 2000, the US economy directly affects the world economy and is in no position to start paying off debt any time soon. Obama has said that if a default were to occur, it could trigger another recession and would have serious outcomes for the economy. Both parties agree that a default would have consequences.

A default is very unlikely as congress has never failed to raise the debt ceiling, but the possibility is definitely lingering. A default in the US could happen before Greece hits rock bottom, which is a startling comparison made by many to put the urgency of the situation in perspective. Obama's proposal of a \$4 trillion deficit reduction within the next ten years has been denied by Republicans. An agreement of \$2 trillion seems more realistic at this point, although the Republicans seem reluctant to do so. If the treasury does not issue new debt, payments to creditors and other payments, including military salaries, social security, Medicare payments and unemployment benefits, could be limited or delayed.

Engineering Co-op Student Debt-Load Survey Spring 2011

Term Total

Total Responses	879
Number of surveys sent	1954
Response %	45%
# of Students in core classes	2605

Does your family support you financially? (867 responses)

Yes	63%
No	37%

Average Cost of Living for a 4 month School Term (861 responses)
\$10,161

Average Cost of Living for a 4 month Work Term (813 responses)
\$4,127

Have you applied for local aid or other bursaries to pay for school? (862 responses)

Yes	42%
No	46%
Not Yet	12%

Have you applied for OSAP? (873 responses)

Yes & Received	38%
Yes & Denied	18%
No	44%

Do you have a loan for academic purposes? (861 responses)

Yes	39%
No	51%
Not Yet	10%

How much is the student loan? (469 responses)

1-999	13%
1000-1999	5%
2000-4999	15%
5000-9999	30%
10000-19999	25%
20000+	11%

Has the differential tuition increases caused you hardship? (862 responses)

Yes	49%
No	23%
Not Yet	27%

How much debt do you expect to be in by graduation? (844 responses)

No Debt	28%
<4999	14%
5000-9999	13%
10000-19999	17%
20000-39999	16%
40000+	9%

Do you live at home while at school? (873 responses)

Usually	8%
Used to	2%
No	89%

Have you lived at home while on work terms? (872 responses)

Always	17%
Sometimes	45%
Never	36%

Average of the weekly salary while on work term (723 responses)
\$678



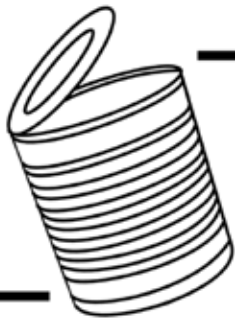
*End of Term
Party:*

**Too Soon,
the OT**

Dress up
totally tastefully

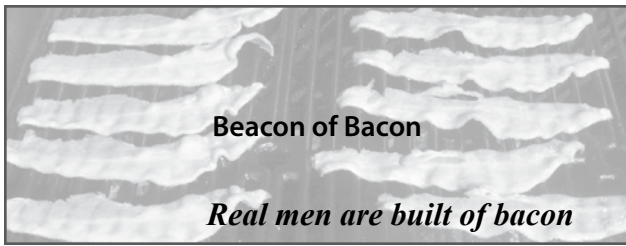
**Friday, July 22
POETS 8 - 10 PM**

THE TIN SOLDIER



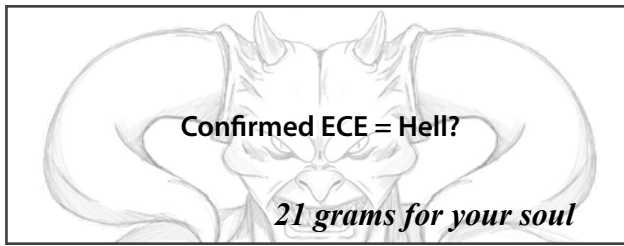
THE BASEMENT PUBLICATION OF THE UW ENGINEERING SOCIETY

VOLUME IDK ISSUE X | WEDNESDEI, JULIUS 20, 2011



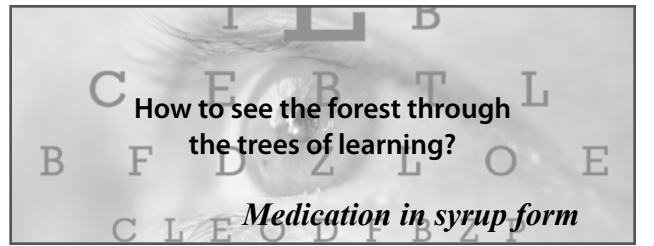
Beacon of Bacon

Real men are built of bacon



Confirmed ECE = Hell?

21 grams for your soul



How to see the forest through the trees of learning?

Medication in syrup form

birds.com/thetinsoldier

http://tsoldier.uwaterloo.ca

Grand Opening of QNC Almost a decade in the making



ALISON LEE
1A PICOTECHNOLOGY ENGINEERING

Future Archives: September 09, 2014

Following Orientation Week 2014 was the grand opening of the long-anticipated Quantum Nano Centre. The original purpose of the structure was to attract new students to UW's Nanotechnology Engineering program with shiny windows, hexagonal frames, and the promise of high-end clean rooms and exclusive lecture halls. After five classes graduated without seeing the building open, suspicions were raised about whether the QNC was actually being built or whether it was all just a marketing ploy. Pictures taken in 2011 showed large empty rooms and labs, and actors were allegedly hired to stand in the pictures wearing construction gear to create the illusion of progress. Another theory is that the QNC construction site was just part of the University's continued effort to eliminate all campus green space.

A university representative denied these claims and explained instead: "The actual reason for the extra delay is that, following initial delays due to falling windows and competing campus construction, the original design was no longer innovative. Because this clashed with the Waterloo brand, we had to innovate a new construction method such that the increasing rate of nanotechnology innovation would not

threaten the QNC being innovative on its projected opening. We basically had to beat Moore's Law with innovative innovation. Double innovation, it's so intense."

Because the features of the QNC are so innovative they have yet to hit the market, the exact construction tactics are not public information and are undergoing patent approval. Information has leaked that the building's interior was self-assembled. The reason the building frame was on campus for many years before opening was because nanotechnology engineers had not yet figured out how to scale up molecular self-assembly methods to be commercially useful, but the QNC is proof that they can scale this up by 10 orders of magnitude or more.

There are now conflicts developing between the Institute for Quantum Computing and Waterloo Institute for Nanotech-



Quantum Nano Center Opening Day

The Face of Boe

nology and the UW staff who designed the self-assembling QNC. The staff members argue that, because they discovered it, the QNC actually belongs to them now. The university plans to settle with them by commissioning their technology to

build three new engineering buildings, E15, E16, and E17, to go on top of the existing antique E2 and E3 buildings. The buildings will only take about 2 weeks to build themselves, so stay posted next issue for their grand openings.

Taxonomy of Nerds



KATHY BETH TERRY
UNDERCOVER NERD

Engineering is a breeding ground for nerds. Like a free radical, propagation of nerds is quick and virtually unstoppable. Contrary to popular opinion, nerds have a very complex speciation that is hard to distinguish unless you're in the inner ranks (translation: not all of them are the same)! Therefore, here is an insider's perspective to the many species of nerds you may encounter at Waterloo—and how to deal with them if you're trapped in their presence for too long.

The Grade Grubbing Nerd – These nerds have one thing on their mind at all times: school and school only. Not only do they give 110% attention to school work all day every day, these nerds are extremely high-maintenance, especially during group projects and exam time. These nerds believe that if they can't do it, nobody can—heck, even if they can do it, nobody else *still* can. Don't be scared if they snap or yell at you in group

projects—rather, realize that projecting their anger onto you is just a way of dealing with their own inner insecurities and perfectionism.

How to Deal: The worst thing you can tell a Grade Grubbing nerd to do is calm down. However, keeping *yourself* calm, and being rational can do a lot to avoid unnecessary conflict.

The "I have an opinion" Nerd – The most popular of the nerd types, this nerd may seem deceptively social. I-have-an-opinion types scavenge the internetz for information on anything from politics to philosophy to crude sexual humour, and as a result, believe themselves to be Ph.Ds on the subject matter. Don't mistake their talkativeness for sociability, though—they are often just looking for a channel through which they can vent their wide array of useless knowledge rather than doing something productive with said information (like writing in *The Iron Warrior*). However, underneath their rather douche-bag exterior, these nerds can be surprisingly refreshing people to talk to if you're tired of making awkward small talk with random strangers.

How to deal: If you are in the present

of IHAO nerds, the best way to extract yourself from their presence is to agree with their opinion. Swallowing your pride might suck, but it's better than having to swallow their spiel. Alternatively, you can use your own witticism to make them look like a fool.

The Sci-fi/Fantasy Nerd: These nerds are the most varied in type—they can range from very quiet and geeky, to very loud and overbearing about their choice of science fiction or fantasy medium. The loud and overbearing are the ones who have memorized huge chunks of books or movies like *The Matrix* and will willingly shout these lines at you in opportune moments. Take heed, though: regardless of whether these nerds are quiet or loud, these nerds are fused together by one common thread: if you argue against their fetish, they will drive you into the ground.

How to Deal: Sci-fi and fantasy nerds aren't just passionate about *their* book—they're passionate about every book! So if you really hate one of the books they're talking about, trying discussing your favourite book or movie instead.

The Vat of Facts Nerd: These nerds don't have photographic memory—it's

more like a constantly filming video camera. They can spew out a colossal amount of scitech-geekery at you, from the number of pixels per square inch on an iPhone 4 to a discussion on the life cycle of a virus in your body. Unlike the IHAO nerds, VOFs can be very gentle but also very boring. They are truly passionate about science and technology—they just don't know how to get this message across without sounding like a textbook.

How to Deal: VOF nerds can be very sensitive, so approach with caution! If you're caught in the presence of VOFs nerds for too long, try steering the conversation toward your area of interest. However, do understand that even the mere act of being interested can spur VOFs on, so instead of being polite, be honest—but nicely!

However, the best way to remedy these situations is simple: try becoming a nerd yourself! Nerd transfiguration is virtually painless, and nerds are more than willing to convert fellow non-nerds to their way of life. But finding the right type of nerd to be is essential—and there are always new and undiscovered species of nerds out there.

Letter to the Dictator of Allowed Content

MICHAEL SOLARIS
SUPER PHOTOMAN

Dearest Dictator of Allowed Content,
This is probably the first actual letter to the editor *The Tin Soldier* has ever received, but I felt it was necessary to allow the readers of *The Tin Soldier* who look forward to some comedy every 4 months to know that there may have been more

laughs in this issue if *The Tin Soldier* was not being censored. I have attached the photo as a final plea to at least have it printed as a letter to the editor, but if it does not appear, then please head on over to [redacted] to take a look at the picture that was rejected.

Sincerely,
Michael Solaris
Michael Solaris Photography

<Insert photo here>
Dictator of Allowed Content's Note:
Unapproved content has been redacted.

From *The Tin Soldier* Staff

REVOLUTIONARIES
TIN SOLDIER STAFF

A revolution begins with an idea. It can be the simplest idea. It only needs to be an idea that brings people together, a common objective and a goal for the future. We, as *The Tin Soldier* staff, have seen things that we cannot forget. We must learn from our fallen peers and honor them by forging on in the hopes of a newer, brighter day.

About nine months ago was the anniversary of an event to be remembered in history. A man wished to remind us that in our world, fairness, justice and freedom are perspectives, not just words. In about three

more months, November the 5th will return again. I challenge you, no - we challenge you to be bold, to be brave and to inspire change for a fair, just and free thought-provoking forum.

We undoubtedly will be chastised and silenced by our big brother and sister for our actions in publishing this issue of *The Tin Soldier*; however, we feel that it is important to remind everyone of the serious lack of truth and transparency within our community. So if you are unaware of the happenings of the censored world, then I would recommend that you leave November 5th unmarked. However if you see what we see, feel as we feel, and seek as

we seek, then we ask you to speak out as we have, in song and dance, and, together, we shall publish a paper that shall never be forgotten.

As a little girl in a red dress once sang:
"The sun'll come out
Tomorrow
Bet your bottom dollar
That tomorrow
There'll be sun!"

And we, your *The Tin Soldier* staff, look forward to a day where we can be proud to stand in the light and sing our own song, where the sun rises today.

Healthy Bakin' with Bacon

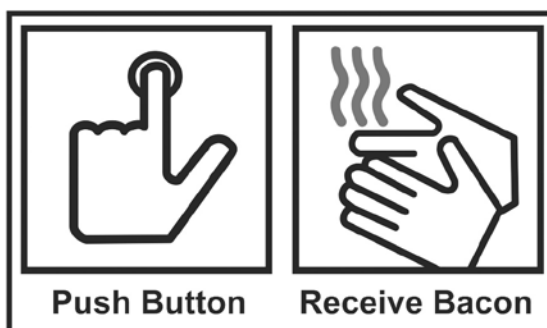
EPIC TEAL MIME
NO HEART ATTACK HERE

Om nom nom nom! How else can you describe the savoury, sweet taste of nature's greatest creation? There is an endless list of adjectives to describe the mouth watering flavour and smell of the best that pork has to offer. If there is one thing a university student ought to know it is to cook bacon at least 12 different ways. Along with fruits and vegetables bacon is essential to your daily diet, if you are not eating bacon at least once a day you are not leading a healthy lifestyle. How do you think Lance Armstrong won all those Tour de Frances? And Michael Phelps won all his gold medals? Bacon...and lots of it.

There are a variety of ways that nature's treat can be cooked: pan fry, microwave, bake. Of these the most essential is the pan fry. This method allows the bacon to be cooked to the preferred crispiness and also leaves the delicious bacon nectar behind, aka bacon grease, to be used as both an anti-stick substance, and as a flavour enhancer in future meals like: eggs, pancakes, grilled cheese, pork chops and bacon. So throw out that old canola oil or Pam, and go au naturel!

Most people associate bacon with eggs.

Although this may be a tasty combo, it is a culinary tragedy to limit bacon, with all its diversity and dietary benefits, to only one meal. Bacon makes everything better. Name any food that is not improved by bacon and you are a liar. If living in residence has taught us anything, it is that any shitty meal (and I mean shitty), can be improved exponentially with the addition of bacon. Whether it is a peanut butter and bacon sandwich, canned soup with bacon, Kraft dinner with bacon bits or just bacon and good old pink lemonade, bacon has made otherwise gag worthy meals into tasty treats.



Bacon, however, need not be relegated to a tool used for making crummy meals better. It is also common in the higher realm of cooking. Ask any of the world's most famous chefs what their favourite

cooking tool is and we can guarantee you that they will say bacon. If they don't, then they aren't famous. From pasta to seafood to soup, bacon has proven its place in culinary culture.

I know what you're thinking by now: "Sure bacon tastes orgasmic, but the scientists and doctors say that bacon is bad for my health." Well that's just a blatant lie. It's because these so called experts fail to take the whole picture into account. Sure, bacon MIGHT clog your arteries and MIGHT increase chances of heart disease, but it provides some much needed happiness in your otherwise sorry day. If you are feeling down, there is nothing better than a good dose of bacon. A happier person is a healthier person! And because bacon equals happiness, bacon also equals healthiness! So to hell with the 'experts,' bacon is one of the main keys to a happy and healthy life.

One more note before we sign off, don't be fooled by any of the poser bacon out there. Whether it is turkey, chicken, or dare I say "vegetarian," these so called bacon impersonators are more fake than Pamela Anderson's knockers. Stick to pork, that's the way nature wanted it. So next time you want to enjoy a well deserved meal of your favourite porky snack, don't feel guilty, you're doing your body and your mind a favour!

"Friendly" No Longer OLT Friendly

LEE EMBREE
4A NICKLE

Whether you are an orientation leader or an incoming first year student, the Natter Intermediary Committee to Konstrain Exclusive Language, (NICKEL), passed a list of words that are no longer appropriate for use during Orientation Week. The driving force behind the updated list is that administration strives to make everyone feel welcome and excited to be a part of this school.

Previously, words such as "Frosh," "lame," etc., were excluded, as learned by many students during their Orientation Leader Training. In the letter sent Monday, some additional words were banned, including "dirty," "sunshine," "puppies,"

"kittens," and "friendly." The rationale for each can be explained below.

The word "dirty" has been banned because the NICKEL felt like "dirty" had some sexual connotation. "Dirty," as seen by the NICKEL, was rarely used in a productive or constructive fashion, and therefore would more likely offend incoming students if allowed. When asked about why "dirty" had been banned, the NICKEL chair John Johnson said "...stop being a... dirty...NICKEL..."

"Sunshine" was taken off the list of acceptable words because recent studies have shown that too much sunlight is correlated with skin cancer. The NICKEL stated in the press conference that skin cancer is not something the entire university community promotes.

The NICKEL felt that the words "puppies" and "kittens" were too local to be allowed during the Orientation Week. Students coming into campus may not have had puppies or kittens and, as such, will feel excluded if that type of language is being used. "Friendly" has become a word that has been associated with sexual or abusive language in the local community, and as such, is something that is to be avoided.

A second reminder email will be sent out to all incoming students and leaders the week before Orientation in order to remind students of the rules they need to follow. In the meantime, all leaders have the Call to Action to avoid using the words mentioned above, or any other words, so that all incoming students feel welcomed and loved when they arrive on campus.

THE TIN SOLDIER

The Basement Publication of
the UW Engineering Society

Dictator of Content
M.M.M.

Minions-in-Chief
Inheritor of Minions
2014

Tetris Minions
Darnell
Pokity-Poke-poke

Comma Minions
It's Not Funny
Yes It Is

Flashy Minion
It Blinds Me!

Spammy Minion
You've Got Mail!

Marathon Minions
I Run Faster!
LIESSS

M.I.A. Minion
Vacant

Type-writing Monkeys

Kathy Beth Terry
Michael Solaris
Proud Mutineers
Epic Teal Mime
Lee Embree
Santa's Mistresses
Emperor Penguin
Tarc Man
Jelly Belly
An ECE Student
Beer More Beer
Double-O-Kevin
Darnell Kumar
Katie Potatie
Hans Solo
Leroy
Kris-T

Incoming Victim
Jon Martin

This is the small print. No one reads me. By reading this paper you have officially given me life. Your soul is now being stored in a tin can and might never be found ever again. All hope for redemption is gone.

Thank you for flying Engineering Airlines. Please remember that this is a non-smoking flight. Should you wish to disembark, please finish all the crosswords since 1980. We may or may not be able to provide these to you and no fewer than 10 of them are impossible to complete.

This is the rant of a tired copy editor. It should probably be modified before being published however *The Tin Soldier* does not like copy editing therefore it might still be published. No one should be blamed for anything anymore forevermore.

We would like to disclaim the existence of the North Korean Campus as you can only scroll infinitely for so long before you go absolutely crazy.

If you reached the end of my rant then have a cookie and don't come over to the dark side.

Pole Vs. Counter-Pole

POLE

BiPolar Disagreement

COUNTER-POLE

SANTA'S MISTRESSES <3 ELVEN ENGINEERING

While the South has provided "endless contributions" to the world (we're just being nice here), the South cannot compete with the aura surrounding the North. It's not hard to believe that the North's awesomeness transcends far beyond the gift-to-the-world that is St. Nick.

As an animal slightly more evolved than the *Homo sapien*, you should know that the motherland of maple syrup and hockey is the only country that can live up to the name of the GREAT White North. Besides these amazing entities, the land of creativity (which is hasn't hard to prove given that Northerners can make IKEA-worthy homes out of snow AND invent twenty words for said building component) have produced prominent international policy makers like William Shatner (Star Trek FTW!). Also, just for comparison, the neighbouring country SOUTH of the Great White North produced George W. Bush. 'Nuff said.

Expanding on the above-mentioned prominence of figures hailing from Don Cherry's kingdom, a special mention has to be made for Colin Mochrie. The man with the glorious, shiny mass that is his head is, by far, the funniest man alive. His love for cats, animal genitalia, audio clues and folding up dead people like balloon animals is what epitomizes his fabulous existence (and the related presence of his extremely fashionable and loudly coloured Hawaiian shirts).

If you haven't figured out that the North's fame and grandeur is directly attributed to Canada's presence on the world stage

(PUN!), then you are, without a doubt, intellectually challenged. Now let's talk about the Arctic. Even the South is flirting with the idea of getting some of that! It's pretty obvious that the NORTH end of the world is the amazingly hot girl in school that everyone is crushing on and the SOUTH is the geeky, uncool, acne-ridden pre-pubescent boy who is hopelessly in love with her.

Now, for a quick second, let us broaden our view to the South, a place full of mystery and failure. Yes, failure. Failure as in the plethora of bird species in the southern hemisphere, like penguins and ostriches, that cannot fly. These birds just sit there, look cute and, if need be, shove their heads into the ground to hide. What is more pathetic is the fact that they believe that sticking just their heads in the ground will save them from ferocious beasts. Also note that these birds use the same manoeuvre to hide from embarrassment; ironic, much? In all seriousness, the North Pole has reindeer that can fly. Reindeer, who have nothing but antlers for aid, can fly and you're telling me that these southern BIRDS with WINGS can't fly?!? For the record, if these birds belonged to the NORTH, it is guaranteed that they would have been able to fly; unfortunately, they were not given that privilege and grew to be substandard creatures.

Now, to the most obvious advantage of North over South: St. Nick. He gives children presents and hope; does any figure from the South provide for the world in such a way? I think not. Seeing as little fat birds in mock tuxedos are the lone contribution to the world from the South, it's safe to say that this argument is very polar, don't you think?

EMPEROR PENGUIN <3 CHUBBY CHASERS

There are three kinds of debates in life: those which are trivial and localized, those which define a generation, and those which define the human condition. Passions can flare for all three, whether debating the merits of Backstreet Boys over N'Sync (though with JT on the latter's team, it's a wonder that anyone could disagree with the superiority of the great men with whom we prematurely had to say "bye bye bye"), of marriage equality, or of moral absolutism against relativism, stances are chosen and rivalries formed. The debate at hand today is undeniably the most polarizing of the third class, and hopefully after reading this argument there will be no more uncertainty: the South Pole is superior over the North; end of story.

Northerners like to argue by heralding the alleged merits of the home-invading glutton, Kris Kringle. Kringle, known by the those unfortunate enough to live in his frozen tundra as "Jolly Leader", is a ruthless autocrat who makes citizens toil in his work-camps making toys for "the kiddies". The pollution from his sweatshops has caused permanent environment damage, resulting in disfiguring mutations including severely stunted growth and bioluminescent tumours. He frequently engages in international espionage for the sole purpose of watching children as they sleep, perversely keeping meticulous record of their daily activities. Around the darkest nights of the year, Kringle actually infiltrates foreign nations, breaks into the homes of children and leaves behind

"presents" to let poor victims know he was playing with their children's stockings. Of course, a monster like Kringle makes sure to leave wealthier children ponies and bicycles while poorer children get underwear and socks. He might have been brought to international justice except he employs hundreds political decoys to wander street corners and shopping malls.

The South Pole is so tremendous (especially when compared to the North) that even wild animals native to the North Pole attempt to traverse the globe searching for Southern comfort. In a documentary by Coca-Cola, a family of polar bears was followed as they journeyed to the South Pole just to enjoy a Coke with the citizens of the South Pole. The bears, used to Jolly Leader's despotism, assumed that they would have to pay to receive refugee status from the benevolent penguins, and made the dangerous move to steal from the Fat Man's stockpile of sweets. Would a koala bear ever travel to Canada for Mountain Dew? Would a Panda even ponder paddling to Peru for prognosis from Dr. Pepper? Of course not! Only a contrast as great as that between the nefarious North Pole and splendiferous South Pole could foster such desperation.

Herr Kringle's propaganda machine attempts to paint the North Pole as a utopia in which he controls the weather and the happiest of people live, but the truth is clear: the North Pole would make Mephistopheles barter to escape. The South Pole, by contrast is a wonderland which fosters harmony, scientific breakthroughs, and the calm, comforting baritone of Mr. Morgan Freeman.

A Real Exec Report

TARC MAN IS GOING TO THE BOMBER

PSYCHEDELIC DREAM SEQUENCE

This is the story of Goldilocks and Fiscal Responsibility. Once upon a time, there was a bonnie young lass named Goldilocks. She was sauntering through the woods on the way to her grandmother's house when she happened upon a wee bluebird. His feathers were ruffled and Goldilocks, being of an inquisitive mind, asked him what was wrong. "My finances are a disgrace!" exclaimed the Bluebird, "I have been financially irresponsible, spending all my money on decorative shrubs and commemorative plates!"

"Oh no!" cried Goldilocks, "You should come with me on an adventure of economics!" The bluebird complied reluctantly and joined Goldilocks on her journey.

They continued to wander through the woods, when they happened upon a small cottage. Eager for a place to sit down and discuss financial matters, Goldilocks unlatched the back door and let herself in.

At this point, the author promptly ran out of ideas and the bluebird vanished in a puff of apathy. Goldilocks then began to rifle through the cottage's drawers, when she happened upon a series of important financial documents. After investigating their contents, she realized that one of the residents of the cottage had poor management practices. They spent too much money and ended up in debt. However, further investigation revealed that another of the cottage's inhabitants never spent any money. They kept all of their money in a shoebox under a bed and, due to inflation, it had lost value.

Dismayed by the residents' lack of fiscal responsibility, she collapsed on the couch.

She then noticed a thick envelope on the coffee table. Curious, she peeked inside.

"Gee whillikers!" she jubilantly claimed, "This is the most incredible financial document that I have ever seen!"

Inside the envelope was a set of documents labeled "Waterloo Engineering Society Finances". Drafted by one "Marc Tan" and supported by "Mary Bland," the reports within indicated a veritable "motherload" of excellent fiscal management. Intrigued, she started to read them:

"The ECIF met on Wednesday and we are presenting our allocations at tonight's Eng-Soc meeting, so come out tonight to find out what is being allocated. Also council must ratify our proposal so definitely be there!"

Coverall Day was a great success, selling 15 coveralls, which is amazing! I also finally got our society allotment after walking to FEDS and giving their VP Administration and Finance a 'wonderful' talk. So I can pay people again, like Mary! Anyways, thanks everyone for the last 16 months and I'd like to wish David Birbaum good luck on his next 16 months as he's going to need it. I also want to say good luck to all the new incoming exec; have a fun ride! I'm not applying for any directorships, so too bad, you won't get to see my beautiful face organizing stuff anymore. Also thanks to my directors; you did what I couldn't!

FINALLY GET YOUR RECIEPTS IN BEFORE EOT OR ELSE!!!!!! (I won't give you money back)"

Taken aback by the phenomenal work before her, Goldilocks beckoned her bluebird friend back from the ether, to show him the newfound example of economic excellence. "Oh, glorious financial management practices," she cried, "I'M NEVER GONNA GIVE YOU UP!"

I am not a *The Iron Warrior* staff but pretended to be one to write this note's note:

This box usually contains some useful, relevant information regarding how the opinions above are blah blah blah. But honestly, who cares? They're opinions.

On the other hand, stories are much, much more interesting. I believe that stories should be put into these boxes instead. Wouldn't you agree? Please send in your opinions to i_am_an_email@emailaddress.ca!

Section 666

AN ECE STUDENT ONCE UPON A TIME

Electrical and Computer Engineering has long been one of the flagship departments for the University of Waterloo; however, ECE has its dark side. Many eager prospective students are lured in by promises of excellent education and even better career opportunities. First year seems good with a large amount of control and guidance coming from the first year engineering office, however, this all changes for second year. For those that are unaware, there is mandatory completion of the Authorization of Soul Transfer Form. If you are in ECE and have yet to fill out the form, there may be large late fees. This form can be found at <http://ece.uwaterloo.ca/final/Academics/Forms/SoulTransfer/>. Students receive section 666 of the policy manual on delivery of the form to room 0666 of EIT. The following is a summary of then most often implemented policies under section 666.

Subsection 666.0: Time Commitment
(a) Students are expected to spend 20 hours a week dedicated to each course.

(b) If a course is offered from another department with a similar description, the ECE version of the course must cover at least twice as much material at twice the

detail.

(c) Instructors are to coordinate in order to ensure that major projects are due in groupings.

Subsection 666.1: Labs

(a) If labs cover material presented in lectures, they are to cover content prior to the content being covered in lectures.

(b) Lab groups that are completing labs on-time must be informed of further restrictions.

(c) Lab groups that continue to complete on-time after (b) is implemented must be provided with faulty equipment.

(d) The expectations for lab procedures should be detailed, but these details should not be provided to students.

(e) Lab manuals should be reviewed yearly for material to be removed. It is mandatory that material is removed during each of these reviews. Actual lab requirements should not be changed to accommodate the removal of procedure steps.

Subsection 666.2: Examination

(a) Final exams are to be worth 50% minimum.

(b) If a student does poorly on an exam, this exam is to be worth more.

(c) Midterm exams should not be short enough for a student to complete in the time permitted.

Beer Buzz: Laker Lager

The Champagne of Beer



BARLEY BABE & HOPPY HUNK
4A BEERINEERING

Welcome back readers, to the wonderful world of beer. This week we will be reviewing what we can truly say is the best beer we have ever tasted – Laker Lager. Actually, that would be an utter and complete lie. It is in fact the best drink (non-alcoholic included) we have ever had and ever will have. EVER. It's name falls trippingly from the tongue – Lllllakker Laaaagggerr. So many L's, so much alliteration. It is categorized as a discount beer, but don't let this fool you! The story of Laker Lager is an enchanting tale of a diamond in the rough who falls in love with a beautiful princess and they – wait a second, that's the plot of Aladdin...well it does have some of the same elements. For instance, it is in rough packaging (like a street rat), but has a heart of gold! Also, if you drink enough of it your dreams will come true and you will be in a happy, brightly coloured world, full of beautiful people where songs spontaneously erupt at the right moments. We can't guarantee there will be a cute monkey in a hat, but maybe, just maybe, if you drink enough and believe with all your heart, your wish of having a monkey servant will come true.

Laker Lager is a Trappist beer which

has been brewed by the Brick monks of Waterloo since the 18th century. Its popularity skyrocketed in the last 100 years due to its proximity to Laurier High School, and the University of Waterloo. Unfortunately, students do not respect this fine beverage of high quality and use it for many highly competitive sports. They also spill it on many surfaces without care. For such an excellent beverage it is quite cost effective, and is produced in massive quantities.

It tastes best in a small volume glass at room temperature and we strongly advise decarbonising it in a big plastic tub (preferably in a sketchy garage, but a sketchy kitchen is also acceptable). To savour its delicate taste it must be drunk as fast as humanly possible while in a crouching position. It is crafted from the finest quality ingredients, plus one secret ingredient. The secret ingredient is rumoured to be the souls of ECE students, but we know for a fact that it is actually the crushed hopes and dreams of engineering frosh. It has huge, dense head and pours a magnificent amber colour. It smells of fresh cut grass, new parchment, toothpaste, and Ron Weasley's hair. Its flavour is like a unicorn high-fiving a narwhal – absolutely sublime!

But truly, it tastes worse than someone peeing in our mouths after they've just won an asparagus-eating contest. Ew. And we always say Fear No Beer – but in this case you should steer clear!

Letter to the Editor

Failed Excuses



DOUBLE-O KEVIN
1B ETHANOLISM

Dear Fräulein EIC,

It is with a heavy, but noble, heart that I write this letter to let you know that I will be unable to submit my article, "Failed Excuses for Missing Deadlines." I actually totally did finish it and it was so good that the Nobel committee requested that I not only win all the awards but also that they should rename the award after me because my article was "DYNAMITE." Anyways, after rejecting the Globe & Mail for the third time (at which point they were so desperate they said I wouldn't have to include a paragraph explaining how Harper will decimate tardy articles) but I said "No! I have an obligation to the EIC and must maintain my pristine record of punctuality!" I loaded my USB with my article, and made way to the IW office. Except when I was on my way this really big guy came up and said "Hey you! I'm going to take your money and beat you up!" I said, "Do what you will with me, but spare my articles for *The Iron Warrior*!" And he said "GRRRR! I hate *The Iron Warrior*!" And I said "You cold-hearted monster!" and then he started cackling and ripping up issues of IW and referring the first-years as "frosh." He then said "I'm going to go to the IW office and destroy the paper!" and

I was like "No, you can't! I will defeat you even if it means that I won't be able to submit my article that I totally wrote on time and it will look like I didn't do it on time but I really did and it's going to be lost in a heated battle in order to save *The Iron Warrior* as a whole and surely the fate of the paper is more important than a single article and I should really be heralded as a hero and not irresponsible but rather super-responsible, you fiend!" By the merit of sheer necessity I then acquired the sword of Douglas Wright and smote the wretch! Sadly, however, in the heat of valiant battle my article was lost in order to save *The Iron Warrior* as a whole and surely the fate of the paper is more important than a single article and I should really be heralded as a hero and not irresponsible but rather super-responsible, my friend! As the beast man lay on the ground, his dying words were, "In my last moments I have seen the light, probably by witnessing a man as punctual and responsible as thou. My dying wish is that you tell the EIC that your article was totally done on time, for real, and you only lost it for the good of the paper and you should really be heralded as a hero and not irresponsible but rather super-responsible." Two tears rolled down my cheek: one for the reformed man, and the other for having lost the article. Anyways, this absolutely won't ever happen again...probably.

Love,
Double-O Kevin

School of Optometry Discovers Cure for Waterloo Vision



DARNELL KUMAR
1B MEDICINE

Researchers at the Waterloo School of Optometry have made a breakthrough in medical innovation with a groundbreaking cure for an endemic with which a whopping 87.32% of UW student faculty are afflicted. This rampant condition is, of course, the infamous plague of Oculodis-torisis, better known as Waterloo Vision.

Waterloo Vision is a disturbing phenomenon that is characterized by deluded fantasies regarding the world in which the patient lives. Specifically, primary delusions of Waterloo Vision include distorted perceptions of the physical attractiveness of people around them, unusually high expectations of mental capacities, and inability to notice fashionable clothing in contrast to casual, worn-out clothing. When interviewing sufferers of the affliction, common testimonies include, "I was in Toronto and everyone was so fashionable and beautiful. It was ridiculous. But

then I told them a joke about a Jacobian they didn't know the difference between spherical and cylindrical coordinates! I assumed they were joking, but it turns out they weren't." Others cite confusion when asking their special dates out to a seminar on Quantum Field Theory and being rejected. "I guess she must have already been familiar with it," said the rejected engineer.

The researchers claim they've found a positive response in rats afflicted with Waterloo Vision (they couldn't relate to other rats unable to solve mazes in un-

der a minute). Rats treated with a daring new drug, "ethanol," were found to first stop solving puzzles, then spend less personal time learning new programming languages and finding enjoyment in activities other than StarCraft. The rats were also observed excreting hormones. Male rats' Douchiness coefficient increased 70% and both sexes excreted 67% more pheromones increasing attractiveness to rats outside their colonies. The radical treatment has already entered clinical phase III trials, with expectations to be on the market as soon as December 2011.

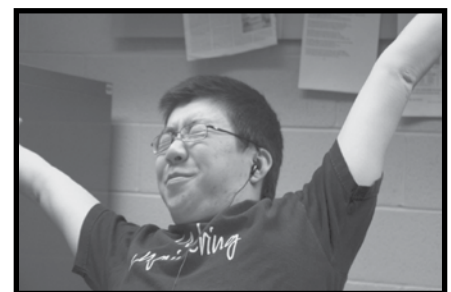
"Who do you blame?"



"Me"
Katie Potatie, 2B NOT IN NANO



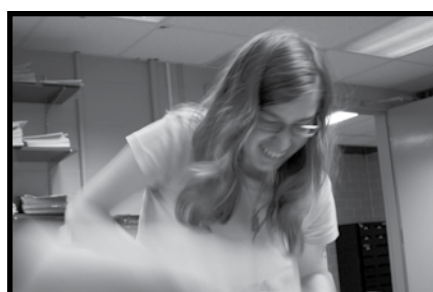
"The bald and not excessively bald and not excessively smart hamster obeyed a terrified and not excessively terrified hamster"
Hans Solo, Drunk Jedi



"The paper bag princess"
Leeroy, 2B Voting



"Blame it on the Alcohol"
Kris-T, 2B Candy



"Roy"
Dictator of Allowed Content



"Computer Engineer Barbie"
Inheritor of Minions

Point Vs. Counterpoint

The benefits of nuclear energy outweigh its associated risks.

POINT

SPENSER GOOD
1B MECHANICAL

In the wake of the recent earthquake and tsunami in Japan and the subsequent nuclear disaster at the Fukushima nuclear plant, questions have begun to arise concerning the safety of nuclear power. Although it has always been a hot button issue, more and more people who were once apathetic or even mild supporters of nuclear power are jumping on the anti-nuclear bandwagon. The terrifying images shown on media outlets worldwide and the arrival of radioactive air from across the Pacific has made nuclear power seem like a dirty, dangerous and even reckless process that is not only damaging the environment, but also threatening mankind. However, don't let yourself be fooled by the alarmists. The quest for sustainability in the face of a ballooning global population lies with nuclear power more so than it does with windmills, solar power or any other sort of renewable energy. We cannot let one incident cloud our judgement and make us flee from the only viable source of clean energy that we have.

Denying the potential dangers of nuclear power is stupid. These are valid concerns that must be addressed if a country plans to generate its energy through the use of nuclear power. However, to address these fears, we need to examine these concerns objectively without alarmism. The facts show that nuclear power is not only safe, but also much less deadly than any other major source of energy, even the hailed "alternative sources" such as solar and wind.

Let us first examine major incidents that can be "blamed" on the use of nuclear power. As of now, there has been only one incident involving fatalities in the entire history of nuclear power usage that can be attributed conclusively to radiation. This, of course, was the Chernobyl incident that occurred in 1986 in the Ukraine, then part of the Soviet Union. Although devastating, this accident must be viewed with perspective. This plant was inadequately taken care of, in bad repair, was old and was poorly run. Above all, it existed in one of the most oppressive and incompetent regimes in the history of mankind. Despite this, the Chernobyl plant would have never melted down under normal operations. It was a foolish and risky experiment, which involved testing a potential emergency core cooling feature that caused the incident. Chernobyl was a perfect storm. Even the slightest regard towards safety would have prevented this accident, and that is why an event like Chernobyl was one hundred percent preventable and is not a fair basis of an argument for anti-nuclear advocates. Despite this, only 65 deaths can be 100% directly and conclusively attributed to the Chernobyl incident (according to a committee run by the United Nations). As for Fukushima, there is still no conclusive list on the deaths directly attributed to its quasi meltdown. Right now, however, ZERO deaths can be directly attributed to the Fukushima nuclear incident. The two most major incidents in the existence of nuclear power's history have death tolls of sixty five and zero, respectively. Although both are tragedies, these are not Armageddonist numbers.

Before we condemn nuclear power, we must also review the statistics stated above and compare them to other disasters caused by power generation through other means. In 1975 a dam built in China

for the purpose of generating hydroelectric power collapsed, killing an estimated 171,000 people. Coal pollution is estimated to cause somewhere in the vicinity of 10,000 deaths per year. In 1944, an explosion at a natural gas plant in Ohio killed 130 people. Even wind power, despite its short existence and tiny, tiny contribution to power generation on the global scale, can be directly attributed to the death of fifty seven people (largely caused by hurling ice from turbines and installing the towers at large heights). It is quite clear that nuclear power is dangerous. However, it is blatantly obvious that it is really no more dangerous, and even safer, than most other forms of energy generation.

The next argument of the anti-nuclear advocates would be that nuclear power destroys the environment. It has had its share of incidents that have negatively impacted local environments, but on a global scale, nuclear power has almost no negative effect on the environment. In fact, a recent study conducted by the Organisation for Economic Co-Operation and Development (OECD) found that, including all installation, extraction, manufacturing and production factors, nuclear power is a "lower carbon option" than not only coal and natural gas, but even wind and solar power. This is because enough carbon has been released in the manufacturing, transportation and installation of a wind turbine or solar panel to outweigh their relatively puny one hundred percent carbon-free energy production. The idea that nuclear power generates dangerous amounts of unrecyclable waste is also easy to debunk. Most of the waste created by nuclear power plants is classified as "low level waste" that is easily recyclable. The remaining dangerous amounts can easily be stored in remote, secure places where it will never be a danger to any human. Sorry to all the Armageddonists and alarmists out there, but nuclear energy IS the cleanest method of power generation we have.

Many also fret that nuclear power plants are potential terrorist targets and security threats. This notion is laughable. Since 9/11, countless studies have poured time and money into determining how safe nuclear plants are to the dangers of a terrorist attack. They have all concluded that they are in no way a threat. Nuclear plants are designed in such a way that a full sized jet could smash into one at full speed with relatively little effect and NO chance of breach. Also, security is so tight around nuclear plants that it would be almost impossible to infiltrate a nuclear plant, and even if this was achieved, there is no meltdown button that would cause the entire plant to spontaneously combust. The idea that nuclear plants are a threat to our security is just another alarmist concept imagined by the regular group of anti-nuclear Armageddonists.

We live in a world with a population that is large and getting larger. We don't have enough power already. The world is threatened by climate change caused by the release of huge amounts of carbon emissions. We need an affordable and practical source of energy that will carry us through the distant future without worsening these problems. The anti-nuclear advocates are noteworthy not only for alarmism and fear mongering, but also their failure to provide a viable alternative. That's because there is no alternative. Nuclear power is safe, clean and practical, and humanities' survival does not hinge on its destruction, but instead on its existence.

ANISH BHUTANI
4A CHEMICAL

First and foremost, the response to whether or not we should have nuclear energy should not be based on the assumption that every reactor will blow up one day and cause a global meltdown. It should also be acknowledged that one ton of uranium can produce as much as two million tonnes of oil equivalents (TOEs).

This article will also acknowledge that events like Chernobyl and Fukushima are very rare occurrences. With the increase of research and technology going into nuclear energy, these occurrences will become even more infrequent, and future occurrences will be contained so that less damage is done. However, in discussing the costs of nuclear energy, the costs of research and technology need to be taken into consideration, as well as the costs incurred when a reactor fails, such as when safety triggers fail or an earthquake and tsunami hit the plant.

This is a debate that many governments have been discussing, with clear differences in decisions that are being made, such as between Germany and France. In May of this year, the German government announced that they would be shutting down many of their nuclear power plants, with the goal of removing all of their nuclear plants by the year 2022. The reason for giving themselves eleven years is to have enough time to research and implement other energy sources that are renewable and do not have a high cost of failure.

On the other hand, in the last couple of weeks, France has announced that they will be upgrading a number of their nuclear plants, as well as investing one billion Euros (approximately 1.4 billion CAD) into their nuclear program. The reasoning behind this is that they want to avoid what happened at Fukushima, and with enough funding, they believe that these types of incidents will not happen again.

Every country is developing different policies regarding the funding allocated to renewable energy. Germany is stating that they will not be putting any funding into nuclear power. This will lead to more research groups and companies investing their resources into finding alternative sources of energy. In France, policy makers are taking the opposite approach that nuclear energy is the best option, and that it will be around for a long time. They are putting resources and research into nuclear energy to make it safer and more reliable in the future.

This counterpoint will outline the reasons why nuclear energy is not the right choice. For starters, no matter how much research is going into nuclear energy, there is always going to be a cost of failure that arises when nuclear energy is being used, such as what happened at Chernobyl and Fukushima. The incidents had high death tolls and damages, some of which were irreversible, were done to the environment. Even if billions of dollars are spent to make a nuclear power plant nearly safe, there is that risk that all the systems in place can still fail. When that happens, there will be major consequences. If another energy source is re-

COUNTERPOINT

searched that does not have the same disastrous consequences if everything fails, then that option should be chosen before nuclear energy is considered. Following Germany's lead on trying to phase out nuclear energy on a national level, more companies will be willing to put their money into another energy source, which may lead to a source of energy that is renewable and safer.

Another problem with nuclear energy is that there is no fail-safe way to dispose of the waste that is produced by the reactors. While methods have been introduced that can avoid damaging the surrounding environment and community, the waste is still dangerous if those systems fail after a long period of time. If nuclear energy is continued, more of this type of waste will exist in the world. The probability for such outcomes may be limited, but either humankind will run out of space to put the waste, or there will be so much waste that it will be likely that a couple of these systems will fail.

Global warming is another issue that is often brought up during discussions on different energy sources. One reason some people feel that nuclear energy is beneficial is because it doesn't release any greenhouse gases. This is false when the entire life cycle of nuclear energy is taken into account. The methods for mining uranium, purifying the uranium so that it can be used in the reactor, maintaining the reactors, and eliminating the remaining waste products all require energy that is not just nuclear, but also gas and other sources that destroy the environment. Now, there can be an argument that this is the same issue with any energy source, including many common renewable energy sources. However, the difference between them is that if a good renewable energy source is found, there won't be the need for as much energy to be put into protecting the plant and the surrounding environment from a failure. Also, other sources of energy may not need very highly technological devices to maintain the waste, or if it does, efficient, long-term methods can be found much more easily.

The last reason that nuclear energy should be avoided is from the engineering perspective of sustainability. Nuclear energy is not technically a renewable energy source, and while it may be likely to last longer than oil reserves, it will still run out or get to a point where using it is too expensive. On the principle of helping the next generation, it is better to work towards finding an alternative energy source now rather than wait until we are on the verge of running out of resources or destroying our environment, even though this may not happen for a number of years.

It is the hope that readers here see that nuclear energy is very costly, and no matter how much the costs can be reduced, there is always the risk of a devastating failure. There is also the risk of what to do with the waste and what to do with maintaining the system during its operation in order to keep it from failing. Lastly, nuclear energy is not a fully renewable resource and will cause a problem sometime down the road.

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.

Sex-Obsessed Media



**ALEXANDER
HOGEVEEN
RUTTER**
4A ELECTRICAL

On June 30th, multiple reports indicate Dominique Strauss-Kahn, the embattled former Managing Director of the International Monetary Fund (IMF), will be released on his own recognizance and the charges against him will likely go unsustained.

After being accused of sexual assault against a hotel chambermaid, the disgraced Strauss-Kahn was extradited to the United States for charges, apparently one of the most grievous offences by a public official in recent years. It has now come to light that the maid in question has ties to criminal activity, lied multiple times in various government documents and testimonies, and had discussed the possibility of extorting Strauss-Kahn for money.

Cases like this detract attention from legitimate sexual assault, which is a real and all-too-pervasive tragedy within our society. I should make it clear that I in no way endorse sexual assault and strongly encourage persecution for actual offenders to the full extent of the law.

However, one source that deserves some of the blame for the false allegations is the public and media's continued obsession with sex scandals. As politicians continually become measured more by their private affairs, rather than their public actions, ideas, and stance on political issues, there is a stronger and stronger incentive for blackmail and extortion.

A good example is the relentless assault on Representative Weiner, fuelled by an orgy of humorous puns. While the American government teeters on the brink of default, all eyes are instead focused on a man's

personal affairs. While I'm not condoning "sexting" various women while married, this transgression pales in comparison to the dire consequences facing the American government and people. To give you an idea of what a default means, think of what would happen if you simply decided not to pay off your student loans. What if you just said, that's it, I'm not paying anymore. I assure, you, the consequences would not be pleasant. Now translate that to a \$14 trillion debt (just higher than the American Gross Domestic Product). Translate that to a crushing blow to a government serving 300 million citizens and serving as the lynchpin for the entire global economy.

Kind of puts the sexting scandal into perspective does it not? Similarly, consider leaders like Arnold Schwarzenegger, who managed one of the largest budget shortfalls in history by trying to balance various referenda mandates, the needs of the public services and the state coffers, while concurrently presiding over attempts to enact some of the most progressive legislation in the United States such as renewable energy minimums, same-sex marriages and the most advanced emissions and alternative fuel regulations for cars in the United States. Yet we judge him on his sexual relations with a maid many years ago, rather than his policies and actions on such pressing concerns.

These issues have real impacts on the lives and livelihoods of millions of people, as well as reverberating effects on global challenges like climate change. While I wish all the best for the unfortunate families of those politicians who choose to engage in deviant sexual activity, this can and should be dealt with by the family. There is nothing to be gained from media and public attention, which only detracts from attention that should be focused on the crises facing our economy, society and environment.

The Future of Nationalized Postal Service



**SPENSER
GOOD**
1B MECHANICAL

There is no doubt that the role of any modern day post office has been greatly diminished in the last ten to twenty years. Advances in modern technology, and more specifically the rise of the internet, have provided a viable alternative to the paper mail that has dominated the globe for centuries. The recent postal strike did little to underline the need for a national postal system, but instead forced companies to make use of alternative methods of conveying information and paying bills. Many of these alternatives, including scanning, faxing and making electronic payments are in many ways more convenient than the conventional postal system, and the strike further highlighted this convenience. In fact, many companies have stated that they have permanently switched to electronic billing and invoicing in the wake of the postal strike.

The statistics support these suspected trends. Canada Post has stated that letter volumes have declined 17 per cent per address over the last five years. Major banks have pushed customers to move to online banking, with ING recently announcing that 350,000 of its customers are moving exclusively to online banking. This move alone will cost Canada Post \$2.3 million a year. Although Canada Post has managed to turn relatively sizable profits in the past

five years, the loss of business due to the strike will leave a hole in their finances that may turn these profits to red ink.

The next question is; do we really need a nationalized postal service? The last thing this country needs in a time of fiscal uncertainty is a nationalized mega service that loses money, is unreliable, prone to labour strife and of little relevance to modern life. Although it is obvious that we will always need a delivery service of some kind, if not for letters then for parcels and the like, there are many alternatives to Canada Post. When electronic means do not suffice, many companies turned toward privatized delivery services such as FedEx and UPS which provide reasonable and reliable service.

It is up to our government to decide if we need a nationalized postal service. However, if the answer does not lie in privatization, then it certainly lies in modernization, and at the very least a major reality check. A struggling, largely irrelevant government service relying on taxpayer dollars should not be subject to labour strife. It wastes too much money and only underlines its lack of importance in today's society. Ultimately, Canada Post will decide its own fate. If it chooses to modernize and compete with other services in the same industry, it could remain a profitable enterprise. However, any more petty labour disputes or a refusal to change and it will become another fatality of globalization and modernization. Times are changing, and unless Canada Post wants to become Canada Past it must also change.

Home from the War



**CHAD
XU**
2B MANAGEMENT

July 7th, 2011 officially marks the end of Canada's combat role in Afghanistan as the Canadian forces hand over command of Kandahar province to the United States military. After nearly a decade of fighting, that resulted in the deaths of 157 brave and honourable Canadian service members and tens of thousands more Afghan lives, one cannot help but wonder whether it was all worth it in the end.

September 11th, 2001 undoubtedly changed the worldview of everyone on earth that day. Fury, sorrow, apathy, and joy were all suitable words that described the emotions felt by people around the globe. Most however, mourned as we once again saw the vile actions that humanity is capable of doing while under the influence of dogma. Canada, as a member of NATO (North Atlantic Treaty Organisation) and one of the oldest allies of the United States, was obligated to do its part in bringing justice to those who have committed the atrocities on that fateful day.

Enter Afghanistan, the temporary hideout of Osama bin Laden, mastermind of 9/11 and a perpetrator of terrorism against humanity. So it was, after fighting in Afghanistan for nearly a decade, Osama bin Laden was shot dead in a Hollywood-style raid in the neighbouring country of Pakistan.

Mission complete for Canada then? Not quite.

Sometime after the Battle of Tora Bora in December 2001 where bin Laden had made a narrow from escape from U.S. Special Forces, the NATO contingency, ISAF (International Security Assistance Force) was formed with the intention of, summed in brief, nation-building. The new primary objective of the Canadian Forces in Afghanistan was to ensure the safety and freedom of the civilian population from the tyranny and oppression of the Taliban.

However, as with all conflicts, mistakes are often made under the proverbial fog of war. Collateral damage in the wake of "laser-guided democracy" (spearheaded by our neighbours to the South) was inevitable. As a result, the sentiments of the common Afghan towards the coalition forces became jaded as time progressed. To them, this was no better than the Taliban rule of yesteryear. Nor was it better than the eerily similar Soviet occupation four decades ago or the British colonization attempt in the 19th century. Afghanistan with its turbulent history was aptly nicknamed as the "graveyard of empires."

The tragic mistakes on the part of the ISAF collective also saw the revival of the Mujahedeen, an organization independent from the Taliban, that only a couple of decades ago was supported by the United States during the Cold War to fight against the Soviets. The level of irony is of Shakespearean proportions. If there is anything history attempts teach us, it would be the fact that history indeed teaches us nothing.

Canada was faced with an identity dilemma. The traditional Canadian value of peacekeeping was, to put it lightly, severely insufficient in dealing with the combined threats of the Taliban, the Mujahedeen, and other foreign Islamic extremist groups. In the decade since 9/11, Canadian foreign policy would continuously test the boundaries of our own acceptance of what it means to be a participant in the Global War on Terror. The perception of the Canadian military as a force devoted strictly to peacekeeping missions will be forever subverted by our involvement in Afghani-

stan. Indeed, Canada's recent combat involvement in Libya is a further testament to the changing attitude towards which we project our military influence on the global stage. For better or for worse, as Canadians, we must come to terms with the transformation that our nation has undergone. Like an artefact of history, the symbolic blue beret donned by our forces for the better half of the 20th century had found its place on the trophy shelf, unlikely to be worn again in the foreseeable future as its color fades away in plain sight. Even worse is the possibility that it would someday be donated to the metaphorical "Salvation Army" of the world as the next generation of Canadians inherit "the house."

The soldiers on the ground on the other hand had a completely different view of the war altogether. All members of the Canadian Forces are volunteers who willingly signed up for service, and as such, they were trained to be soldiers. They were trained to fight in a politically-agnostic environment, or more precisely, there is little room for politics to begin with when the cracking sounds of bullets are whipping inches above their head. The Canadian soldiers on the front lines of Kandahar fought above all else, for each other. They were brothers and sisters in arms. Nothing else in the vanity of madness induced by war or politics can shake their commitment for one another.

Unsurprisingly, the disconnect between a soldier's day-to-day armed exchanges with the insurgents and Canada's stated mission in Afghanistan, one of nation-building, conjures up a contradictory impression of our success and true objective in the foreign land. We were without a doubt the victor in nearly all the tactical engagements fought in Afghanistan. The Canadian military has some of the finest and fiercest warriors anywhere in the world. But if we were to measure our success by the number of Afghan hearts and minds we have won over, then it is with great regret to say that we did not achieve our goal. Our efforts seem to have done little more but further divide the diverse ethnic groups living in the volatile nation. The various attempts of domestic terrorism and protests within our own borders tell an even more distressing story as we began to polarize our own population.

Afghanistan will invariably fall victim to a civil war once the remaining coalition troops pull out of the region. Even with Western military advisers who will remain in the country indefinitely, the corrupt Karzai government is still nonetheless ill-prepared to fight the far more cohesive insurgent forces.

Perhaps we are being too hard on ourselves as Canadians when we ask whether it was all worth it. Perhaps the more practical thing to do would be to reflect on the new insights we have gained as global citizens after witnessing the tattered third-world country humble a global alliance. Certainly, on the top of that list lies the realization that freedom and democracy, despite being basic human rights, is not something that can be handed out. They must be inherently craved for and earned by the nation in question, as had been demonstrated by the recent regime changes in other parts of the Middle East. Only the Afghans themselves can pick up the unremarkable pile of rubbles in their homeland and transform it into the familiar cultural mosaic found in Canada's own underlying values. In the end, there were no grandiose victory celebrations like the ones sixty-six years ago when the boys came back from Europe. We didn't need one. Most people were silently grateful in knowing that their loved ones are still alive and finally home again.

TechnoSpeak: The Future Now



**AMMAR MASUD
KRISHNA IYER**
2B NANOTECHNOLOGY

The best part of technology is that there are always more advances on the horizon so there is always more to look forward to. There are trends that can be followed to help accurately predict what will come in the near future, but then there are always things that come by surprise. When making predictions there is always the worry of missing something important and then of over-thinking it and making an incorrect forecast. We are all doomed to hindsight bias so if you are reading this from the future, note that we are not psychic. Here are our predictions of what you will see introduced (or see more frequently) in the near future.

Touch/Gesture Control

The majority of Smartphones are now utilizing touch-screens and the new Xbox Kinect uses in-air gesture control of Xbox360 menus (and playing games of course). A new trend seems to be developing. Physical buttons and mice will not die out but will become accompanied by gesture based controls. There will be a strong push from Microsoft with Windows 8 which has been revealed to have a separate interface just for touch screen navigation. The touch interface will be on all versions of Windows 8 which raises suspicion that laptops with touch screens will become the standard in the near future. Having the tablet market flourish shows consumer interest which the developers will strive to exploit. The Xbox Kinect windows SDK

has been released meaning you'll soon be capable of controlling your computer Minority Report style but better...no power gloves required.

Cloud Computing

As technology progressively gets better, people have started using multiple devices that previously would have been possible only on a computer. The advent of wireless internet through cellular networks and Wi-Fi has spawned countless mobile devices such as slate computers, media players, Smartphones, Netbooks, etc. As such technology proliferates, it becomes important for one to keep data synchronized between these devices. This is where cloud computing stands out. I use a Smartphone, a laptop, a desktop and multiple PCs in computer labs. Services such as Windows Live Mesh and Dropbox have allowed me to seamlessly sync my folders. Steam (a digital gaming network) stores my licenses for games I own so I can play on any computer with ease. Such technology is only going to get more prevalent. I would love to have my history synced on all of my browsers (any other "redditor" would agree strongly). Services like eyeOS provide a complete desktop computing experience within the browser.

Augmented Reality

It is as cool as it sounds, already introduced to Smartphones and having been available to aircraft pilots for years, augmented reality is real-time alteration made to reality through computer generated images and sounds. It can be as basic as adding a squares around other aircrafts to being as complex as creating an augmented pet. You may already have used it if you have ever used Wikitude, Playsta-

tion Eye, and the Nintendo 3DS. With current Smartphones, you have the ability to use the camera to acquire the live image that is modified on the screen by utilizing the GPS and the magnetometer (digital compass) to identify where the camera is pointed and figure out what additions to make. Currently you can find the locations of friends and find links to websites and information about locations. This is just the start though. The American Army is interested implementing glasses that alter what you see directly rather than through a camera to help identify friendlies when in the battlefield. Imagine needing to go to the washroom and arrows suddenly appear in the air for directions, or having any website appear on any surface with movement tracking to develop and interactive surface anywhere.

Better use of the USB standard

With almost all my portable devices being charged through the USB interface, I can envision more power outlets with built-in adapters outputting 5 volts via the USB interface. Moreover, I can see more portable devices using the microUSB standard as the data transfer/charging interface. Presently, my media player, my cellular telephone, my video camera and external hard drive all use different interfaces to connect to my PC as well as charge. With more companies agreed through a Memorandum of Understanding to use similar interfaces, I hope to see microUSB being implemented uniformly across multiple devices thus reducing the complete array of various cables and assortments of chargers I presently own.

Photonics

As Einstein claimed, nothing can travel

faster than light. Hence, what better way to transmit information other than light? Photonics is that field of science where light interacts with electronics. Fiber optics has been used for a very long time by internet companies to enable higher bandwidth of data transmission. However, with the need for faster data transmission standards to keep up with the high density displays, huge memory storage devices, and so on, I can imagine a world in which fiber optics as used more widely. Furthermore, using principles of quantum cryptography, fiber optics can be used to make the most secure method of data transfer. There is several quantum information processing systems in which data thieving is almost impossible and immediately detectable. The possibilities with such secure connections are endless.

Power efficiency

The focus of present generation circuit designers is power efficiency. On an average, a Pentium processor dissipates 10 times more heat per square centimeter that a hot plate. All the power hence dissipated as heat is a waste of energy and must be minimized. Further, with the quick transition from powerful desktop computers to portable computing, there is an increasing need for minimum power consumption in order to maximize battery life. This is further visible in displays. With the advent of low power display such as e-Ink and mirasol, a whole new generation of computers has been spawned in the form of e-readers. These e-readers can give up to months of battery life on a single charge. This is also evident in battery research and design to find the highest energy density system to store energy.

Nostalgia Galore: Old-School Cartoons



KRISHNA IYER
2B NANOTECHNOLOGY

So, exam-time is nearing. I found that the best way to study is, of course, to procrastinate and cram all night long on the eve of the exam. This frees up a lot of time in your schedule these days. *The Iron Warrior* has the perfect solution for that. Not being a big fan of anime, I decided to go old school and watch those cartoons that would probably remind your father of his childhood. These cartoons (despite being incredibly racist sometimes) are also incredibly entertaining. If you have never watched any such cartoons, don't fret. We are here to tell you exactly what you missed out on during your childhood.

Tom and Jerry

This show's plot is the classic cat and mouse chase. Despite the premise being ridiculously simple, the characters in this show never fail to crack me up. Tom is a blue and white cat living with his owner (whose face is never revealed) in a large mansion. Jerry is a small brown mouse who is bent on making Tom's life hell. These adventures are highly entertaining. Although they contain copious amounts of cartoon violence, these episodes are ingenious in the use of contraptions built by both Tom and Jerry. Every now and then, there were special episodes of Tom and Jerry set in the future or Tom and Jerry flying into outer space. Side characters in the show, Spike and Tike, a father-son bulldog duo, are often featured in the show. This series is especially impressive because of its ability to entertain without dialogue.

The Flintstones

This classic cartoon has been on TV since the 60's, entertaining kids and adults alike. *The Flintstones* revolves around a family set in the (inaccurately represented) Stone Age. The misadventures of the main protagonist, Fred Flintstone, are the source of endless hours of entertainment. As a construction worker, Fred uses dinosaurs as cranes to move rocks around and build buildings. His family consists of his beautiful wife, Velma, his one child, Pebbles, and a pet dinosaur, Dino. Their neighbours, the Rubbles are also an integral part of the plot. The use of Jurassic era creatures as analogues to modern day technology is also a source of humour and constant jokes. Recently, it was announced that Seth MacFarlane (of *Family Guy* and *American Dad* fame) is going to revive this cartoon with a new twist in the spring of 2013.

Wacky Races

This is by far my favourite old school cartoon. This follows a race of eleven cars around the world. The main villains, Dick Dastardly and Mutley (a dog with a very funny-sounding laugh), are constantly trying to sabotage opponents in order to emerge victorious in the race. All the standard characters are featured in this cartoon including the dainty damsel in distress (Penelope Pitstop), the cavemen (Slag Brothers), the Mafia characters (the Ant Hill mob), the hillbilly (Luke), the perfect gentleman (Peter Perfect) and more. There were several spin-offs spawned from the success of the series like *The Perils of Penelope Pitstop* and *Dastardly and Mutley in Their Flying Machines*.

I hope these cartoons are satisfactory for those like me who enjoy watching cartoons and experiencing nostalgic flashbacks.

Chemical-Free Labels: Are They Real?



KEVIN JOSEPH
2B NANOTECHNOLOGY

When was the last time you bought a box of electrons? How about a can of plasma or a case of quarks? As charming as that would be, it sounds strange for a reason: it does not make any sense. And yet, how peculiar is it that there are a number of "chemical-free" products in the market.

This evidently is a misnomer employed by deceptive marketers, hence, a recent push by chemists to ban this practice. Some might argue that this is a harmless substitution for meaningful distinctions such as "toxin-free," "preservative-free" or the dubiously valid "synthetic-chemical free." The fact remains, however, that this is not the case, and by allowing manufacturers to sell products with false accreditation, this fosters scientific illiteracy, confusion and allows for serious dangers to be underemphasized.

Perhaps, the majority of people do not know the exact difference between chemicals, toxins and preservatives, or between organic, non-synthetic and natural chemicals. However, to use the terms willy-nilly not only increases the confusion and ignorance, but actually encourages it. It leads people, who might otherwise have an idea of what is in these products, to receive blurred notions, and so the health- and environment-conscious consumer is left trying to decipher which product is the "greenest." Instead of using buzz-words, which manufacturers know consumers don't actually understand, product labels should explain exactly what is it about

them that make it good for the consumer or planet. One way to start this movement is to forbid the use of meaningless terms which can be applied to any product equally and invalidly, such as "chemical-free."

The inherent danger in this practice is the creation of a lot of noise which drowns out serious threats. When people are bombarded with various terms, all of which sound vaguely "green," it becomes inevitable to make concessions and not buy products that are "non-synthetic," "chemical-free" or "HFCS-free." The problem is that some things, such as the lack of high-fructose corn syrup, are actually legitimate. Several studies, endorsed by The American Medical Association, have linked high-fructose corn syrup to obesity, diabetes, cardiovascular disease and other serious health problems. Yet, those who lobby for HFCS are able to take advantage of the flood of pseudo-significant labels and concerns with an ad campaign in which one person says to another "My hairdresser says high-fructose corn syrup is bad for you," and gets the reply, "Is your hairdresser a doctor?" In a world in which scientific honesty was taken seriously, everyday consumers would be able to tell the difference between safe and unsafe products and being a conscious consumer wouldn't be so arduous a task.

Maybe it's a trivial fight, but the use of terms like "chemical-free" are just part of a bigger plague in which nonsense like homeopathy and power balance wristbands hide behind vaguely scientific-sounding terms and prey on an unwitting public. Demanding legitimacy in the market is a step in the right direction in the interest of empowering the consumer.

A Review of EngPlay: *Rhinoceros*



**CHRIS
LETNICK**
3A COMPUTER

EngPlay has been a long standing tradition for the University of Waterloo Engineering Society. Almost every term, a theatrical production is put on by primarily engineering students. This term's EngPlay had an impressive total of 27 people who were directly involved. This group comprised of 13 actors, 10 crew, and 4 directors. EngPlay has a history of having a very small cast and crew with few exceptions.

This review is based on the Friday, July 15th showing of EngPlay.

The title of the play this term was *Rhinoceros*. This is a full length play set in the 1950s about a town where people start turning into rhinoceroses. The play was written with a very serious attitude about social movements and mob mentality prior to World War II. This selection of play is much more serious than what is normally done for EngPlay, so the directors chose to appropriately shorten monologues and provide actors with a large amount of freedom to add comedy. The result was a play that had enough of the original content to understand the theme of the originally written

piece if attention was given, but also contained enough comedy and action to keep the less attentive audience members entertained.

At the time the doors opened, the cast and crew were well-organized for the EngPlay production. Pre-show music was playing and there was a dancing projection of a rhinoceros on the wall to keep the audience entertained.

With the introduction of the main character, Barenger, as he makes a fool of himself, the introduction of a logician, and one too many innuendos, the first scene was one of the funniest. However, the most confusing moment was also in this scene. At a point

where two conversations were supposed to overlap, the actors had difficulty keeping in sync. Although this did result in a bit of confusion for the audience, it is an impressive theatrical stunt to attempt with the small amount of rehearsal time the actors got. The remainder of the play was quite seamless. The large stage crew resulted in very fast set changes. The actors appeared to be performing their roles more naturally after the first scene change, especially after intermission. This is possibly due to them becoming more and more comfortable on-stage.

The production was well done and stayed true to the expectations of an EngPlay production.

What's so great about Harry Potter?

The Life and Times of a Harry Potter Fangirl



**ANJALI
GOPAL**
2B NANOTECHNOLOGY

I have a very serious and, at times, a life-consuming problem: I am *obsessed* with Harry Potter.

No, really. I am the type of girl who would spend three hours debating with you over why Bellatrix Lestrange is the best villain ever, why Slytherin house isn't all that bad and how Steve Kloves (the writer of the Harry Potter films) is a Harry/Hermione worshipper who couldn't understand foreshadowing if it bit him in the nose.

Most people don't understand my addiction though. As the number of days nearing the release of the final film grew smaller and smaller, for every excited person I saw, I met an equal number of exasperated and annoyed people who just couldn't understand what the hell was so great about Harry freaking Potter. It was just a movie—a *book*—and not even a very well-written one. What was the big deal?

If you, dear reader, are among the ranks of people who roll their eyes at the mention of He-Who-Is-So-Overrated, what you're missing isn't just sixteen hours of screenplay or five thousand pages of contrived dialogue. It's the experience, the expectation: it's the enchantment that *surrounds* Harry Potter that's such a big deal.

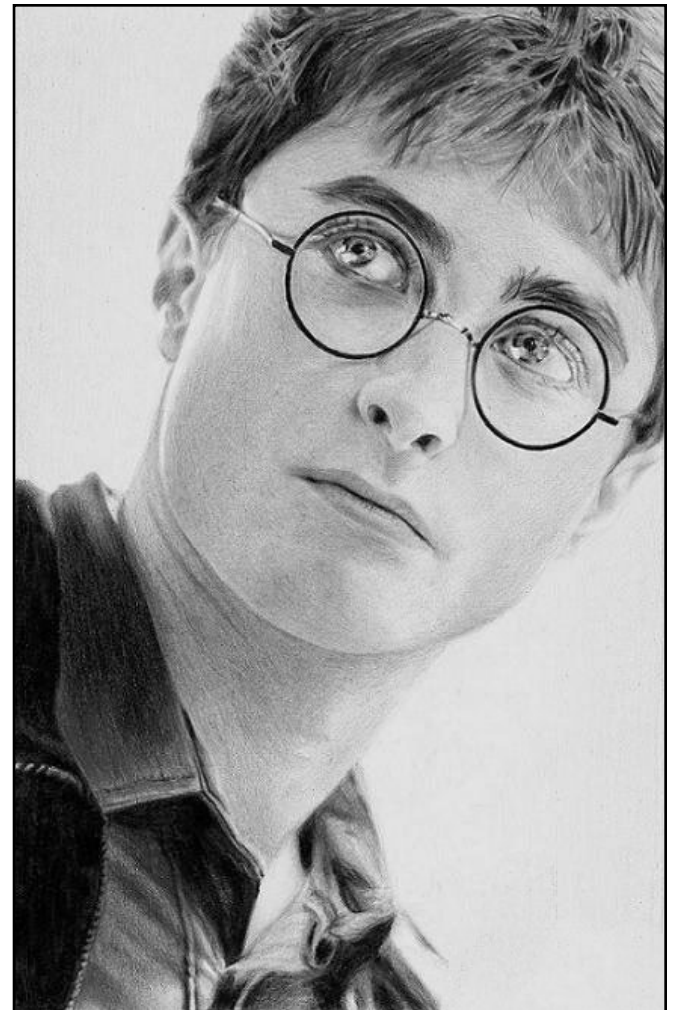
Let me explain: I have been a Potterhead since I was about nine years old (that was back in 2000). If you were a hardcore Harry Potter fan, you'd remember that this was

the time when the first four books had been released and that there was a three year gap between the release of the fourth book and the fifth. Back then, Harry Potter was only as famous as *The Chronicles of Narnia* or *The Lord of the Rings*—a lot of people had heard of it and it was certainly a big deal in any discussion of books, but Pottermore didn't stretch very far beyond its beehive of bookworms. Nevertheless, I fell in love with Harry Potter back then because of the sheer brilliance of the idea: an ordinary, unremarkable boy who found out he had his own special destiny? A secret world of witches and wizards hidden between our own? How *awesome!* Perhaps now, there are a lot of similar and better written stories that can compare, but back when I was ten, there wasn't.

Ten was also the age when the movies first came out, and I will 120% agree that the movies probably had the biggest contribution in making Harry Potter the worldwide phenomenon that it has become today. For those of you who *aren't* Harry Potter fans, you were terribly unlucky to be caught in a generation that was on-par with the movies. When I was ten, Harry was ten. When I was thirteen, Harry was thirteen. And once the movies started rolling out, there was *always* something Harry Potter to look forward to each year: it would either be the movie, or the last four instalments of the highly anticipated books; more likely than not, there would be months and weeks of anticipation leading up to these movies. It was like Christmas, but cooler because you knew—and wanted—exactly what you were getting.

But I will confess one thing: you will never find such a group of Harry Potter-crazed adults or kids beyond our generation. For those of us who were old enough to savour the books and wait for them as they came out *and* old enough to grow up with the actors and actresses—that's a sort of connection that no other generation can have. Some of my closest friends that I have met have bonded over our love for Harry Potter. The fact is, all of my younger cousins who have read the books, watched the movies and have admitted they liked it will *never* like it as much as I will.

So, the next time you see us—a group of kids who desperately wished Quidditch and Butterbeer and spells were real—remember: we aren't crazy. We were just a group of young and impressionable kids who turned into optimistic and dreamy adults. To us, the magic isn't in the books—it's in the atmosphere, in the anticipation and in the knowledge that yes, there are people like us out there who are just as passionate and



*carmenharada

just as entranced with an idea as we are. So, forgive us, if we were a bit too hysterical over this last installation of the Potter films but, as my friend Maddie (who is also a fellow Potter fan) said, "What do I do now that Harry Potter's over? I might just have to grow up."

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JON MARTIN
OBI JON1138

Hey everyone, this is the last issue of the term before going onto exams, or, if you are on co-op right now like I am, it is getting into the final month of the term, and you better start thinking about that work report. For this issue, I'm going to be discussing a topic that has come up many times in the media and a couple of times in this column over the years – video game rentals and used games.

I'm sure all self-proclaimed gamers, and many who say they just play games casually and therefore aren't "gamers," have rented a few games. I definitely won't deny that game rentals are a great way to try out a game and see if all the hype is really justified, or for the speed freaks out there, it can be a way to actually complete an entire game.

As for used games, who doesn't want to save some money and pick up a game after someone else has finished playing it? For many games, there really isn't much replay value to draw you into keeping the game and starting the adventure again, and so the games just end up sitting on a shelf collecting dust, but if a store would actually pay you good money (that is questionable at some spots), then why not?

For both rentals and used games, the biggest issue is the impact on the developer through the lack of sales. For rentals, it is obvious that the company renting out the game is making all the money, while the developer only gets income from the actual number of copies purchased by renters.

The rental place is able to "sell" the game over and over again without ever needing to purchase new products, and at the end of the process, the game will probably go into the used game bin. Of course, there are other retailers, like EB Games/Microplay, that skip the rental phase and just buy the games directly from gamers to resell. For used games, people will readily pay 90% of the retail price for a new game when it goes on the shelf; the problem here is that the publisher and developer sees absolutely no profit from that sale. While a new sale will normally yield some profits for the developer, the process of reselling the same game allows the retailer to keep all of the profits for themselves.

There are tons of games on the market that deserve higher praise and the chance for a sequel, but if the developer doesn't see enough of a profit on the original, there is little chance that decision makers of the company will give the green light to a new adventure. So the bottom line is basically, if you want to support the industry and you want a sequel for that game you just bought, buy new, especially if the game has only recently come out. Do you really care about saving \$10 enough that you are willing to give EB Games \$40 and the developer \$0?

Now I'm not going to say that buying used games is entirely evil, but I think there is a time window in which it should be avoided. Multiple game developers have shown that they make most of the profit on a game in the first few months of sales; beyond that point, it really isn't noticeable. So don't worry about buying NHL 2011 used when NHL 2012 is coming out in a month – by that time, the developer really doesn't care.

It seems some publishers aren't willing

to accept the losses incurred by rentals and used games and are taking steps to prevent the practice. EA is now introducing a "PlayPass" which uses an individual code to authenticate a game for online play. This idea is currently being used by other publishers and is the norm in PC gaming, but its effects have yet to be seen in the console gaming crowd. In a new copy of the game, purchasers will receive a code in addition to the traditional manual; register the code with your Xbox Live tag or PlayStation Network profile and you are good to go. The interesting part comes when you want buy a used copy of the game – How do you get around the missing playpass? Here is where the publishers are able to actually profit from the reselling of their games by offering the playpass as a separate purchase from their online store.

I see a couple of benefits for the industry – if you are in favour of developers not going bankrupt, that is. The biggest benefit, of course, is the fact that the publisher and developer actually make a profit on the resale of the game, at least in an indirect way. Instead of the retailer pocketing all the money, the developer is able to charge each user for the use of their product. The other benefit is in the data the continued sales provide. What I said earlier about the publishers making most of their money from a game in the first few months was an actual statement from a publisher, but how do they really know? The publisher has no way of knowing what sales they would have had if they weren't actually profiting from the resale, but now there is a way to track those resales, as everyone who wants the full experience will need to purchase a playpass from the online store. Publishers would be able to track sales of a game over its entire

life span, releasing downloadable content and continuing to operate servers long after they would have normally shut them down, purely because they know that people are still buying the game and they are still getting income from it.

Now for the downside, which is basically the eradication of the entire rental and used game market. Let's say a game retails for \$60, including a playpass, and a store wants to sell the game used, knowing that you will have to purchase a playpass. If the playpass costs \$30, the retailer can only charge \$20 for the brand new game if they want to entice you to choose a used copy over a new one. That's a far cry from the traditional \$50 price tag. Also, that means the store can only offer the original owner about \$10 for their copy, which will definitely cut down on the supply of used copies.

The consequences will be even worse for rental stores, as they will basically be forced to shut down their gaming sections. Renting a game will be impossible once people realize that the \$6 rental fee doesn't include the \$30 playpass (again, just an estimate). With video game rentals a dead market, there goes another source of used games.

As you can see, there are dire consequences for the rental and used game markets, and the promise of lost profits for publishers. Who should win? Let's reword that statement a bit... Who should win: The people who create and produce the game or the companies that resell the product without contributing to the industry? Hmm, seems like an obvious choice to me.

So that's it for this article and for this term. Good luck on exams and work term report writing, and be sure Keep on Gaming.

Fashion Files: The Swim Suit Issue



AMANDA LEDUC
4A MANAGEMENT

Swimwear is a touchy subject for a lot of people. In everyday wear, we can easily disguise or cover the parts of our bodies we dislike, but when it comes to swimwear, exposed skin is unavoidable. But don't fret; there is a flattering swimsuit out there for every figure so you can be confident in your swimsuit!

To break the ice, I'm going to tell you an absolute secret about my favourite swimwear that you cannot tell anyone: my absolute favourite bikini is from the plus size department at the Bay. I'm not kidding. You look at me and think, "she's definitely not plus size," and no, I am not, but full-figure swimwear is designed to be extra flattering, so why not give it a try? Swimsuits are stretchy; you'll be surprised at what you can find that fits in the plus size swimwear department and how amazing it makes you look.



Think banded halter, slit skirtini

Now that you know my dirty little swimwear secret, we can move on to the tips and tricks of finding the perfect swimsuit for your body. We'll start with ladies' swimwear, and then briefly discuss men's swimwear.

If you are self-conscious about your derrière like I am, try opting for mini-shorts or little skirts on your swimwear bottoms. I feel like traditional, bikini-cut bottoms just scream, "Hey, look at my huge thunder thighs!" and accentuates how far they stick out relative to the rest of my frame. But now you think, "My grandmother wears swimsuits with a skirt; I'm way

too young for that!" to which I respond, "No, you aren't! If those skirt bottom swimsuits make your grandmother look good, imagine how awesome they'll make your 20-something body look!"

The trick is to find a young-looking skirt bottom. One of mine looks like a wrap around skirt but doesn't quite meet up at the front of the left leg, so there is a slit through which you see the black bikini bottom. The slit is strategically placed so it shows the bikini bottom from the front, not the side

where my massive thighs extend far past my hips. I have another low-rise skirt bottom that has a plaid pattern and is designed to look kind of like a cute, flirty mini-kilt.

The combination of a low-rise cut and ruffled, short-skirt look with a plaid pattern is flattering and looks nothing like your grandma's skirted swimwear.

If you are self-conscious about your tummy area, opt for a tankini or a one-piece. Fortunately for you, the one-piece swimsuit has made a fashionable comeback. No longer do one-piece swimsuits have to be synonymous with Speedos or other such racing wear. There are so many fashionable options out there with plunging necklines and strapless tops that a one-piece can look as good, or better, than many of the bikini options available. Furthermore, many tankinis and one-piece suits have ruching on one or both sides which nicely conceals any insecurities in the tummy zone.

Lastly, if you are self-conscious about your ta-tas, there is also a swimsuit for you. Halter style tops with a thick neck tie and thick bottom band look amazing on all sizes of ta-tas. If your ta-tas are of the

larger variety, avoid those itsy-bitsy bikini tops; in many cases, they don't provide the support or coverage you need to hold the girls in place. If you have smaller ta-tas,

you're lucky in that you can wear just about any type of swimwear top and have it look fabulous. You don't have to worry about looking trashy or too scandalous by showing excessive cleavage or worrying about one of your ta-tas falling out of your top.

Now for the men. You have it pretty straight forward. Board shorts are a sure winner every time; you really can't go wrong with swim trunks. You also can't go wrong with crazy patterns or colours. The only thing I ask you to avoid is the brief-style Speedo bottom. If you aren't a competitive swimmer, we really don't need to see you in a brief style Speedo. An acceptable alternative is the jammer-style Speedo. It's significantly less creepy-looking, and is just as fitted and competitive-swimming-friendly as the brief-style. And that's it for my male swimwear input.

Stay Classy and Wear Sunblock,
Amanda
Chief-Fashion-Officer



Rushed one piece Victoria's Secret

Tour de France: A Biking Experience



**ALISON
LEE**
2B NANOTECHNOLOGY

On the other side of the pond, the world's biggest cycling challenge is in progress. While not as popular here, the Tour de France still has a dedicated following all over the world. If you're new to the sport of cycling, here are some quick facts: The Tour de France is a race that travels 3,443 km, mostly in the French countryside, in 21 stages during the month of July. Throughout the race, there are 4 coveted jerseys to wear: best mountain climber (red polka dots), best young rider (white), points leader (green), and overall leader (yellow). There are 22 teams of 9 riders for a total of 198 cyclists (although fewer actually finish due to injuries or oth-

er misfortunes).

Here is an update on the 2011 Tour, which moved into its 14th stage on Saturday, July 16th. This year's Tour has seen the emergence of a new set of stars and a series of dramatic accidents. In the first stage, the 2010 champion Alberto Contador suffered a crash that injured his knee, and he is still suffering from minor injuries as he continues to race in the middle of the pack. Previously a favourite as a return champion, Contador can pretty much try to just finish the race with a decent time, although a dramatic comeback is not out of the question because he is only 4 minutes off the



flickr.com/photos/malias

lead. Injuries have also broken the Tour-winning dreams (and collarbone) of veteran Bradley Wiggins, but the "crash of the race" prize certainly goes to Juan Antonio Flecha and Jonny Hoogerland. Reckless driving by a television vehicle knocked Flecha off his bike, sending Hoogerland flying behind him... into a barbed-wire fence. It is not pretty, but it's on *YouTube* if you have not already seen it.

One pair to watch are the Schleck brothers racing together on team Leopard-Trek. Andy and Frank Schleck have been racing well near the top of the standings and have, thus far, avoided accidents. After a strong Stage 12

finish, they are confident they can bring it home. After Stage 13, Frank Schleck was in second place with 1:49 off the lead and Andy was in fourth with 2:17 off the lead. Another favourite to win is probably Cadel Evans, who has finished on the podium twice but never in the yellow jersey. Maybe the third time is the charm. After Stage 13, he holds third place with a 2:06 gap between him and the leader. So who is this overall leader? Thomas Voeckler of team Europcar. Known for his strength in the mountain stages, Voeckler had held the yellow jersey in stages of past Tour de France, but never been able to keep it to the end. With frequent daring passes, accidents, and team maneuvers, this year's Tour has proved unpredictable.

Now you're set to watch the remaining stages! They're broadcast live on TSN at 8 am (except for rest days), and sometimes re-broadcast later in the day.

NBA Lockout Continues



**ANDREW
MCMAHON**
1B ENVIRONMENTAL

On July 1st, the NBA commenced a lockout of its players until a new collective bargaining agreement is met between them and the National Basketball Players' Association (NBPA). During a lockout, players do not receive their salaries and teams cannot sign, negotiate or trade player contracts. Players cannot use their team's fa-

cilities for any reason, and teams cannot conduct any kind of summer camps, practices, workouts or team meetings.

The lockout was a result of too many teams operating at huge financial losses. Financial restraints resulted in wealthier teams dominating while smaller market franchises remained bottom feeders. The league has been trying to propose restrictions that would restrict the amount of money teams could spend on players, so that all franchises would be competitive and not operate at losses. The players' argument is that by restricting the amount of

money that goes to the players, the league and owners ensure more money for themselves.

As the lockout continues, more and more players are accepting offers from European teams to go play overseas either temporarily or for an entire season. Deron Williams, a franchise player for the New Jersey Nets, has agreed to preliminary terms with a team in Turkey last week. He is the first big name in a list of players who have talked about deals with European teams should the lockout extend into next season. This exposed the fact that most, if

not all, of the players in the league could just go overseas, play in Europe and wait out the lockout with minimal losses. This is similar to the way that NHL players went to play for teams in Europe during their league's lockout in 2004-2005.

Other professional sports leagues like the NFL and NHL have so called "hard cap" systems designed to have fewer exceptions to spending limits. Even with this system, the highest-spending team in the NHL spends twice as much as the lowest-spending team in the league, and in the NFL, there is also a gap of about 70% between top and bottom. The NBA operates similarly to the NHL, with the LA Lakers spending twice as much as the Sacramento Kings; for this reason, they should focus on a cap system that has a small range between the highest and lowest spending teams. The players should ensure that a team cannot spend an abnormal amount under the cap and the owners should want a hard cap so they don't have to spend more than they have to. Unfortunately, the players want an increase in pay and the owners want to spend less, and neither side is budging.

It is my opinion that the lockout will result in the loss of the next season in the NBA. After watching how the NHL was able to bounce back after its lockout a mere six years ago, I don't think that the two negotiating sides are worried about time constraints. The NHL was just as popular during the 2005-2006 season as it ever was, and the belief that the NBA can pull off such a feat will extend the stalemate. This whole ordeal has no end in sight, and is a sad reminder that professional sports is a business and not driven by the competition and desire that the fans love to believe in.

Recipe: Chocolate Chip Banana Muffins



**CALLIE
HOLT**
3A CHEMICAL

I can't say that I've ever met anyone who hates muffins. They exist in almost every flavour combination imaginable, so there's something for everyone.

The best thing about muffins is that they're so versatile. Muffins for dessert? Great choice. Muffins for breakfast? Also acceptable! Any excuse to eat chocolate for breakfast is fine by me.

These muffins are crispy on the outside, soft on the inside, and full of chocolatey goodness. Thanks to the bananas, they keep enough moisture that you don't even need to add extra butter before eating.

Chocolate Chip Banana Muffins
makes 12 muffins



Callie Holt

Chocolate Chip Banana Muffin

Ingredients

- 1 cup whole wheat flour
- 1 cup all-purpose flour
- 1 1/2 tsp baking soda
- 1/2 tsp salt
- 1/2 cup butter
- 1 cup white sugar
- 3 ripe bananas, mashed
- 1/2 cup water
- 1 tbsp vanilla extract
- 1 cup dark chocolate chips

Directions

1. Preheat oven to 350°C.
2. In a medium bowl, mix together flours, baking soda and salt.
3. In a larger bowl, cream together butter and sugar, and then add in mashed bananas, water, vanilla extract and chocolate chips.
4. Stir until uniformly combined, and then spoon into greased muffin tins.
5. Bake for 25 minutes, or until toothpick comes out clean.
6. Cool on a rack, and enjoy!

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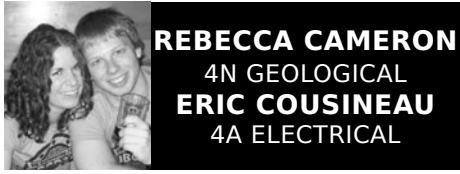
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#02

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Beer Buzz: Kitchener Ribfest & Craft Beer Show



REBECCA CAMERON
4N GEOLOGICAL
ERIC COUSINEAU
4A ELECTRICAL

Hello readers! Today we bring you an article that is going to give you a lot of info about the craft beer festival scene in Ontario. We are going to start things off with a brief description of beer festivals. A beer festival is an event in which you can taste and purchase beers (and other alcoholic drinks). Beer festivals are held in a number of countries around the world. The largest beer festival in the world is the Oktoberfest in Germany. As many of you know, the second largest Oktoberfest festival actually takes place in Kitchener-Waterloo in October. Don't worry, Rebecca will be there to cover Oktoberfest in October, but be sure to buy your tickets as soon as you can since they get sold out very quick! Beer festivals can also be found all over Ontario in the summer – the biggest one is the Toronto Festival of Beer on August 5th. Unfortunately, due to final exams, we can't attend this year, but we encourage anyone who does not have finals to go investigate (it was amazing last year!).

Last Friday (and Saturday!), we attended the Downtown Kitchener Ribfest & Craft Beer Show. It was very busy, and we spent a while waiting in lines, but it was definitely worth it. There were 11 Ontario Craft Brewers in attendance: Amsterdam Brewing Co., Big Rock Brewery, Brick Brewing Co., Cameron's Brewing Company, F&M Brewery, Lake of Bays Brewing Company, Mill Street Brewery, Nickel

Brook Beers, Railway City Brewing Company, The Flying Monkey's Craft Brewery, and the Wellington Brewery. Overall, there were over 50 different beers to try. Beer alternatives were also available and were provided by the Black Fly Beverage Company and the Yellow Tail Winery. In addition to beer, there were seven ribbers there, along with a ton of traditional fair fare. The ribs we got were from Boss Hogs BBQ and were absolutely amazing! There was also live entertainment and admission was free.

To sample beer, you had to purchase a wristband and a sampler glass for \$6. The wristband could be used all weekend. To purchase beer, you had to buy beer tokens for \$1 each. Whenever you wanted a beer, all you had to do was go to a booth, give them a token and then they would fill up your 4oz beer glass. This is a pretty sweet deal as it lets you try a ton of different beers for cheap! Most of the brewers brought along swag and some even had coupons and contests.

We ended up buying 40 tokens on the Friday night, and due to the long beer lines and a mistake on our part regarding the closing time, we only used about half of them (in an hour and a half; it was a fun time), so we decided to go again on Saturday to use the rest! Unfortunately, this article had to be sent in before we went back on Saturday, but we will be doing a quick review of what we tasted on Friday (yes, we took notes at the festival). We are going to write some brief notes on what we tasted separately:

Eric

I tried Flying Monkeys Netherworld (coffee and cocoa with a slight fruit taste),



Crowds at Kitchener Ribfest

Angelo Alaimo

Lake of Bays Red Ale (spicy hops and dark, roasty malts), Railway City Iron Spike Blonde Ale (mild hops, sweet fruit and grains), and Wellington Special Bitter (sweet malt with a slight hop aftertaste).

Rebecca

I tasted Flying Monkeys Orangemungus (Cask beer that has a very pronounced orange taste, my first impression was that it tasted like Five Alive mixed with beer. Delicious), Lake of Bays Pale Ale (slightly sweet malt flavour with medium hop bitterness), Railway City Iron Spike Copper Ale (Sweet caramel, fruit, and some vanilla and spices), and Wellington Special Pale Ale (Malt with spicy hops at the end).

Both

Mill St Organic (we chugged this one...)

so no tasting notes), Mill St Stock Ale (very flat and warm so it was really gross; we are hoping they will take proper care of their beer next time), F & M Stonehammer Dark (chocolate roast, hops, chocolate coffee finish), F & M Stonehammer Pilsner (we drank it too briskly to make notes), and Wellington Trailhead (grains with a clean hoppy aftertaste).

The Kitchener Ribfest & Craft Beer Show happens once a year and we strongly recommend you attend next year – it is a perfect place to try a ton of new beer for cheap and in small quantities. This is our last article of the term and we hope that on your break, you will try some tasty summer brews. See you this fall, and as always, fear no beer!!!

TOPZ (with a Z): Top Ways to Get that Special Someone to Notice You

JEFFREY DAHMER AND JOHN WAYNE GACY
1B FRIENDSHIP

With exams looming and sleep deprivation setting in, romance is in the air. We know that you've had your eye on a certain person, perhaps a dashing young gentleman or two writing an article in Starbucks on a Macbook sipping on a very masculine venti non-fat caramel macchiato. But in today's hustly- bustly world, meeting people is no easy task! Ask yourself, when was the last time you went to a box-social and made a real humanoid connection? Well, don't you fret, today we have a list of our top tips to make sure he or she will be yours, lickety-split!

Love Letters: Since the time of Shakespeare, the love letter has been a fundamental aspect of the courtship process.

Anyone who's written cover letters knows that personalized letters pack much more of a punch than generic ones, so be sure to not hash out some generic all-purpose garbage. Go through **her** garbage, scour her Friendster account, hack into her computer, really pull out all the stops to get to know all about your cherie amour. Then, to maintain a shroud of mystery (people dig that), write the note with cut-out letters from magazines and sign it anonymous. The following is an introductory template to get you started: "Dear [proper noun], I saw you [verb] last week. You looked really nice in your [noun]; it really brought out your [adjective] [noun]."

Be the Boy or Girl Next Door: He's on the phone with his girlfriend; she's upset, going on about something that he said, she doesn't get his humour like you do. Oh, if only as the object of your af-

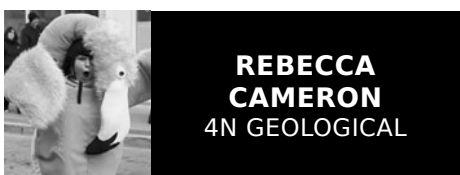
flection looked out the window in desperation they could see your sympathetic and quirky face ... Whether Mary Jane Watson or partially nude Elisha Cuthbert, the girl (or boy) next door is an oft-romanticized trope that makes even the hardest of hearts turn to mush. Problem: you don't live next door. Solution: set up camp next door in his bushes! When he notices you peering into his window and realizes that you've always been there, it will be sure to capture his heart and soul!

Scrap-booking: A cute trend that seals any deal is scrapbooking memories together as a couple. When times are rocky, she can flip through an assortment of pictures and silly captions and remember why she fell head-over heels for you in the first place! Of course, as you've thus far only been admiring from afar, the precious memories have been dubiously mu-

tual. However, you can bypass that bump with the use of Facebook, Photoshop and a little creativity! Start a scrapbook of pictures you find of her online with yourself shopped into them. Make sure to think of clever and cutesy captions like under one of eating ice cream, "I scream, you scream..."; you can also quote the lyrics of beloved songs like "Every breath you take, every move you make, I'll be watching you <3." Deliver it to her house and just wait for the romantic reciprocation.

Well, there you have it! Simply follow our guidelines and that lovely lady or gentleman will go from being a crush to being crushed (by you (during physical encounters)). And remember, one last tip: perseverance is of the utmost importance, and you can't spell "restraining order" without "retry" (unless you listen to those cork-blockers at the dictionary!)

Webcomics: Another Distraction For Your Busy Life :D



REBECCA CAMERON
4N GEOLOGICAL

Need a study break? A good way to spend this spare time is reading webcomics! Webcomics are (exactly as their name suggests) comics published on a website. The difference between webcomics and regular print comics is that anyone can write and publish one for cheap. This has resulted in a huge array of genres, and allows a ton of artistic freedom as there is virtually no censorship (yay for the internet!).

I first started reading webcomics when I was introduced to *Dr. McNinja* – a webcomic about a ninja who is also a doctor. It was an awesome read, and I was hungry for more since I had given up on comics when I left high school (too expensive and time consuming). I then found out about *xkcd* – a webcomic featuring humour about technology, science, mathematics and relationships. In other words, something most engineering students will find pretty entertaining. Now it's been two years since I first explored webcomics and I religiously follow seven webcomics: *Dr. McNinja*, *xkcd*, *Red String* (life of a Japanese high schooler), *Bear Nuts* (zoo bears with clashing personalities), *Sister Claire*

(a pregnant nun fighting evil), *Evil Diva* (a high school devil who just wants to be good), and *Two Kinds* (love and friendship between two enemy races).

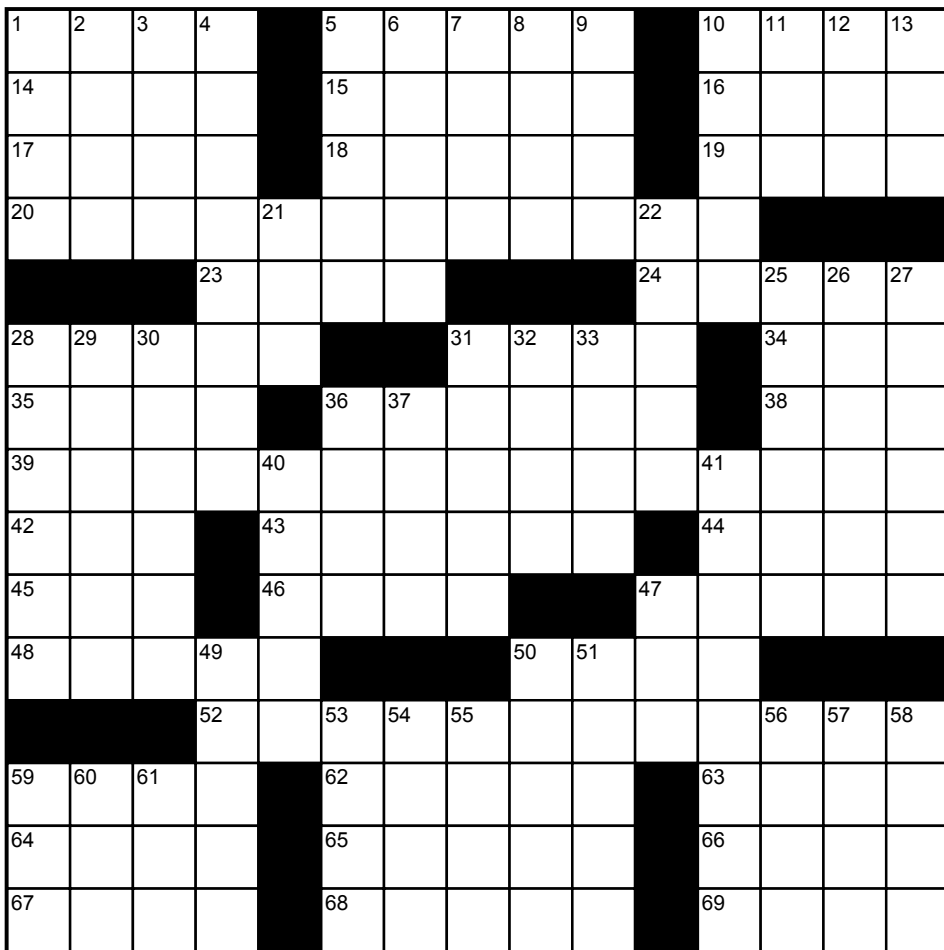
Beware – these webcomics are to my taste! I encourage you to go out and find some that cater to your interests. For instance, if you are a gamer there are many choices – I highly suggest *Penny Arcade*, *VG Cats*, and *Brawl in the Family*. Many other genres are out there, take the time to explore and find what you like. My suggestion is to start from the beginning of the comic, or at least at the beginning of a new story arc so that you can have some idea of what is going on. Most webcomics are updated at least once or twice a

week. Very few webcomics are financially successful, and only some are published on paper. In January 2007, there were an estimated 38,000 webcomics being published. As I just found out while researching for this article, the first webcomic was released in 1985 on CompuServe, which was the first provider for online services in the U.S. This was before the World Wide Web even existed!

So get on out there and take a look at yet another form of distraction the internet has to offer! I can't guarantee you will find something you really enjoy right away, but I can assure you that it will at least be much more interesting than your lectures!

The End is Nigh

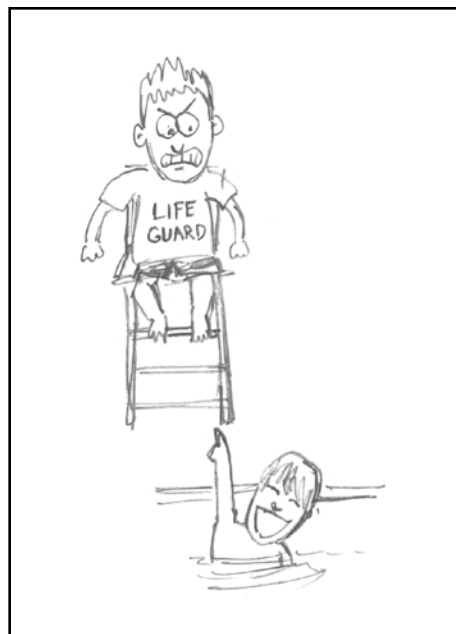
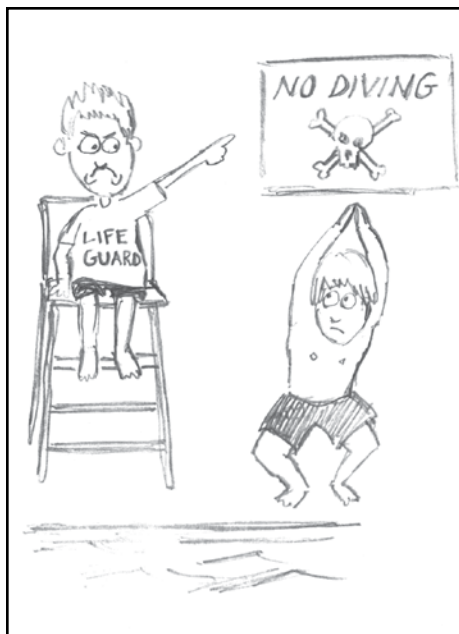
STUART LINLEY
2B NANOTECHNOLOGY



- ACROSS**
- 1 Costless
 - 5 Actress Amy
 - 10 Soap base
 - 14 Radiance
 - 15 Misrepresent
 - 16 High-schooler
 - 17 Crazy go with
 - 18 Winged ant
 - 19 Single
 - 20 Last thing that pushes one over the edge?
 - 23 Thought
 - 24 Tries
 - 28 Drivable
 - 31 It's a stretch?
 - 34 Digit
 - 35 Budget rival
 - 36 Whorl
 - 38 Depression
 - 39 Final final?
 - 42 Greek 'H'
 - 43 Indignation
 - 44 Foundation support
 - 45 Droop
 - 46 Sums
 - 47 Saltpeter, for example
 - 48 Braid
 - 50 Crooned
 - 52 Finals week?
 - 59 Altar area
 - 62 Everybody Loves Raymond actress Roberts
 - 63 Burn soother
 - 64 1993 video game hit
 - 65 _____ of Two Cities
 - 66 Not-guilty
 - 67 _____ Murder (2006 AFI song)
 - 68 Type of ray
 - 69 Had, as power
- DOWN**
- 1 Hare-like
 - 2 Book after Judges
 - 3 The E in 'H.O.M.E.S.'
 - 4 First
 - 5 Sully
 - 6 Change in
 - 7 Too bad
 - 8 Catcher
 - 9 Augury giver
 - 10 First Canadian female doctor
 - 11 Likes cocks
 - 12 Unagi
 - 13 Either
 - 21 Concentration disorder
 - 22 Shallow reef
 - 25 Shipping passage
 - 26 Rustle, as hair
 - 27 Irish dog
 - 28 Most death-like
 - 29 Bodily manifestation
 - 30 Face
 - 31 High-school functions
 - 32 Core material
 - 33 Groening or Damon
 - 36 Took to court
 - 37 Vet's trouble
 - 40 Rude
 - 41 Essay opening quote
 - 47 Compass dir.
 - 49 Stalks
 - 50 Long leg
 - 51 Sailing
 - 53 It's 'made' in Holland
 - 54 Better than bot B
 - 55 Modern Persia
 - 56 She, to Yvonne
 - 57 Yule
 - 58 Like zombies
 - 59 Admiral (abbr.)
 - 60 Taro dish
 - 61 ...-----

Mike the Lifeguard: The Basics of Teaching a Lesson

By Michael New, 4A Civil



THE IRON INQUISITION
Ammar Masud, 2B Nanotechnology

"What can't duct tape do?"



"Nothing"
David Birnbaum, 1B Mechatronics



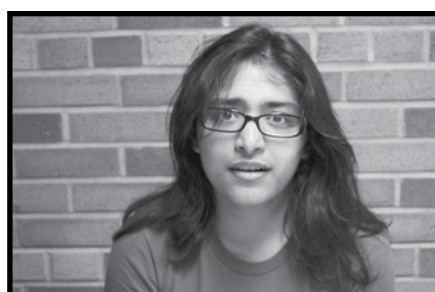
"Do my homework or make food"
David Hu & Mark Duan,
2B Software



"Cover the entire surface of your boat"
Kyle Pohl, 2B Mechanical



"Get a girlfriend"
Devin Witherspoon, 2B Software



"I'm speechless"
Sucharita Datta, 3A Electrical



"Birth control"
Michael Seliske, 3A Computer