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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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Construction on Campus: ENV 3 Opens its Doors & Health Services Expansion Breaks Ground

ANGELO ALAIMO
4N ELECTRICAL

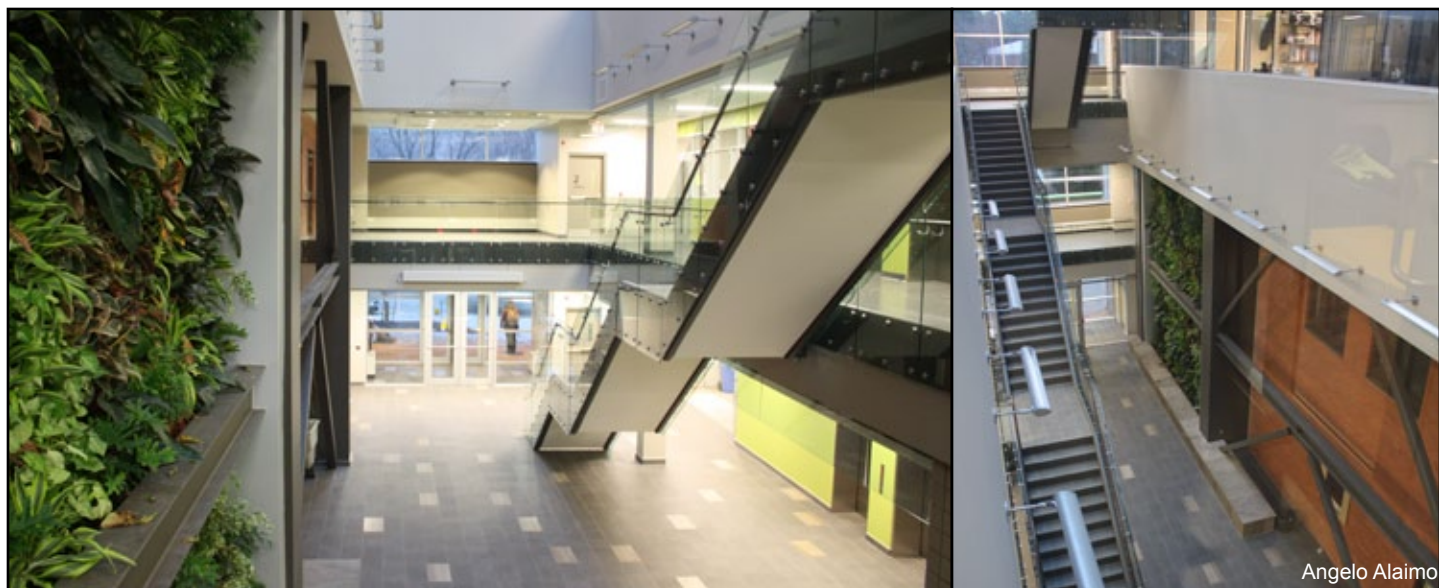
As our campus continues through its major expansion, ground breakings and building grand openings seem to occur each term. In the past month alone, two buildings have officially opened their doors, and just last week a building expansion broke ground.

Environment 3, located on the mid-west interior of Ring Road officially opened its doors on November 18, 2011. The building is another product of the Knowledge Infrastructure Plan (KIP), which is a federal stimulus fund set up to enhance the country's post-secondary institutions.

Environment 3 is a unique building as it was actually partially constructed over top of another environment building. In the spring of 2010, a massive steel lifting operation blocked off a section of Ring Road for the entire term as massive supporting beams for the new building were placed over top of the present Environment 2 building. Although the main entrance to ENV 3 is located on the ground, the top two upper floors extend over top of the older brick building.

The building also is currently targeting LEED (Leadership in Energy and Environmental Design) platinum certification - the highest possible in the program.

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Angelo Alaimo



Design Our Tomorrow Inspires Students

ALEX HOGEVEEN RUTTER
4N ELECTRICAL

November 12th, 2011 saw the third annual Design Our Tomorrow (DOT) Conference. Thanks to Waterloo organizer Nan Huang, Waterloo students had free tickets and were transported by bus to Toronto to experience the event, billed as "Rapid fire inspiration". Modeled after TED conferences, but targeted toward students, DOT is not about current innovation so much as the innovations of the future.

Unfortunately, an accident on the 401 caused the Waterloo contingent to miss the first three speakers, but we were not disappointed by the rest. We arrived in time to see Edward Burtynsky's expose on environmental degradation through photography, reinforcing strongly the notion that a picture truly speaks a thousand words.

Next up, product design legend Karim Rashid talked about his approach to design and his unique blend of functionality and attention to aesthetics. Despite initially struggling with school, and being unsure about his career path, he found his passion in industrial design. He reminded us that, in a way, we are all designers - whatever we do will be used by someone, directly or indirectly and we must never forget our purpose in serving that future customer. On

a side note, his talk highlighted what a good speech should really look like-images of his designs served as a backdrop to his talk, and he had no words to read from the slides. In fact, he barely made reference to the slides, which demonstrated that a truly strong speaker draws power from his words and uses visual aids like PowerPoint to supplement or provide context for their ideas, not to transmit them.

The next segment of talks contained Aza Raskin, former creative lead at Firefox and founder of Massive Health, an organization devoted to applying design principles to health issues. He demonstrated his in-depth grasp of the Feedback Effect, for example dashboards returning real-time feedback to driver's on fuel consumption strongly influence driving habits. Though his specific example was diabetes feedback, helping diabetics manage and understand insulin levels in a more meaningful and intuitive way to encourage better response times and insulin management, his talk discussed the broader implications of such an effect. He implored the audience to seek out those pernicious cases in our world where the amount of data is abundant or even superfluous but is not in a form that is manageable and readable by those who need it most.

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Queen's Bans the Bands

LEAH KRISTUFEK
1A CHEMICAL

When is it time to ban something? In today's world, sexually explicit language and music seem to go hand in hand, especially among youth. University students, though we are cultured individuals, don't always engage in the most tasteful activities in the opinions of the older generation. The older generation has always told us how 'music just isn't the same as it was in their day,' a fact which becomes increasingly true as we march in to the new century, though the recklessness of youth hasn't changed as much as they would lead us to believe. Recently Queen's University suspended their school's marching band, cheerleaders and highland dancers for publicly distributing pamphlets called "The Banner" at open events. The pamphlets contained sexually explicit content, inappropriate pictures and violent language which we do not wish to repeat in the Iron Warrior and unsurprisingly, was deemed offensive, especially towards women. Which brings us to the question, when does 'just a little fun' turn in to too much? When does a joke among friends become degradation and bullying? The line has been smudged beyond recognition and now, it seems as though few know when they have stepped over it. Why now? Queen's has long had many traditions bordering on the inappropriate, but until now they have been over-

looked in deference to the positive reputation from having the bands participate in events such as the Toronto Santa Clause parade and the Calgary Stampede as it celebrates its centennial in 2012. This crack down on lewd, unrespectful behaviour at Queen's has come in the wake of Jerry Sandusky's November 5th arrest on convictions of sexually assaulting minors. If you are wondering who Jerry Sandusky is, he was the Football coach at Penn State University prior to his arrest. Though evidently both offenses are fairly different in nature, this arrest has placed a spotlight on university campuses, and not one which is highlighting our wonderful academic programming.

Universities have long been exciting and emotionally charged places. For many people going to University is the first time they are leaving home and this new environment away from their sheltered home lives allows them to explore new interests, and pursue new experiences such as drinking and socializing. Yes, Arts students get to journey long and far on this experimental path, but engineers have their fair share as well. Most people expect to have a few wild years in which experiments take place and mistakes are made. A little more than a century ago campuses were filled exclusively with men, so the jokes about women and drinking songs

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Letter From the Editor

The Term in Review, Who Cares What Society it is Anyway, Staff Appreciation



JON MARTIN
EDITOR-IN-CHIEF

It is hard to believe that another term has come and gone, and the IW team has once again managed to publish five excellent newspapers. I hope the Iron Warrior has been a good source of distractions during those boring lectures we all avoid, and maybe even been a little informative, but I won't get my hopes up.

In addition to producing five newspapers over the last twelve weeks the IW has also had another project on the go, archiving the old copies of the newspaper. This project is extremely important as the newspaper is really one of the only records of the history of the Engineering Society and the Faculty of Engineering at the University of Waterloo. Every paper that we have on file has been packaged and labelled so that each can be identified easily. This has actually been a big problem in the past it seems, as every society used a different numbering convention, a different layout and even different sized papers.

Unfortunately the inconsistency in numbering (and even the practice of putting a date on the paper) has led to some questions with cataloguing - did the group publish five issues that term or only three, are we missing some? To solve this problem I have started the process of contacting previous editors to see if they can shed some light on their publication schedule and if they actually have any copies of their own issues in storage (I know I will).

One of my big goals this term has been to try and promote a better relationship between both A-Soc and B-Soc IW teams, and I hope I have taken some steps towards that goal. I have tried to encourage new writers to continue writing once they switch societies, as well as continuing columns across societies. Next term, any B-Soc people who want to write, contact Chris Letnick with your ideas. Having done most of my co-op terms in KW I have been able to participate in many A-Soc events over the years and have had a ton of fun - maybe that has something to do with not having class the next day, or assignments due, so try and get involved wherever you are for co-op. I will be in KW for the winter term, and look forward to seeing all of my A-Soc friends and joining in on Pubcrawls (why they all happened on IW production weekends this term is beyond me). As an aside to Chris Letnick, the incoming EIC for the Winter term, if you need any help I will be around on weekends, so just say the word - and you will have a Future of Gaming article every issue.

Now, on to the staff appreciation section of the editorial. This paper would not be possible without the amazing group of people that come up with ideas, write the articles and help with production weekends. I have to mention a couple people by name who have gone above and beyond this term. First of all is Kevin Veloso who has been in the office for every single pro-

duction weekend this term. He has been able to help with both writing articles and fixing computer problems (because of him the FTP connection for the website is working again) and a big contribution to copy editing.

Another big help has been Jacob Terry, who has also been in the office for almost every production weekend. He has balanced his busy schedule while also having a life and still contributing a huge amount to the paper. Jacob has written many articles this term, competing in a hopefully friendly competition with Angelo for the Iron Pen, but more on that later.

Another big contributor has been Anish Bhutani, who has written several PCP articles this term as well as the often difficult PD related articles. His camera guy creepiness has been a great fixture in the office - though his annoying abandoned phone ringing continuously until we found it was a little annoying.

Previous editors like Angelo Alaimo, Cailin Hillier, Trevor Jenkins, and Kevin Ling have also been there for advice and when I needed a 250 word article ASAP really early in the morning. I also want to mention the great number of first years, and other new writers who have joined the writing team for the paper this term. Some have even started new columns that I hope will continue into the future.

While not a part of the IW team, I also want to thank my class for putting up with my absenteeism and vacant looks as I've been thinking about the newspaper at all hours of the day. I will be out of zombie mode next term, I promise.

So, on to the awards. The first award is the Iron Pen, which is awarded to the staff member who has contributed the highest quantity of published content to the IW. This term there has been quite a contest going on between Angelo Alaimo and Jacob Terry. Each issue these two have written any article I asked them to, in addition to writing their own articles (or in the case of Jacob, his column as well). In this case I wish I could give both of them the award, but here it is purely about the numbers and only one person can have the highest wordcount at the

end of the term. So, the winner is.... drumroll please (and don't read ahead) Angelo Alaimo. After writing over 12,300 words this term, Angelo has achieved the IW trifecta, getting his name on all three plaques for Iron Pen, Editor's Award, and Editor-In-Chief.

The Editor's award goes to the person who has "distinguished themselves through dedication, commitment, and contribution to the Iron Warrior." This term the Editor's awards go to two people who have contributed a huge amount of their time to the paper, and have been a constant help throughout the term. I am pleased to give the awards to both Kevin Veloso and Jacob Terry, both of whom I have already talked about. Both of them have been a great help, and I am truly grateful.

Again, I want to thank everyone who has contributed to the paper this term. That includes staff writers, contributors, and everybody who has submitted an idea or shouted them at me in the hallway.

I want to end by thanking the past editors and contributors who will be graduating this Winter term. To all the 2012s, good luck with your 4B term and I hope to see you out at the pubcrawls next term. Every September there is a constant influx of new engineers who join the faculty and see the Iron Warrior newspaper for the first time (realising how much better than the Imprint it is) and work up the courage to step into their first meeting. But every winter we lose the seasoned veterans, some of whom have been writing for the paper for years, and suddenly that column you love to read is gone. That is when the next editor needs to find the next columnists and recruit a whole new group of people - so that is my segue into naming the next B-Soc Editor-in-Chief of the Iron Warrior.... drumroll... Jacob Terry has been an amazing contributor since he started writing for the paper, and we all look forward to seeing what you will bring to the newspaper this summer. Good luck, have fun, and try not to fail the term, just kidding. But really, don't fail.

So that's it for my term. So long and thanks for all the fish.



Thanks to the IW team for a great Fall term.

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THE IRON WARRIOR

The Newspaper of the University of Waterloo Engineering Society

Editor-in-Chief

Jon Martin

Assistant Editors

Cailin Hillier
Jacob Terry

Layout Editor

Jon Martin

Copy Editors

Adriana Cameron
Alex Hogeveen Rutter
Anish Bhutani
Jacob Terry
Kevin Veloso
Sydney Bateman
Allison Ngsee

Photo Editor

Angelo Alaimo

Advertising Manager

TBA

Circulation Managers

Jason Nguyen

Web Editor

Jacob Terry

Staff Writers

Aby Mahmoud
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Nina Feng
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Rebecca Cameron
Suzy Patchett
Taylor Lambert
Trevor Jenkins
Will Zochodne
Zac Young

Contributors

Alessia Danelon
Alexandra Collins
Andrew Fisher
Craig Hall
Laurin Benson
Owen Coutts
Yasser Al-Khder
Stuart Linley

Off-Stream Editor-in-Chief

Chris Letnick

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

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

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

Mail should be addressed to The Iron Warrior, Engineering Society, E2 2349A, University of Waterloo, Waterloo, Ontario, N2L 3G1. Our phone number is (519) 888-4567 x32693. Our fax number is (519) 725-4872. E-mail can be sent to iwarrrior@gmail.com

Band at Queen's

From QUEEN'S on Page 1

which are being so criticised by officials now were common and for the most part condoned practices. After all, boys will be boys. Pub nights would be a common occurrence, one at which songs bemoaning their single state might be sung in terms not befitting any woman's ear. Now, however, there are members of the female sex involved in nearly every aspect of academic life, and we expect equal treatment, courteous behaviour and the ability to take part without hearing about certain aspects of the female form, or male anatomy for that matter which men seem to find so fascinating. Huge expectations, we know. Now before I go any further, a Disclaimer; I do not in any way have any problems with my colleagues, let's just roll with the stereotypes for awhile here. While most of us here at Waterloo have chosen to explore in the region of fabulous amazing sciency things, or friendly open group activities like building robots or taking part in EngPlay, we are not the norm. Pupils at other schools, and plenty here as well, have chosen to embrace the wildness of youth, occasionally taking it a little too far. For most of us it's all in good fun, but it is difficult to know how our humour will be taken by someone raised in a different environment than ourselves, and they might not make the group aware when they have become uncomfortable. That's why societal conventions are in place.

Members of the Queen's bands, which also includes those involved in Cheerleading and highland dancing, will now be required to take mandatory human-rights training to create a more inclusive, respectful environment which better reflects the school's mission and standards since it is such a public face for this prestigious old school. In this ever changing social climate, it has to be remembered that however racy the mainstream music becomes, and however acceptable something seems in a group of friends, a team or club should not be exclusive. People will still be judging based on their own standards which don't necessarily agree with your own. The sub culture of hyper sexualisation of women, vulgarity and partying which has taken root within Queen's Bands does not display characteristics of equality (which is what we're all about, right?) I have come up with a two step strategy to cope with this. First ask, "What would grandma do?" And abstain if what you are planning to do would cause your grandma to have a heart attack. Finally ask yourself, "Would this disappoint the Tool?" If you are planning to steal the math tie, paint the Guelph cannon black and yellow or some sort of similar trick, go full blast ahead, but if your plans might offend the sensibilities of someone else who is participating, choose no. Do Not Disappoint the Tool. If only Queen's had such an awesome mascot, they might not be in the pickle they are in today.

DOT Conference

From DESIGN on Page 1

It was fascinating to learn of the motivational effects of real-time feedback, irrespective of additional tangible rewards.

David Keith, climate advisor to Bill Gates, spoke next about the potential of Geo-engineering as a mitigative measure against climate change. He talked about the importance of iterative research and design-theoretical modelling, empirical testing, pilot projects and full-scale implementation, with challenges at each stage addressed by iterating to the previous or even first stage. Unfortunately, his talk was also a sobering reminder of the challenge of catering to government requests. Though using sulfate aerosols in the stratosphere to mimic natural global dimming has been theorized for decades, government opposition has limited the possibilities of empirical testing. This is especially critical, as it appears more and more that humanity will be unable to make the requisite carbon emission cuts to prevent serious climate change and may need to rely on direct action such as geo-engineering to prevent runaway feedback cycles. What was most compelling was that David Keith did not have a blind faith in his proposal, but was advocating the need for research and testing to assuage fears about the technology, ironically the same fears which prevent even the tests from occurring.

Raghava KK, contemporary artist, illustrated the power of merging art and technology. He discussed his "Shake-up books"-children's books for a tablet device that, when shaken, transform the setting to another perspective. One example was a typical nuclear family shaken up to illustrate a gay or lesbian household. Immediately intrigued by the idea and brainstorming my own perspective stories highlights just how valuable conferences like DOT can be. Three weeks later, I am still thinking about shake-up stories I would like to write and am able to apply the principle when approaching complex social situations.

Another speaker, Craig Shapiro, talked about how he shook up the publishing industry. Realizing that magazines typically break

even on subscription revenues (when factoring in the cost of promoting the magazine) and make the majority of their money off advertising, Craig took a different approach when founding Good magazine. Subscribers donate the subscription cost to charities of their choice. Not only does this foster goodwill among subscribers, various charities have actually taken it upon themselves to promote the magazine as a way of generating donations. A counter-intuitive approach (giving away what one would think would be a primary source of revenue) has actually been a powerful promoter and revenue generator. It is interesting to think of how other industries such as music, literature and movies could be radically disrupted in a similar way.

The final speaker, Siobhan Quinn at Four Square was, in my initial opinion, the weakest speaker of the event. However, whenever I disagree with an idea, I make sure to write it down in a notebook in case a new perspective sheds light on something I may have earlier missed. One of her ideas, the power of curiosity as a unifying factor actually clicked the very next day when I was facilitating a motivation workshop through the Student Leadership Program. The students were in fact immensely motivated by a task not because there was a reward for success or punishment for failure but because it was challenging and intellectually stimulating. Rather than dismissing her words out of hand, I was able to let them germinate and come to fruition later in a different context.

This discovery speaks to the true power of opportunities such as Design our Tomorrow. It may not be physically sitting in a room listening to someone talk, but the discussions, thought and ideally trial applications that should ensue. Though only a few hours long, I can easily say I learned far more from my one day at the conference than many hours of class - not just because of the talks themselves, but because of the reflection, synthesis and bridging of what might initially seem to be disparate ideas. I would encourage everyone to seek such opportunities, not just for the experience itself, but for true education; nurturing thought, discussion, curiosity and innovation.

New Buildings on Campus

From CONSTRUCTION on Page 1

To achieve this level of certification, many unique building features have been implemented into its design.

On the roof of the building, a photovoltaic installation is expected to provide 60,000 kWh of electricity each year while on another section of the building a 5,000 square foot green roof garden patio exists. Renewable building materials have been used in the building's construction and energy and resource efficient fixtures have been implemented for the building's lighting and plumbing. Furthermore, the atrium of the building includes a two-story "bio-wall" - a wall of living plants, which connects to the building's air supply system to act as a "living air filter".

The building was originally supposed to cost \$20.7 million, 70% of that coming from the federal government. After construction began, a change was made from achieving LEED Gold to Platinum certification which then added a further \$2.395 million dollars to the project plan. The additional cost of achieving LEED platinum is to be partially supplemented with fundraising activities.

Apart from the Opening of Environment 3, the health services expansion has broken ground. Back in the fall of 2009, a student referendum was held asking to approve student funding to construct two new buildings on campus. One of those buildings was to be a student services building to be built just south of South Campus Hall in parking lot H, and the other was to be an expansion of health services.

Students voted against the construction of the student services building but were still in favour of the health services expansion. The expansion is to be funded by an added student fee to be tacked onto each student's term fees. This added fee starts once construction is complete.

Two years after the referendum, the health services expansion finally broke ground on Thursday of last week. Construction had been mobilizing over the last couple weeks with the construction area now fully fenced off and site excavation started.

The project is expected to cost \$7.75 million dollars and repayment will begin as a \$10 fee tacked on to student tuition starting once the building has been completed sometime next year. The fee will stay on student's tuition bills for a maximum of 20 years or until the building has been fully paid off. Similar student orientated buildings have been funded with a student fee in the past such as the SLC expansion/renovation in the 90's as well as the CIF sports complex on north campus.

The expansion adds 20,000 square feet of space across two levels and also includes around \$600,000 of renovations to the existing building. The first floor of the building will include 21 new examination rooms and the 2nd floor will be used for the mental health and health promotion activities of the University.

Kearns Mancini Architects Inc. along with John MacDonald Architect Inc were selected as the architects for the project and Devlan Construction Limited have been selected as the construction managers.

Russia approves of Bering Strait Crossing

NINA FENG
1A ENVIRONMENTAL

In late August, Prime Minister Vladimir Putin of Russia approved the construction of the Bering Strait Crossing, an underwater railroad that will span the roughly 100 kilometre-wide channel separating Alaska and the Siberian region of Russia. The project is expected to cost more than \$65 billion, and will be developed over the course of the next 20 to 40 years.

A project that had been initially proposed centuries ago, it has been rejected numerous times over the years due to the ambitious nature of its production, and it will take a great deal of precise engineering and troubleshooting to make this happen. To build in water at such an extreme area comes with more problems than usual. Some complications may come from the cold climate, including the fact that large, 6-ft. thick ice floes often float through the area and may cause damage to the system and hinder its construction. Furthermore, some geological inconveniences may arise as well. Though the Bering Strait does lie outside the Pacific Ring of Fire, it still has a fault line beneath it and experiences a relatively high level of seismic activity, especially if they are trying to send trains through it.

Despite the potential difficulties, there are still features of the area that will help in the

process. For instance, it is lucky that the channel is only about 180 feet deep, which will allow for easier construction and access. Also, it is planned to be very environmentally friendly, in terms of energy use. The fact that it passes through the ocean opens up opportunities to make use of the renewable energy sources offered, such as wind energy, and tidal energy.

The construction of the railway would make it possible for people to travel from North America to Asia by train, across the Pacific Ocean. If all goes as planned, people can expect to be taking day trips from Alaska to Russia by 2030, if not 2045. Moreover, the railway is also set to be connected to other European and American rail networks in such a way that one might be able to travel from New York to London, England without having to fly or sail.

However, the initial use to the crossing will not be recreational. Its primary use will be mainly for the transportation of cargo and trade goods. For example, it is expected to supply oil and natural gas to the U.S., imported from European sources. This should help in developing Siberia and improving U.S.-Russia relations, which have been strained in the past.

It will be a long and arduous process, but though we may not see the final product anytime soon, it has certainly made the world seem that much smaller already.



The Bering Strait separates the U.S. and Russia by only 90km.



EngSoc and FedS Working Together, To Work Better, For You!

ALESSIA DANELON
ENGSOC PRESIDENT

As you may or may not be aware, FedS, the Federation of Students, is the official representative of the undergraduate students of the University of Waterloo. They also act as the umbrella body for all of the societies on campus, including our very own Engineering Society.

FedS has many policies and by-laws that govern how the societies work with FedS in order to accomplish common goals. However, in the last few years, the FedS VP Internals have been working with the presidents of each campus society (officially known as the Council of Presidents, or COPs) to draft and sign a "Societies' Agreement". This agreement will act as a document over and above the current FedS policies and by-laws. The goal of the agreement is to give societies better resources, coverage and also tangible expectations for what to expect

from each other.

What does this mean for EngSoc? EngSoc gains security in that they are essentially protected from liability due to another society. Due to the way the university recognizes student societies, all of the societies are liable together for the financial fault of any one society. The agreement protects EngSoc from liability for another society's actions by pre-emptive courses of action on the part of FedS. For example, if another student society were to use their funds in a way that breached Canada Revenue Agency standards, the agreement allows FedS to withhold the fees of a that society, pending approval by their Board of Directors, and of course, an audit. The society in question would then have to work to correct the error before the fees were allocated to them again. By withholding the fees until the error is resolved, any non-profit status that FedS, and therefore EngSoc, holds is not lost because the society at fault could not

continue to misappropriate their funds.

There is some responsibility on the part of EngSoc that results from this agreement as well. One new course of action that EngSoc didn't follow before was submitting event forms to FedS for each of our events. This task will be taken on by EngSoc Staff, and FedS has even offered to customize the form for EngSoc. Mary Bland, the business manager of the Engineering Society, will also be checking these forms. Though the forms are tedious, they make sure that an event is well thought out and properly planned. This should in turn increase the overall quality of events offered by EngSoc in the long run, as it gives directors a guideline for what type of information they should have considered in the planning and execution process of their event.

The agreement itself is yet to be signed. I am working with the other student society presidents and the VP Internal of FedS, Luke

Burke, to ensure that the agreement meets its needs without being too overarching. I am personally looking into adding a rigorous process for having fees withheld. I am also working on a timeline for the agreement that better aligns with the active terms of our presidents and the FedS executive. Overall, I am trying to better protect the interests of EngSoc. I think a strong relationship between EngSoc and FedS is important. However, I acknowledge our specific needs, and I will work to make sure they are reflected in the final terms of this agreement.

Finally, I invite you to discuss this agreement with me at any time. You can email me at president.b@engsoc.uwaterloo.ca, or come visit me during regular business hours in the EngSoc office. I know final exam time is coming up, but if you are interested in this conversation, I invite you to start it. I am always willing to listen to new perspectives, and I would love for you to share yours with me.



EngSoc Exec Wants You!

First Year Integration Conference

YASSER AL-KHDER
VP EXTERNAL

First years, did you read the first two words of the heading? That's right. This conference is for you and you only. The First Year Integration Conference (FYIC) is a conference run by the Engineering Student Societies' Council of Ontario, that's ESSCO for all you acronym loving people (ALP), that brings first year engineering students from across Ontario together to learn about leadership opportunities, ways to get involved in your engineering society, university, and ESSCO.

There are many reasons you should attend FYIC, and since I know us engineering folks hate big blocks of text, I present to you "Top 10 Reasons You Should Attend FYIC". Drumroll please.

- 10 - You get to see Hamilton
- 9 - You will probably get the Friday off work if you tell your boss you are attending a leadership conference.
- 8 - You get to meet first year engineering students from across Ontario, and learn a lot about other engineering schools and their traditions.

- 7 - You get to stay in a fancy hotel.
- 6 - The speakers in conferences are inspiring and generally amazing. I will also guarantee you that at least one speaker will make you laugh harder than that time you inhaled helium from a balloon.
- 5 - Good Food
- 4 - You get to spend a weekend with me!
- 3 - Putting Waterloo Engineering Delegate on your resume looks impressive, especially for first years
- 2 - You might get that push to get involved in something you're passionate about. I decided to run for Vice President External after the first conference I attended.

1 - It will be an unforgettable experience, whether it's from the people you meet, the speakers you listen to, the sessions you participate in, or the conference as a whole.

The conference will be on the weekend of January 20th at McMaster University. Applications will be open by the time you read this. So why are you still reading this? Go ahead and apply.

Disclaimer: Please make sure you're working somewhere close to Waterloo, Hamilton or the GTA if you are applying to attend FYIC.

Find a job with JobMine?

OWEN COUTTS
VP EDUCATION

For the last number of years, JobMine has been in a state that is less than ideal. About 3 years ago, CECS along with IST tried to address the problem with the existing system. A replacement piece of software was searched for but nothing suitable existed. The university decided that it would be worth investing in developing their own piece of software that suited the diverse needs of the Waterloo co-op program. The development of Waterloo Works, a replacement system for JobMine began. In the spring of 2011, it was announced that after much investment in the product, Waterloo Works would be cancelled.

Deloitte Consultants were hired with the goal of assessing what happened, what went wrong and what lessons are to be learned. Waterloo Works was developed under different methodologies and practices than the way IST normally works on projects. Most of the issues that were identified stemmed from managerial and structural issues. Unfortunately, the structural issues go beyond the scope of this report, so there are likely very few lessons that can be applied to fu-

ture projects. The next cycle of looking for a replacement to JobMine has already started. Since the process was started three years ago, many things have changed. Many more Universities have well established coop programs and software packages have responded. The hope is to find something relatively "off the shelf" that would suite the needs of Waterloo. This process is expected to take a long time and is currently in the preliminary evaluation stage.

Meanwhile, CECS is pushing constant improvements and termly updates to JobMine. Unlike the time during the development of Waterloo Works, CECS and IST plan to keep developing JobMine as a new system is searched for and implemented. This process has already started. In time for the Fall interview season the first major update to JobMine was launched. It has a more up to date backend which provides the opportunity to develop in a supported environment. This allows for future development of features such as better job searching, improved resume upload flows and features to develop a more robust system. Though replacing JobMine is a long process, the system is continually improving.

POETS				
MOVIE SCHEDULE				
SHOWINGS BEGIN AT NOON				
Wednesday Nov. 30 Arnold Week	Thursday Dec. 1 Arnold Week Cont.	Friday Dec. 2 Arnold Week Cont. EOT 9-11PM	Monday Dec. 5 Toy Story Marathon Last Day of Lectures (No Lectures In POETS)	Tuesday Dec. 6 Study Day
Wednesday Dec. 7 Study Day	Thursday Dec. 8 Exams Start	Friday Dec. 9 Study For Exams	Monday Dec. 10 Still Studying For Exams	Tuesday Dec. 11 Why Aren't You Studying For Exams? Happy Holidays (eventually)



Get Involved!

Commissioner and Directorship Applications

ANDREW FISHER
VP INTERNAL

Are you at the stage in your University career where you want to get more involved in extra-curricular activities? Do you want take on a greater leadership role? Well the Engineering Society has announced the opening of Commissioner and Directorship applications for the Spring 2012 term! These roles help aid the EngSoc Executive in running the various events, services and inner workings of the Society. These positions look great on a resume and are a good opportunity to develop your project and people management skills. It is also a great opportunity to meet students from other classes and graduating years.

Commissioners work directly under the Executive aiding their assigned directors and assisting in the day to day running of the Society. This is in hopes of freeing up more time for the Executive to take on new initiatives during the term. There are five Commissioner positions available for the Spring Term:

- Speaker
- Student Life Commissioner
- Student Services Commissioner
- Communications Commissioner
- Waterloo Engineering Competition (WEC) Commissioner

The application form including the qualifications and responsibilities is available at <http://engsoc.commissioner-application>. Commissioner applications will be closing Wednesday November 30th. These positions

require an interview with the Executive. Applicants will be contacted to arrange an interview time once applications close.

Directors work with the Executive and Commissioners to organize and execute specific social and academic events and services. Duties can include running a budget, booking venues, recruiting volunteers, advertising, and selling tickets to name a few. Some Directorships available in the Spring Term include:

- Arts – Colouring Contests
- Athletics – Pick-up Ball Hockey
- Canada Day
- Cardboard Boat Racing
- Resume Critiques
- EngPlay – Director
- Genius Bowl
- Music – Coffee House
- Outreach Rep
- Semi-Formal
- POETS Manager – OT’s
- Scholarship Awareness
- WEC – Senior Design Competition
- Year Spirit

For a complete list of available Directorships, including the expected responsibilities are available at <http://engsoc/director-application>. Directorship applications will be closing December 31st.

If you have any questions about these positions or would like some advice on which ones to apply for, do not hesitate to contact any of the Executive, or this term’s Commissioners and Directors.

Funding from ECIF

ALEXANDRA COLLINS
VP FINANCE
AKA VP CASH MONEY
AS NARRATED BY MINA LABIB

Hello sexy engineers. Being so close to the holidays, it seems about the right time to announce the awesome ‘gifts’ the Engineering Capital Improvement Fund (ECIF) committee is bringing you. This term, the committee agreed upon funding the following initiatives:

- USB Multimedia controller for POETS – This device will allow people to change the volume/channel without accessing the internal A/V equipment. Never will the Fast and Furious marathon be too quiet again!
- Lighting Equipment – For use in a myriad of events such as EngPlay, Semi-Formal

and OTs

- Printing and framing new pictures for POETS – Bringing the history of Engineering into the 21st century.
- LCD screens for new advertising system – This is a new initiative that is going to taking event and service advertising into the 4th dimension.
- Screening of POETS door – While the Ask Eng Alumni stickies have been working, we thought a more permanent solution would serve you better.
- E7 Atrium – Have you seen E7 yet? Me neither but I hear the atrium will be awesome.

Do you have another project that could use funding from ECIF? Submit your ideas to the website and stay tuned next term. Enjoy all your gifts!

EngSoc B Executive
Alessia Danelon - President
Andrew Fisher - VP Internal
Yasser Al-Khder - VP External
Alexandra Collins - VP Finance
Owen Coutts - VP Education

executive.b@engsoc.uwaterloo.ca
president.b@engsoc.uwaterloo.ca
vpinternal.b@engsoc.uwaterloo.ca
vpexternal.b@engsoc.uwaterloo.ca
vpfinance.b@engsoc.uwaterloo.ca
vpeducation.b@engsoc.uwaterloo.ca

FedS Council Report

KEEGAN SKORETZ
FEDS ENGINEERING COUNCILLOR

Greetings once again from your fantastic FedS Councillors! We have a few updates from Students’ Council that may be relevant to your interests, including changes to FedS Housing Advocacy Strategy and the UPASS deal with GRT. There are a few notes on upcoming FedS events a bit further down.

Changes were made to FedS Off Campus Housing Advocacy Strategy at Council on Nov 13th. The basics are more or less the same, in that Feds will continue to advocate the needs of UW students to all relevant government bodies to ensure that students have affordable, accessible and safe housing options. Changes were made to apply the policy to all neighbourhoods where UW students may be residing, whereas the previous policy made specific reference to the Northdale neighbourhood. FedS is also committed to assisting in the development of a long-term plan for the City of Waterloo’s post-secondary student population. This includes engagement with officials from the local government, as well as WLU administration and the WLU Student Association.

UW FedS is also working to improve the current UPASS deals with GRT. For those of you who are not aware, this is the deal that allows you to use your WatCard like a bus pass on the GRT. In the future, negotiations will be done in concert with a working group comprised of representatives from UW FedS, UW GSA, WLU GSA and Wilfed Laurier Students’ Union to develop a long term agreement that will be of benefit to the entire student population. Fees have increased to \$60.64 per term, but there has also been the addition of the new iXpress 201 route. Overall service times have increased and wait times have decreased, which I’m assuming is a good thing!

Last business-y thing (I promise!); there is still one Engineering seat left on FedS Council! There are 5 remaining council meetings, one per month from now through April 2012, as well as the AGM in March. You can download the nomination form and submit it to the FedS office at any time. If there are no other nominations within 7 days then you get the seat! All those interested should contact one of your friendly neighbourhood FedS councillors (I’ll leave some info below).

EVENTS! HURRAY! The term may be drawing to a close, but there are still a few events that may be worth checking out. Such as...

The Last Bomber Wednesday of the term is taking place on November 30th (same day as publication). Doors open at 9:00 PM, there is no cover for UW Students (\$5 for non-UW Students) and the night features \$3 BEvERages.

End of Term with WTFedS is taking place all day Dec 1st in the SLC. FedS would like to wish everyone good luck on exams and a happy holiday by giving out Free Snacks!

Last, but certainly not least, is the Call for Talent that is continuing on Tuesday Dec 6th. This is an audition for Showcase Your Roots, a talent and fashion show in February 2012 as part of Black History Month. The show will be for an all age’s audience, and all backgrounds, identities and genres are welcome! Singers, spoken word artists, dancers, models, instrumentalists, emcees and artists of other varieties are needed, Details for all of these events can be found at feds.ca/events.

That’s all for now folks! If you have any questions or comments about the goings on at FedS, feel free to stop by POETS (I try to be there as much as humanly possible) or send me an email at kskoretz91@gmail.com.

New Free Service: Outdoor Bike Repair Stand by CPH


ERIC COUSINEAU
4N ELECTRICAL

If you’ve ventured by CPH Courtyard in the past week or so, you may have noticed a shiny new fixture resembling a mess of pipes, cables, with a bike pump on the side. Well sir/miss, that is EngSoc’s shiny new Fixit Bike Repair Stand made by Dero Bike Racks. It really is quite a neat idea and I really believe that the uWaterloo community will get great use out of this for years to come. Anyone is welcome to use it including all students, faculty, and staff. It’s just one way that EngSoc is giving back to the university community.

In case you haven’t had a chance to inspect it yet, the way it works is that you hang your bike in the middle by the seat, and perform the repairs using the multitude of tools attached to the rack by steel cable. I haven’t seen it in person yet (in BC for co-op) but it should have: Phil-

lips and Standard screw drivers, Allen wrenches (2 – 8 mm), Torx wrench, Headset wrench, Pedal wrench, Box wrenches (8 – 11 mm), two tire levers, and a bike pump. This pretty much covers any basic bike repairs or adjustments you’ll have to do. This is the first purchase of the newly instantiated EngSoc Capital Improvements Fund (ECIF), approved during the spring term, and costing approximately \$1700. Each term, EngSoc allocates a certain percentage of its income from student fees (15% in Fall, 5% in Winter & Spring) to make lasting improvements to our Engineering spaces. This bike rack is the first example of a capital improvement that we think will be of great use to EngSoc Members and others alike. If you have any ideas of capital improvements that EngSoc could make to benefit Engineering students please contribute them to the committee. You can either talk to a VP Finance or myself ([eric.cousineau \[at\] uwaterloo](mailto:eric.cousineau[at]uwaterloo)) We really want to hear from you!

Upcoming Events Calendar

Wednesday November 30	Thursday December 1	Friday December 2	Saturday December 3	Sunday December 4	Monday December 5	Tuesday December 6	<p>Check out up-to-the-day event postings on the EngSoc website at engsoc.uwaterloo.ca</p> 
Coffee House Santa and Tool Photos EngSoc Meeting 5:30PM - Potluck - POETS	Running Club 5:30PM POETS Patio	End Of Term Party			Charity Pancakes 8:30 POETS Foyer Lectures End		
Wednesday December 7	Thursday December 8	Friday December 9	Saturday December 10	Sunday December 11	Monday December 12	Tuesday December 13	
WE Innovate 1-3PM E5 3rd Floor	Exams Begin	Exams	More Exams	Still Exams	Never Ending Exams	OMG Exams	



WEEF Reaches \$10 Million Participation Rate Hits Record High!

LAURIN BENSON
WEEF DIRECTOR

For those of you who were lucky enough to get some tasty WEEF cake (yes, you can eat the sparkles) on November 17th, you should be aware of the incredible milestone that WEEF hit this term. For those of you who are unaware, the principal account reached an incredible amount of \$10 million! This means that all the money received from students and private donors, plus all the interest earned over 21 years has totalled to this impressive amount. Congratulations to everyone who has supported WEEF in this time and made WEEF possible! Thank you! It was not so long ago that undergraduates John Vellinga and Avi Bellunsky started WEEF in 1990 with a fraction of this amount.

What does this really mean? Well, reaching \$10 million says many things. Firstly, this means that as WEEF continues to grow, WEEF can contribute more and more funding to undergraduate engineering. Term allocations are based on percentages of the principal amount. You can do the math! Waterloo Engineering has really taken the concept of "pay it forward" to a whole new level. It also speaks volumes about the University of Waterloo's Undergraduate population. In addition to being selfless and generous, your support results in personal involvement in a huge number of initiatives across campus. WEEF money goes directly from the students, back to the students, in the form of lab upgrades, buildings, student team equipment and much more! Students started, administer and continue to facilitate WEEF and this is an incredible tradition that we look forward to continuing until the next big milestone. Can anyone say \$15 million?

Also, watch out for our \$10 million T-shirts, coming to Novelties soon!

Also, rejoice and be glad, for this now we will be taking a look at the Fall 2011 WEEF



L to R: Midori Telles-Langdon (WEEF Board of Directors Member), J.C. Silvera (WEEF Representative), Laurin Benson (WEEF Director, B Society), Kal Sobel & Keegan Skoretz (WEEF Assistant Directors)

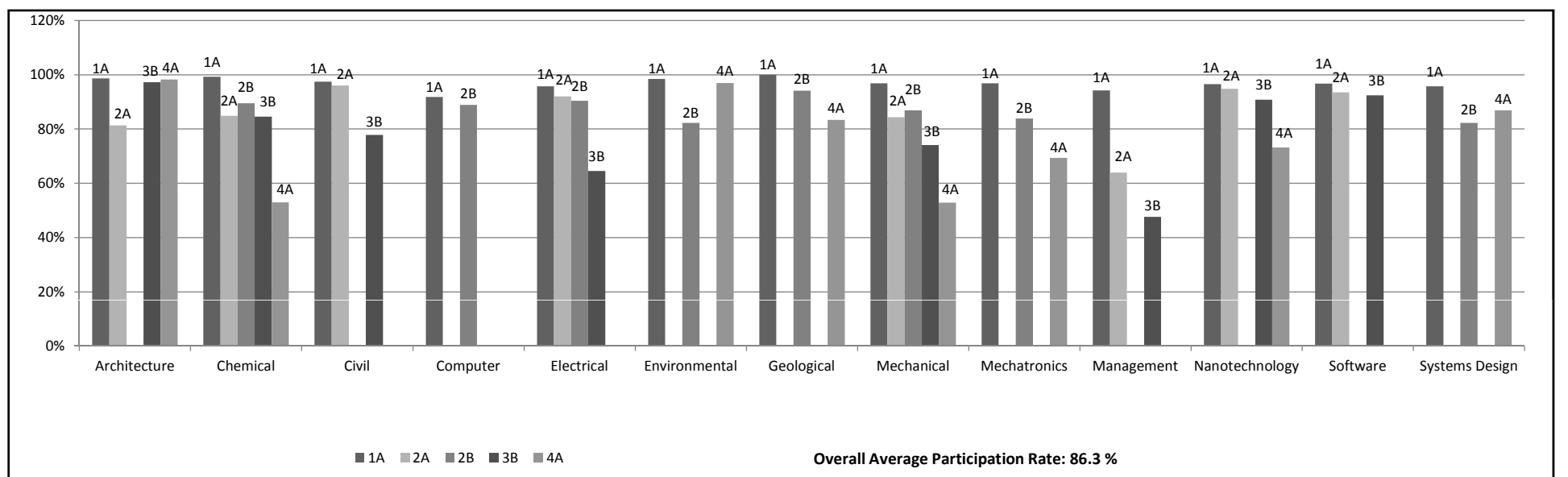
Participation Rates!

"What are participation rates?" you may wonder. Well, the Voluntary Student Contribution (VSC) of \$75 to WEEF is collected from undergraduate students each term. Some students choose to obtain a refund of this money for a variety of reasons. The participation rate is simply the percentage of enrolled undergraduate students who choose to

support WEEF and personally contribute the many undergraduate projects, teams and departments.

I am extremely happy to report that this term we hit a record rate of 86.46% participation! Thank you to everyone who supports WEEF and has made this possible. The figure below is a breakdown of participation across programs and academic terms. Shout

out to the 1A Geological for coming in at an amazing 100% participation! Participation in WEEF does not only equal a well-endowed bar on this graph, but does a lot more. Contributing to WEEF essentially makes you a stakeholder and financial supporter of the hundreds of undergraduate initiatives around campus. Thanks again and until next term... WEEF IS GOOD!



Fall 2011 Participation Rates

	1A	2A	2B	3B	4A
Architecture	99%	81%		97%	98%
Chemical	99%	85%	89%	85%	53%
Civil	97%	96%		78%	
Computer	92%		89%		
Electrical	96%	92%	90%	65%	
Environmental	99%		82%		97%
Geological	100%		94%		83%
Mechanical	97%	84%	87%	74%	53%
Mechatronics	97%		84%		69%
Management	94%	64%		48%	
Nanotechnology	97%	95%		91%	73%
Software	97%	94%		92%	
Systems Design	96%		82%		87%
Term Average	97%	86%	87%	79%	77%

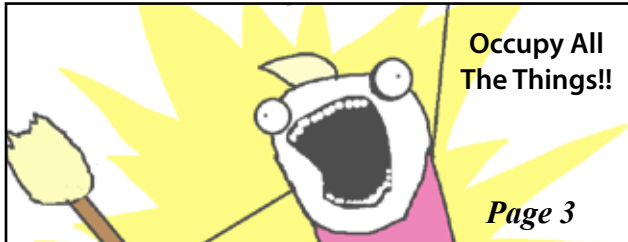
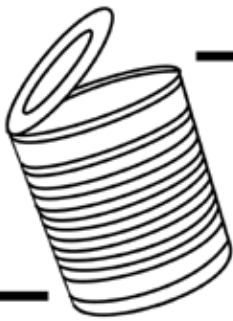
ESL Student/Researcher? End-of-term reports and presentations due?

Get off WordReference and get on FastTrack!

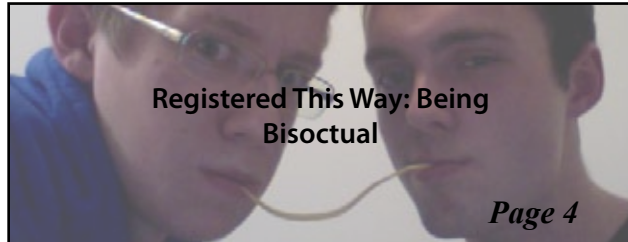
- Report proofreading for appropriate sentence structure
- Presentation corrections for pronunciation and flow
- Supporting article search based on your parameters

Don't waste precious time. Don't get lost in translation.

fast.track@rogers.com



Angero, Y U NO Update Twitter?



We Had the Internet, but He Got Married In California

Challenge Accepted!

Dean Sedra Meets His Match in the 2nd Annual Ribbon Cutting Contest

TIN SOLDIER "NEWS" BUREAU

The International Committee of Mundane and Pointless Competition was thrown into chaos as numerous challenger's announced their intention to challenge Adel Sedra, Dean of Engineering at the University of Waterloo. Dean Sedra is the reigning champion of speed ribbon cutting (for coverage of his last triumph see the December 1, 2010 issue of the Iron Warrior).

Few people have dared the challenge Dean Sedra as he has always shown a certain innate talent for cutting ribbons before the count has even begun. While in most competitions you are disqualified if you start before the whistle or gunshot, but here it is all a matter of style and finesse. If you start cutting too soon others will be left behind and you will lose style points for not appearing to stay with the group. On the other hand if you start cutting

to late then you can get caught in the middle of the pack and can't break away to speed past the leader. A proper balance is needed to start cutting at the same moment as everyone else, but then speed up so that you can look down the line of competitors left in the dust, bonus points for style. For a visual sample of this highly advanced technique take a look at Dean Sedra in any building grand opening ever at UW.

How will the Dean react to this pressure to his reign as champion? Contradictory information leaves questions as to his future speed cutting career goals, but there are rumours he is trying to branch out into the Breaking Ground competition. Using his own secret weapon Dean Sedra apparently plans to speed past the competition and their measly ceremonial shovels, make way for the excavator and heavy machinery! Look for more coverage of Dean Sedra's growing competition career in future editions of the Tin Soldier.



UW admin and guests practice their ribbon cutting skills

IW Acquires Nightclub Under Suspicious Circumstances

TIN SOLDIER "NEWS" BUREAU

Almost every term, the success as Canada's foremost engineering student newspapers allows The Iron Warrior to make strategic acquisitions to ensure the continuation of providing reading material during boring lectures. In the past, The Iron Warrior has acquired a helicopter, a boat, and a building. The last acquisition occurred in Fall 2009 with the acquisition of a new building, but since then, the acquisitions dried up as the markets plummeted into disaster.

The markets have since rebounded spawning the ability to once again make a strategic purchase for the Fall 2011 term. Jon Martin, Editor-in-Chief, had the following to say, "The previous two B-soc editors really dropped the ball on acquiring absolutely anything, but I know this term's purchase will really light a fire close to campus in the hearts of everyone."

The purchase? A nightclub. But it's not just any nightclub says Martin, "Due to unknown circumstances, we got a really, really good deal on a club familiar to many people, you

might even call it a fire-sale!"

According to Martin, while browsing Kijiji - a free online classified service, he came across an advertisement for a popular local Uptown-Waterloo business being sold. After crunching the numbers, he decided the investment was solid, especially since Waterloo had mysteriously lost 2 nightclubs close to campus around 19 months ago leaving few places for students to get their grind on.

To Martin's dismay, the Engineering Society caught wind of the nightclub sale and the acquisition of the property was brought before council during the EngSoc budget meeting. Intense debate ensued during the meeting with proponents for the purchase fighting furiously to convince council to focus on winning the first-year vote. Fortunately, Martin knew the previous outcome of the famous "Cattery" acquisition of the term prior and knew the vote would never survive.

And it did not. Society council voted the acquisition down with a slim margin of 2 votes. Afterwards, the Editor quickly made the phone calls to the nightclub owner's parents where he is under house arrest for unknown reasons.



After intense negotiations, Martin was able to lower the price of the club to an affordable amount for the paper: A can of gasoline, and a couple hours of legal advice.

Since the acquisition, Martin has been hard at work retrofitting the club for the Newspaper's use. Although previous acquisitions have been used to improve the quality of the newspaper, there is little usefulness in a club for the paper except for financial gain.

The club's close proximity to the city's university campuses and extensive use of lasers in the interior makes it perfect for at-

tracting WLU and UW students. Inside, each group of students will be placed into separate areas. Laurier students will be herded onto a cramped lower dance floor while Waterloo students will be placed on the upper balcony where they will observe Laurier students in their natural habitat.

Martin specified no reason for the club's new layout, but he assured me there was a method to the madness. He expects the club to be open in the new year with the grand opening happening on New Years Eve just in time for the new school year.

VOTE BOPPIN JUMPY FOR PREZ

THAT'S SIR JUMPY TO YOU

- World Traveller
- Bounces Back from Adversity
- Senior Member of The Education Committee

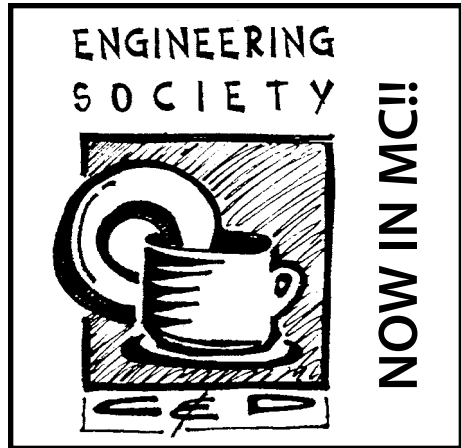
YOU'LL JUMP FOR JOY!!!



Math CnD bailed out by Engineering CnD

TIN SOLDIER
"NEWS" BUREAU

As reported in some other "campus newspaper", the Mathematics society Coffee and Donuts (CnD) shop has hit hard financial times and is in debt. The reported losses are staggering, reaching close to \$100 000 with likely no plan in place to reduce that number in the near future. The amount of debt is currently in dispute with some saying it's much less than the reported amount, but really guys? How hard can it be to count money, or in this case, a lack thereof.



It was only 17 years ago that an article was published in The Iron Warrior stating how the Engineering Society CnD could learn from the Math CnD, as at one time the Eng CnD did apparently pale in comparison. The table has since turned with the Engineering CnD as financially healthy as a non-profit could ever be - and we did it by stealing Math CnD employees. Yes, that's right, but that's another story.

With MathSoc on the brink of financial col-

lapse, the Engineering Society has decided to use its cashcow to help bail out the Math CnD. For \$50 000, which was labeled as "pocket change" by one Engineering CnD insider, the Math CnD has been saved for the time being. The Mathematics Society has guaranteed the loan by betting the house. If the math society defaults on the loan, the Engineering Society has all rights to every asset MathSoc owns.

One of those assets is the famous pink tie which is generally put up each frosh week and where a tie "guard" is set up each night to prevent theft. A tie guard, in this age? If anyone was to even try stealing it in today's age, it's highly unlikely the tie guard would try to go vigilante and stop the thieves. If anything, they'd likely just cry to police services and whine like an 8 year old until the tie was returned by its captors. Something like that would just never fly today, but again, that's another story.

Another one of those assets is MathNEWS- while being "separate" from the society, the math publication still collects their operating cash through their faculty student society. The Engineering Society already has a plan for MathNEWS, and its called 'saving money by not printing on 8.5x11" paper'. It's simple math (aren't they supposed to be good at that?) - 12 sides - let's assume \$0.05 per sheet - that's \$0.60 per copy for 1122 square inches of printing space. The Iron Warrior on the other hand is about \$0.25 per copy and a typical copy has over 3 times the printing space of a typical MathNEWS issue...

In all, EngSoc welcomes MathSoc as a debtor, and leaves these tips to try to turn the CnD around: 1.) Lower the price of your coffee - you'll sell more AND make more money. 2.) Have food and drink in stock - I heard you kind of need to have that in order to make money.

Ginger Beer Buzz

Gingervitis is even spreading to drinks!



Hello dear readers! Today we will be delving into the fascinating world of ginger beer. Ginger beer is a fizzy drink flavoured with ginger and sweetened with sugar. Alcoholic ginger beer was first made in England in the mid-18th century but has come to be associated with Jamaica because it was brought there by British soldiers. These days non-alcoholic ginger beer has now taken over, gaining immense popularity in late November 2005 after a South Park cartoon popularized the term ginger.

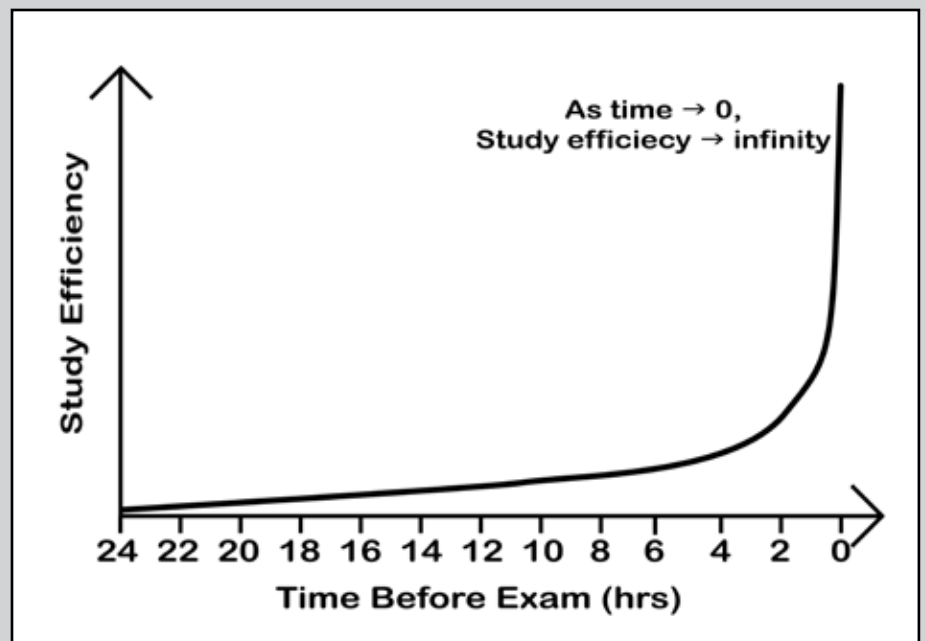
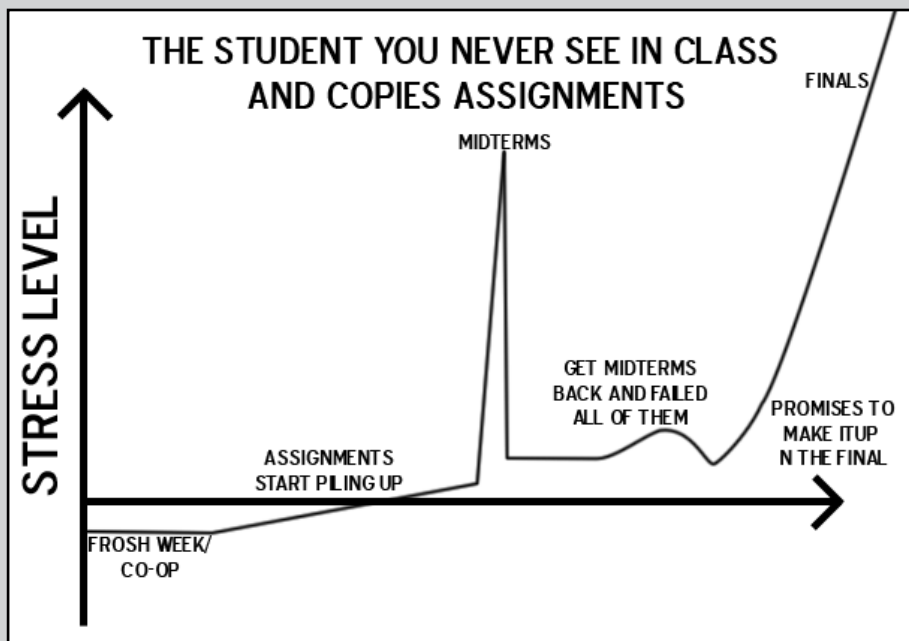
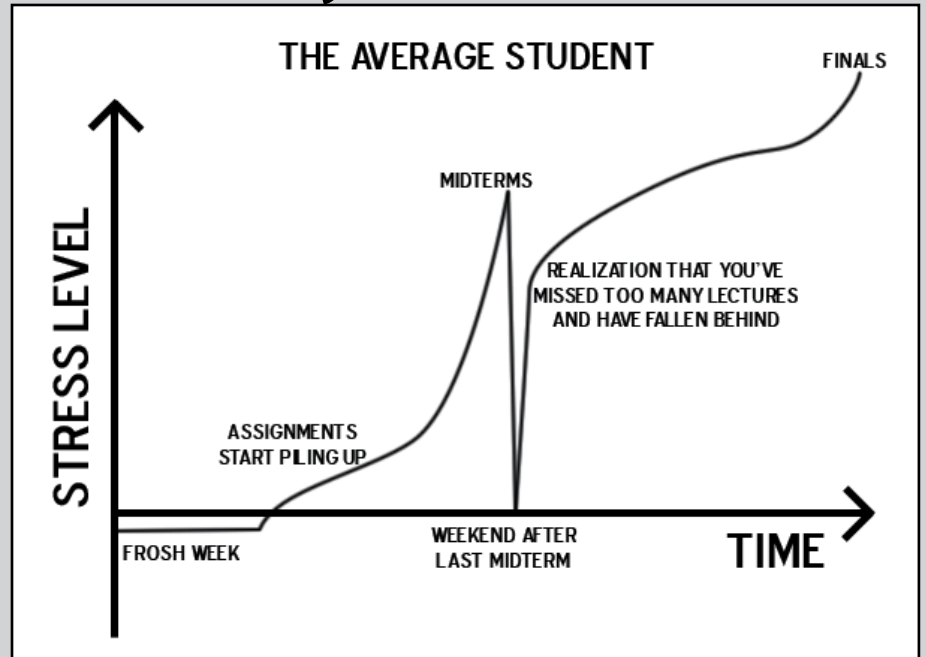
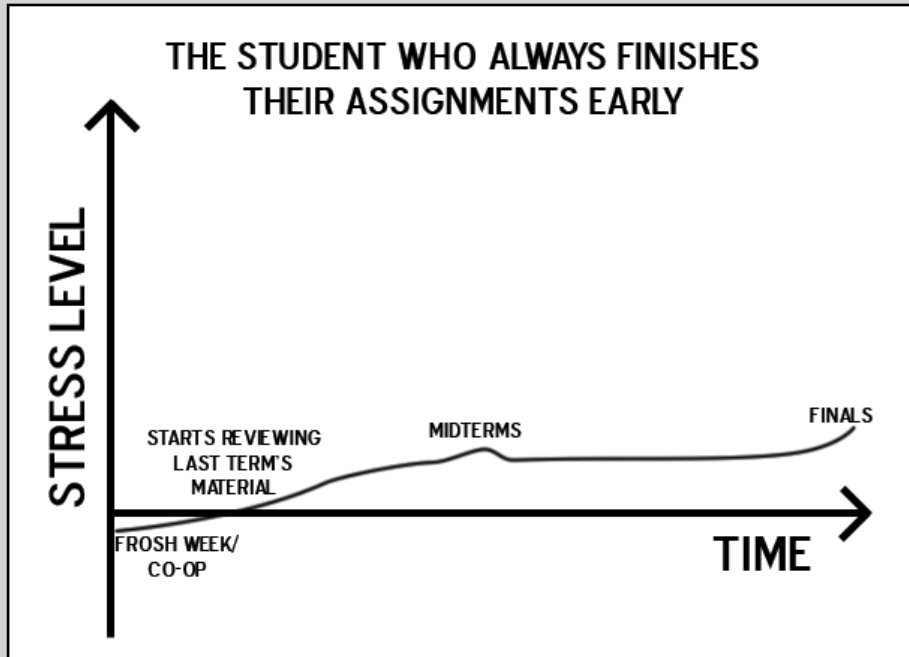
Modern ginger beer is very similar to ginger ale. The main difference between ginger ale and

ginger beer is the strength of the ginger taste. In ginger beer, the ginger taste is pronounced and it may have a cloudy appearance. Ginger ale is clear with a softer ginger taste, and is usually used as a mixer in cocktails. Some ginger beers even have chunks of ginger (ginger the spice, not human ginger) floating in them to give them a more pronounced flavour. One final difference between ginger beer and ginger ale is that ginger beer has less fizz than ginger ale.

Unfortunately we could not find any ginger beer in time to do a tasting, but Stewart's makes a Jamaican style ginger beer that has an extremely spicy flavour according to some reviews we read on the Internet. Most people have difficulty finishing the whole bottle, and suggest that it is a ginger beer best used as a mixer with alcohol. As much as Rebecca likes gingers, this is one she never wants to meet.



The Science of Study



No More Desire2Learn

JON FOOTKNEE
4N NASG

Last Friday, an email was sent from the President's office at the university announcing that Desire2Learn, also known as D2L or Learn, has been cancelled.

Learn was started just over a year ago, when the university made the decision to make the change away from the UW-ACE system, due to it being too slow and having too many bugs. In the summer, a handful of courses used Learn, and this Fall, about 300 courses at this university. The original plan was to have the entire university switched over to Learn by the Winter 2012 term.

However, in the email from the President, the university has announced that they will not

be moving forward with Learn. Three reasons were given for this reinstatement: Firstly, it has been decided that Learn would not be scalable to all courses, especially with the intended growth to 80,000 students by the year 2016. Secondly, it was found to be more buggy and slower than UW-ACE due to inefficient programming resulting in a single page taking as much as 15 seconds to load.

The last reason the email from the President's office gave for not moving forward with Learn was that there would not be enough funding available to run the program in the coming years. While no specific reason was given for why this was the case, it has been speculated that with the new bill introduced in the House of Commons last month, governments would be decreasing their spending on post-secondary

education and closing loop-holes that unevenly gives money to universities through technicalities.

So what were the results from this email over the last few days. Unlike Waterloo Works, Laser Logo, and FedS Hall, where Facebook groups filled with thousands of people, occupy movements around campus, and other forms of violent and non-violent protests, the announcement about the removal of Learn had almost no impact on the student body. It appeared that students had little to no opinion that there was no Desire2Learn.

Faculty members at the university are not surprised by this at all. They have noted that in the past year, since Desire2Learn was announced, they had noticed that the thoughts of students on Desire2Learn was rapidly depleting. One

faculty member, who wished to remain anonymous, had commented that it was not expected, as first years at the university had little thoughts on their Desire2Learn, as they have not become familiar with the university lifestyle. On the other side of the spectrum, those in upper years have realized that through many moves the university has done in the past few years, it doesn't matter that they have no Desire2Learn.

The university is planning to have a Town Hall meeting after the break, to further discuss their plans. In the meantime, weekly updates will be done on UW-ACE to make it better for students until a newer system can be introduced. Hopefully by the next issue of the Tin Soldier, it will be clearer as to what these changes will be. In the meantime, enjoy the lack of Desire2Learn as you go into your final exam.

Santa got run over by a Tool

ANDREW FISHER
PARADE SLAVE DRIVER

On Saturday November 25th, the Engineering Society partook in the 189th annual Kitchener-Waterloo Santa Claus Parade. With a full sized tractor trailer, student teams' vehicles and minty fresh candy canes in hand, the float departed on the journey to re-kindle holiday cheer. However, there was a small hitch during the parade:

**[Chorus] Santa got run over by the Tool
walkin' down King Street, so naive.
You can say there's no such thing as the
Tool.
But us Engineers and Mary, we believe.**

**Santa been drinkin' too much egg nog.
And he really, really, really had to go.
But he had forgot his whereabouts,
and waddled off the path onto parade row.**

**When Santa hit the movin' Tool,
he made a very big loud whack.**

**He had ridges on his forehead,
And incriminatin' chrome
marks on his back.
[Chorus]**

**Now were all so proud of Santa.
He's been takin' this so well.
We see him laying there in POETS,
drinkin' beer and playin' more cowbell.
It's not Christmas without Santa.
And the family dressed in black.
And we just can't help but wonder:
Should EngSoc be invited back?
[Chorus]**

**Soon the food will be on the table.
At the Potluck in the eve.
And a chrome and ridged handle,
will be there to never leave.**

**Please tell all your friends and neighbours.
"Watch out while walking parade row."
As EngSoc has a Tool,
And it ain't stopping even if you have to go!
Chorus]**



**Your Money Hard at Work - New ECIF Expenditures
Brighten the KW Santa Claus Parade - With Baloon Floats**

Occupy ALL the Things!!

ANGRY BIRD
4A HIPPIE STUDIES

Occupy the Orifice!!!

We the People are fed up with 20% of the EngSoc executives drinking 99% of the CnD coffee. It has brought the People much strife due to a lack of caffeine. We demand the exec find an alternative source of caffeine.

In addition, 15% of the exec use 20% of the Orifice computers. This is unacceptable – more computer availability is needed for the 99% of the undergraduate engineering students who are not exec. We demand EngSoc does not allow exec to use the Orifice computers anymore.

Until these demands are met, we will form a human chain around the Orifice to prevent exec from going on bathroom breaks.

Occupy POETS!!!

Scratch what was said above. We the People are even more fed up with the lack of room in POETS – only 1% of engineering un-

dergrads can sit on the couches. The 99% demand a seat on a couch for every undergrad.

The 99% also demand more engineering oriented POETS programming. From now on, Mythbusters and How It's Made need to be playing 24/7. The cartoons and movies we have seen in POETS all term do nothing to foster an intelligent learning environment.

If our demands are not met we will set up tents in POETS indefinitely. We will also form a human chain to prevent shipments of BEvERages from arriving in POETS. The 1% will be helpless without their precious BEvERages.

Occupy ALL the Things!!!

The 99% has now reached a new decision – nothing is right within engineering. Therefore, we will Occupy ALL the things until further notice. This includes the purple/orange/multi-coloured statue outside of CPH and the CnD (protestors please remove backpacks before entering the CnD or you will be coffee-sprayed by unrepentant employees).



Registered This Way: Living Life as a Bisexual



**APPLE JACKS &
ANDERSON COOPER**
2E[^](-9) JOBLESS

Due to Waterloo's unique co-op term structure, most engineering students identify as A-soctual or B-soctual, depending on their academic and soctual preferences. Most engineering students experiment with different soctualities at least once in their time at Waterloo, but there has never been such a public display of bisoctuality on campus until the beginnings of the Nanotechnology Engineering program, which was the first organized group of openly bisoctual students. Unfortunately, Waterloo still has much to learn about life as a bisoctual and how to make us a waaay bigger part of our university. Take a glimpse into the mysterious lives of bisoctual nanos on campus.

Bisoctuals in (Eng)Society

As a bisoctual, it's tough to feel like you are at home in either the A or B-soctual societies. Bisoctuals need to find someone else who is comfortable enough with their soctuality to be their partner. With this caring and understanding relationship, bisoctuals are more ready to bring their diversity into public. A bisoctual has never been President of the EngSoc, however many have made their way into these positions that are orders of magnitude larger than ever before. Society in Waterloo tries its best to be accommodat-ing to bisoctuals, however it is unavoidable that we seem uncommitted to a long term relationship with either soctuality. In other engineering groups, the same divide of soc-

tuality makes intimate relationships challenging for bisoctuals. While we may represent a very, very small part of the world, bisoctuals are engineers just the same.

Bisoctuals in bed ;)

Bisoctuals are easily the best in the sack. We bring both chemistry and erecricity to any soctual encounter. We don't care if it's top down or bottom up, because we do it both ways. We are experts at the backside at-tack and can express any multiplication skill suggestively. Some people say size matters, but bisoctuals are always finding ways to go deeper. Its not about how much bulk you have when you can make it harder, stiffer, and go from elastic to plastic in a matter of seconds. Our ability to lay millions down on their substrates and excite their electrons is unparalleled.

Employers love an engineer with an eight month work placement

While many bisoctuals complain about how long their work and school terms are as they grow older, employers have shown they are one of the quickest groups to embrace our soctuality and they drool over the size of our huge co-ops. Telling an employ-er during an interview that you're willing to make an eight month commitment will score you mega bonus points and they'll be much more eager to throw those dollar bills at your cleaved silicon bonds.

Even the university accepts us

Not only do employers support our way of life but even the University of Waterloo is learning to accept bisoctuals for who they are. Even though the University is respon-sible for the rise of bisoctuality in the last decade, they have struggled to be fully sup-



portive and understanding of the role we play. After promising the original bisoctuals a community centre on campus where they could intermingle and fraternize, the Uni-versity has pushed back the building of this elaborate facility (the \$160 million state-of-the-art Questioning and Nonsoc-tual Centre) multiple times. With the second generation of bisoctuals released into the world, it's unclear even at this point whether the third generation of bisoctuals will be able to make use of these facilities. With rumours of the QNC being completed by Summer 2012, it looks like the University is finally ready to embrace bisoctuality on campus completely.

Nanos aren't the only ones

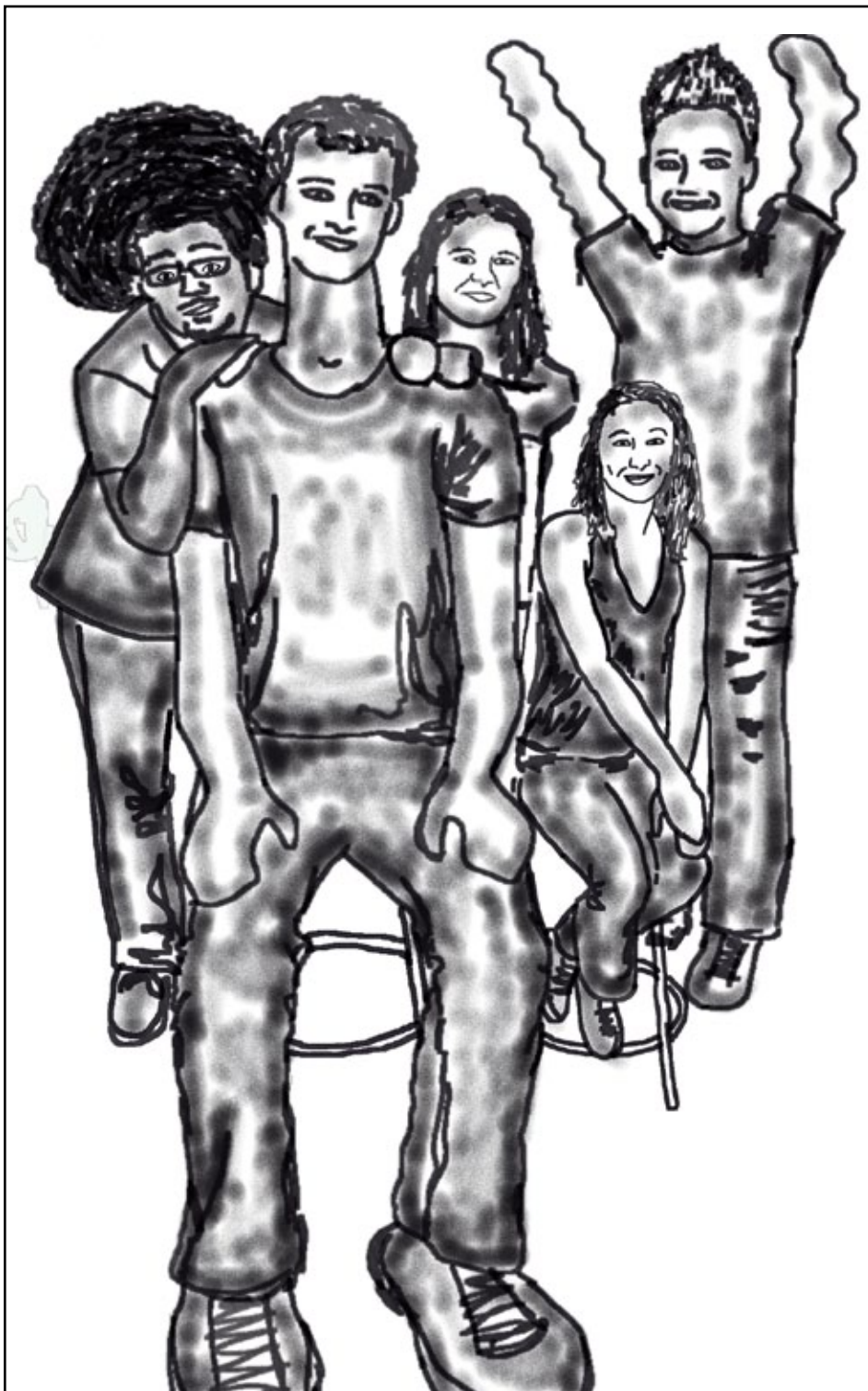
We talked a lot about the smaller bisoc-tuals, and it sounds those who experiment with both A-soctuality and B-soctuality are in the minority. You would be surprised to

know that at over half of you were bisoctu-als too! We were all born bisoctual in our 1A term but many rebounded with 1B not two weeks later, experimenting with new soctual frontiers. This experience, while often forgotten, was an engineer's first experience with both A and B-soctuality. For those who didn't jump ship in first year, most of you get to experience your first trans-soctual experience as mature 4Bs. Remember you were just as bisoctual as we are once upon a time!

Everything will be okay, we promise

As a personal message to all bisoctuals, it gets better. By fourth year, all your peers will have had at least one term experiment-ing in both types of soctuals. Remember that while some monosoctuals may think you are too promiscuous now, everyone will one day understand how fabulous bisoctual-ity can be.

EngSoc B Exec



*Should I give up
Or should I keep designing pavements
even if they lead no where?
Never thought I'd find
somewhere like uWaterloo
I wish nothing but the best
for uWaterloo
We could collect it all
Rolling in the WEEF
You have the charge inside of your fees
And you paid it to the WEEF*

In stores now
His farewell album
ADEL 21

RIM acquires Apple Cites Weakened Reality Distortion Field

TIN SOLDIER
"NEWS BUREAU"

Apple Computer Inc., once the most valuable company in the world after surpassing Exxon Mobile in the past year, has come crashing down after the loss of the great Steve Jobs. It was recently discovered, Steve Jobs had a type of charisma which cannot be replicated and has been determined as the major building block of Apple's steamrolling success. This charisma has been dubbed the "Reality Distortion Field" where one person can make something so simple, cheap, and lackluster, yet be able to sell it to consumers at higher than market prices.

The "Reality Distortion Field" (RDF) can travel in most mediums from the source, whether its freespace, and can be transmitted digitally through any type of visual media. It's believed the RDF occupies a slim portion of the visible light spectrum which allows it to be transmitted at the speed of light around the world through any type of electronic device.

Apple, after discovering the powers of the RDF, realized they needed a vessel to transport this charismatic power to allow it to reign supreme in the consumer electronic market. The first vessel for which the RDF was transmitted was a product called the iPod which was released in 2001. It

was an absolute hit, transforming not just how people listen to music, but the whole industry itself.

The RDF transmitted in the iPod allowed for the iPhone to be the next major launch vehicle for which to continue Apple's hunger to brainwash the weak. And so it did. It's among the most, if not the most popular smartphones on the market today. Antenna problems? Easy shattering glass construction? Battery issues? Weak internal upgrade? Such issues would never be tolerated by consumers on any other electronic device, but with Apple's powerful RDF, any issues could have been overcome.

Or so they thought... After the death of Steve Jobs, interest in Apple's products began to wane. Although the company spoke publicly of having several years of products in the pipeline designed by Steve Jobs himself, the weakening remnants of the RDF was not enough to keep followers on board and the hipsters, baristas, and "creatives" abandoned ship in droves.

Apple's stock price plummeted to 15 year lows, now just hovering above \$5 per share – a valuation of just above \$4.6 billion. Rumours of a takeover proved true yesterday as Waterloo's own Research In Motion Inc., hot after a successful and riot inducing launch of a smartphone in Indonesia, announced it has successfully completed a hostile takeover of Apple Compu-

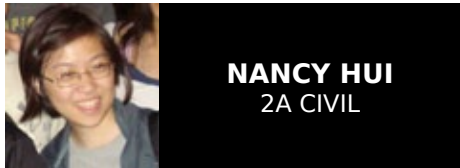
ter Inc. Complete details of the company purchase aren't fully known just yet, but a spokesperson for RIM stated that the company hopes to complete the transaction

soon after the release of OS 2.0 for the company's astonishingly successful Play-Book tablet which they expect to be out by the year 2020ish...



RIM-Apple's newest offering, the BlackBerry CrabApple. Now with all the bugs of a BlackBerry as features iPhone

Disney: Not Even Once



NANCY HUI
2A CIVIL

Children are pure of heart, like the gold bars they keep chained up in the Royal Mint in Ottawa. But like gold, which can be easily stretched into razor-edged garrotting wire, children are also malleable of mind and easily corrupted into violent, lazy sociopaths. I guarantee you that almost every man, woman, and child in our penitentiary system today has watched at least once Disney feature-length film before embarking on a life of crime.

It seems innocent at first, doesn't it? Just a little Disney to pass the time in second grade homeroom when the teacher's misplaced his black line masters, and you're excited to be all rebellious because you're not doing math anymore, you're watching Disney. A little Disney in the dentist's waiting room, and it calms you down better than a tank of koi ever could. And your parents might put on a Disney movie in the basement and leave you and your friends limply sprawled across the floor like invalids in an opium den. They start you on Disney when you're too young to say no and ask for a different movie. And you trust them, don't you?

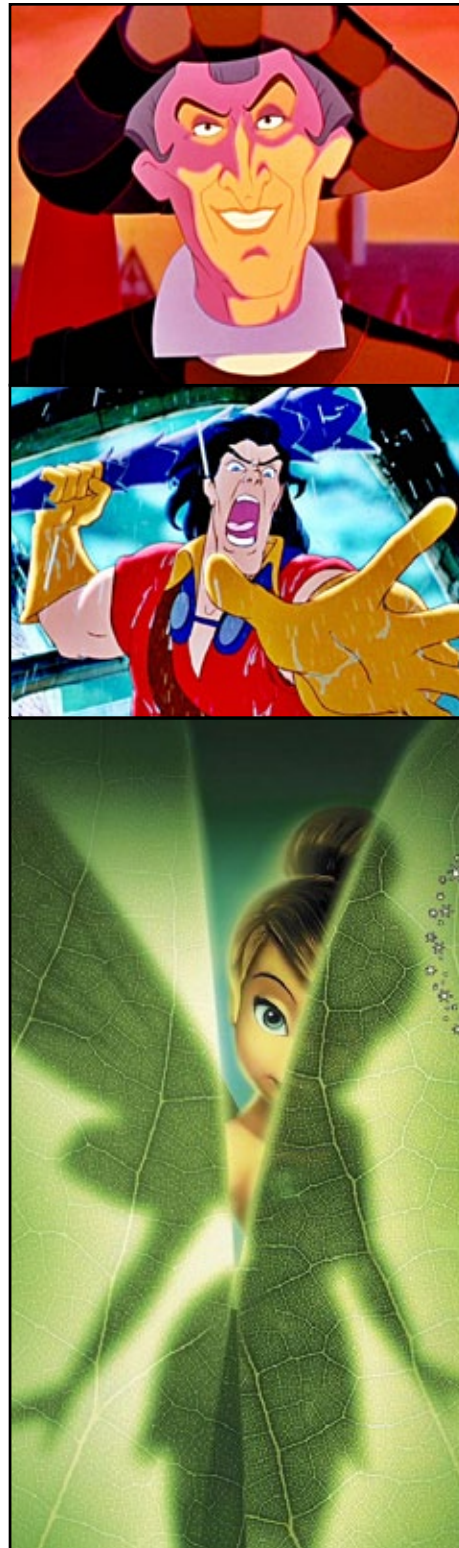
Even now, I know you doubt my words. There's no harm in Disney, you think. It's all happy colourful animals and heartwarming Aesops. I watched Disney all the time as a kid and I turned out okay. What you believe is a lie.

The "magic" and "love" you think you feel when you watch Disney is nothing but a smokescreen for the darkness beneath. Cloaked underneath the incessantly saccharine singing and the dancing are subliminal undertones of utmost evil. For example, Disney films are rife with references to violence against women. In The Hunchback of Notre Dame, Frollo sings a whole song about how he wants to rape Esmeralda before deciding to just kill her with fire. In a similar vein, Gaston of Beauty and the Beast insists he will have "six or seven children... all boys" with Belle, prompting one to wonder what would

happen if Belle decided to stop at two or three kids, or if the children were female. And then in Snow White when Prince Charming kisses the protagonist lying in a coffin – he doesn't necessarily know that she's not dead, and also supports the idea that taking advantage of a sleeping woman under the influence of magic apples is totally acceptable. Kids will pick up these ideas subliminally, like sentient psychic sponges, not to realize what they've seen until years later when the damage is already done.

Secondly, Disney films perpetuate T.H. White's notion that "Magic is might". Those with magical power perpetually oppress the mundane. For example, in Peter Pan, Tinkerbell, a powerful fairy, spends the entire movie trying to kill Wendy because she's jealous and clingy, and of course she's forgiven and made a Disney mascot, glorifying her obsessive psychopathic tendencies. In Beauty and the Beast, a fairy throws a peaceable kingdom into anarchy for the rudeness of a Prince who probably had to deal with tax law and inter-kingdom diplomacy before he was interrupted and held personally responsible for the social welfare of a single fairy expat wearing what looked like a Guy Fawkes mask. In the vein of political disruption, the Genie in Aladdin is cavalier in utilizing his forcing his candidate of his choice into a monarchy's line of succession via fraud and income tax evasion. Disney films assert that it is commonplace for those with power, or "magic", to manipulate those who do not have comparable means, referred to in modern vernacular as "muggles".

Disney films themselves also reflect a certain unreality in their visual style and approach, reminiscent of complete and utter schizophrenic insanity. This is known in certain circles as a "Disney Acid Sequence". Such acid sequences are remarkably common. In Dumbo, a bunch of pink elephants parade around the title character while he is in the throes of Oedipal grief and homesickness. In Pocahontas, the protagonist and her love interest run through the woods like a pair of hippies and reinforce a conservative approach to environmental preservation, and optimistic bobcat anthromorphism, except that the colours of what is described as "nature" bears no resemblance to real-life wilderness. Even



Disney's favourite
homocidal maniacs

The Aristocats has a rave sequence in which the titular characters are scantily dressed in fur and writhe rhythmically to funky music. Disney acid sequences are often accompanied by musical numbers, the combined effect of which are likely to cause viewer heads to bob uncontrollably to an invisible beat while seeing psychedelic swirls of light and colour.

Disney films continue to be a menace in modern society, as the production and distribution of Disney films has grown in recent years. An even more addictive variety of Disney films, known as Pixar productions, have also entered the market. The proliferation of both substances remains unabated; in fact, addiction is more widespread than ever before, to the point of becoming socially acceptable. Viewers of Disney films often find themselves purchasing tens of dollars of movie tickets and DVD packages every year to fuel their cravings.

It should be abundantly clear to all that Disney films pose a danger to viewers. Even the initial exposure to Disney film will often create a lifelong dependence on "warm and fuzzy feelings" (WAFF) that are induced. In fact, one's brain will quickly become hardwired to associate Disney with the pleasurable effect of WAFF, and to subconsciously believe that nothing could feel quite the same as Disney when it comes to WAFF. Consequently, addiction to Disney is presently incurable, as non-Disney WAFF substitutes (such as Dreamworks features and asinine romantic comedies) are often rejected by the brain as ineffective and a low-quality source of WAFF, though substances of drastically different chemical structures, such as kittens and puppies, have been found to stimulate independent WAFF production. Unfortunately such treatment is extremely expensive and not currently funded because the Ontario Premier has been rumoured to have a pointy head and eat kittens for breakfast.

No, the best treatment for Disney film addiction is prevention. Talk to your children about the dangers of Disney at about the same time you tell them not to run on the playground and to "Just Say No" to throwing Nerf balls during recess. Remember, don't watch Disney – not even once.

Musings of a Caveman



LUCY
AUSTRALOPITHECUS
1A HUMAN EVOLUTION

Scientists were amazed today when they unearthed what appears to be a large cave painting from the Palaeolithic era. Experts versed in reading picture books were hired from the Wilfred Laurier University, renowned for its football team. They have now translated the cave painting into what appears to be the diary of a Stone Age caveman named Ugg, an inventor of many revolutionary tools and quite possibly the first engineer.

Many suns into cold time: Dear rock slab, Ugg made new tool called club. It used for killing big long tooth. It made of long rock. Today day cavelady Arg want to share cave, Ugg know it!

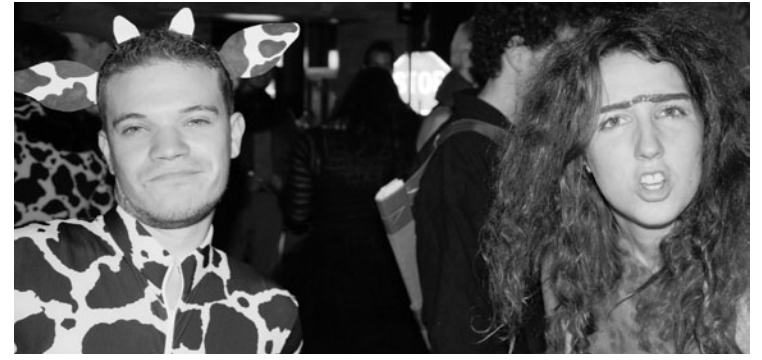
Many suns into cold time: Rock slab, Ugg need new way to name suns – all suns sound same. Ugg sad. Cavelady Arg did not want Ugg club – she want Gor sharp club. No fair, Gor sharp club same as Ugg club but pointy on end. Ugg make new tool today called roller. It oval shape and make cavelady Arg come share Ugg cave.

Few suns into rainy time: Gor took Ugg idea – he make new tool called wheel! Same as roller but more round. Cavelady Arg say Gor now cavefriend...Gor say

roller cruddy tool. Ugg now need new tool better than Gor. Ugg need think time.

Sunny time: Ugg now invent best tool. It called knife. It short, sharp rock and kills big long tooth easy. Ugg show Gor who better tool maker now.

Sunny time: Dear rock slab, Gor stole Ugg knife, tie to stick and call spear. Ugg hate Gor. Ugg invent new tool now. It



roller pushed off cliff. New tool called revenge.

Few suns into cloudy time: Cavelady Arg now Ugg cavewife. Gor gone. Revenge best tool.

Video Game Physics Explained



MASTER CHIEF
3RD GEN
GAME-INEERING

FUTURE OF GAME-INEERING

For years people have pointed out the various ‘inaccuracies’ in video game physics, things like the so called “Double Jump”, changing direction and momentum in midair, and impossibly strong cover. Just how does that wooden crate withstand a nuclear explosion, and why does the evil supervillain store a single clip of ammunition and a first aid kit inside every single one of them? Well I have had to opportunity to interview some of the leading gaming physicists to find out the truth behind these phenomena and why they have not been put to use in general society.

The names of these scientists would probably add credibility to the claims, as would the academic institutions they come from. But that would require a breach of security that would get me killed, and coming up with pseudonyms takes too much imagination. So let’s call them Bob and Doug (Not Mackenzie) and they are from their parent’s basements. There, with those technicalities out of the way, on to science!

One of the oldest causes of confusion has been the common wooden crate, which has existed since the dawn of gaming and has offered both unbelievably strong cover against enemy as well as a veritable treasure trove of loot and weapons. You may be asking about the claims of wooden crates being in every game since the dawn of time. “What about Pong?”, I hear you say. Well, have any of you seen Pong in 3D? I didn’t think so. You see, that paddle you move across the screen is actually a very narrow wooden crate painted white, which is why it can withstand the constant impact of the energy sphere. These are the kinds of gaming insights you only get when you interview Doug over a lunch of his Mom’s best microwaved pizza pops.

The invulnerability of the wooden crates is actually due to the fact that they are made of nonblowupium, but they are then coated in wood paneling to make them look more homey. Every super villain wants the perfect secret hideout to conquer the world in, and nothing adds the same charm as a wooden crate. Of course, you always get those rebels who want to go for the modern or post-modern hideout complete with volcano and killer sharks with lasers on their heads. In these cases, the villain may break the standard and go against the grain by not putting wood veneer on the raw nonblowupium. These villains are never confronted at the annual Christmas party, but everyone shuns them, so they know who they are. Wow, that was a tangent, anyway, back to their amazing strength properties. Villains love these crates because they are great for taking shelter behind when running like a wimp from the hero when they escape your evil death trap. The one drawback

behind these crates is that the strength of nonblowupium is inversely proportionally to the impact velocity and energy output of the projectile. This means that you will be perfectly safe from a nuclear explosion (this material was also in the refrigerator in Indiana Jones 4) but punching or kicking the crate will cause it to fall apart like a piñata, providing its bountiful wealth of powerups, money, ammunition and health packs.

This brings us to the second important use of crates, they are the perfect storage space for all of the things a villain needs when fleeing from the hero. Unfortunately the architects who designed the secret evil base for the villain, and were subsequently shot by said villain, always seem to only provide one main hallway through the entire building that leads the hero right to the secret inner hideout of the villain. This means that the hero ends up using all of the villain’s supplies before beating them to a pulp. Theft charges would normally be laid (wouldn’t you be angry if someone broke into your secret lair of world domination and stole all your batteries?) but the villain always ends up dead, so the courts just throw out the case when it comes to a judge.

The art has been honed to such a level that it is now possible to change your direction of travel and even your trajectory after you have already left the ground. Everyone has been in that situation where you are trying to jump across the giant mutant venus flytrap in order to jump over the mutant turtle bombs and reach the friendly dinosaur. It is such a common occurrence, but people have long been plagued by death after misjudging the distance. With non-surface traction it is possible to redirect your motion or take a second jump once you are already airborne to increase your jumping distance or correct for bad aim. Never again must you use one of your extra lives just because physics is stupid. You can punch physics in the face and rewrite the textbook yourself -- who needs momentum anyway?

The final gaming phenomenon I was able to wrestle out of Bob by providing him with a new Xbox 360 controller (he had broken his in frustration but was too pale to go outside without burning up – but at least he didn’t sparkle), the reason for polite henchmen. This is less physics and more psychology, but it finally explains why enemies like to approach the hero one at a time rather than just charging

to undercut the competition by giving equal pay to all henchmen regardless of whether they kill 10 innocent bystanders per day or only 8. What gives these henchmen the drive to defeat the hero? It all comes down to the Christmas bonus at the end of the year, that is where the hallway guards are separated from the tower snipers. You may be wondering who these villains are that are breaching the sacred evil mastermind trust, well we don’t really know. First the shiny crates instead of the wood veneer, and now this, just know that they will be shunned at the next Christmas party. They may even have a spelling mistake on their table setting.

Back on topic, armed combat is different than hand-to-hand combat. Here, both evil henchman (or thugs as they prefer to be called) and the hero’s allies commonly act in the same way. Both groups attempt to show how dedicated they are to their boss by running out into the middle of the battleground and collecting as many bullets as possible. The largest lead count is normally achieved by the person who stands directly in front of their allies, this allows them to collect the bullets directly to the chest while also blocking



Right, I’m sure that crate will protect you from the giant bug, just think positive. (Photo from Gears of War)

Also the jury is normally biased towards the hero because they stopped them from dying in a giant robot attack – it’s so hard to get a good jury these days. So now you know everything there is to know about the humble “wooden” crate.

The next wonder of videogame physics is a phenomenon known as “Non-surface traction”. This force is what makes it possible for videogame characters to take a second jump even after they have already left the ground. While normal people have yet to master the art of jumping off of air, it has been perfected over the years in the world of videogames.

them and beating them to death. You see, it is deeply ingrained in the standard evil henchman that they are fed and allowed to continue breathing based on their performance in hand-to-hand combat. It is simple logic that if you storm the hero and defeat them as a group, there is no way to determine who dealt the death blow and who just gave them a bruise. This may seem trivial to us, but when it means the difference between a Joe Louie and a Twinkie for your two weeks rations guarding corner 3 in corridor 7 of Secret Evil Headquarters 9, it can get pretty cut throat.

Unfortunately, some villains are trying

their ally from collecting their own bullets. It’s simple psychology really.

So there you have it, the biggest secrets of videogame physics and psychology revealed. Who knows how long before these amazing breakthroughs are available to the public, but we can only hope it is soon. Thanks go out to Bob and Doug for their insight into the amazing world of video games (the conspiracy theory about the dragons was really great too Bob, but I just didn’t have time to write it in, I promise I’ll put it in next time, really). Keep on Gaming!

POINT

Point Vs. Point

POINT

Who Should Win the Iron Pen Award?

Angelo Alaimo

Jacob Terry

JACOB TERRY
2A NANOTECHNOLOGY

Every term at this office where we somehow manage to print out over 15000 words every two weeks and send it to a couple thousand engineers, we get this flow of various people that come in and out due to our co-op schedules, almost like a petting zoo where the animals rotate shifts in the cage and you gain and lose some with every rotation. As a relatively new animal in this zoo, it has been interesting to watch the creatures that make their home in this cozy writing room.

One creature that has held a large presence is the Angelo Alaimo (Latin: Editorus RIMus hipsterum), who I've observed as equivalent to a wizened old lion who maintains a respect-based leadership amongst the other animals. Providing assistance and guidance to all the younger creatures of the genus Editorus, the Angelo has been a strong influence here for as far as I can remember, even if that hasn't been that long.

During his work terms, the Angelo emerges from his den at the RIM campus to come to meetings when he has the time and help out with the paper in the way he does best. Always with the latest shiny object he found in his den in hand, the Angelo is a professional and worldly creature, who communicates with creatures around the world such as the French businessman. The Angelo is always sure to communicate his dealings to his peers

in a blue jay-like warbling speech pattern. While many confuse his sarcastic cries as pompousness, these tweets are actually the Angelo's endearing way of conveying humour to his peers.

As far as my case study on this establishment has shown me, those who are either born into the genus Editorus or evolve like Pokémon into said genus like to collect three Iron Warrior achievements before they graduate (the Deathly Hallows of the newspaper): The Editor-in-Chief, The Editor's Award and The Iron Pen. While the Angelo has made great contributions and achieved both the Editor-in-Chief and Editor's Award, the Iron Pen has ever eluded him and with only a couple terms to still get the Iron Pen, the Angelo has found himself running out of time to earn the award for the highest word count of the term.

As part of my observations, I have been keeping up with the Angelo's word count to see the effects of competition on the creature, and my studies have shown that the Angelo works harder to increase his word count when faced with the possibility of not receiving the Iron Pen. The dedication of the Angelo is unparalleled amongst the creatures in its habitat, and as I increased my word count lead over him, he would respond with a battering of articles unlike the kind I had ever seen before. It is his dedication, guidance and much appreciated contributions to the paper that makes the Angelo the most worthy candidate for winning the Iron Pen this term.

ANGELO ALAIMO
4N ELECTRICAL

Let me preface this article by stating that I've been forced to write this article about why Jacob Terry should deserve The Iron Pen award. For those who have began to read this article, I apologize in advance as I sincerely do realize this will likely end up being a massive inside joke that very few people will fully understand. I've always been for trying to minimize the use of Inside jokes for satire to try to appeal to a wider audience, but I've also have felt the burn of having a 1/4 empty "newspaper" late on a Sunday night with finals looming overhead and have generally succumbed. I guess this is the punishment I get by being the "Obnoxious and Overbearing" previous Editor-in-Chief, but oh well, we only live once right? I digress...

Jacob Terry. Say that again with me slowly, J-a-c-o-b T-e-r-r-y. Doesn't that name just roll off your tongue so eloquently? It's rare that we ever leave the newspaper's office without one person chanting his name over and over again with the ease at which you mouthed his name at the beginning of this paragraph. He's been around for a bit, not as long as others, but nonetheless, he's been around.

So what's this Iron Pen Award? I'm not surprised you don't know what it is. The Iron Pen is awarded to the person who writes the most words in a given term. It's a thankless award that no one else really knows about as

I already have proved, but hey – you're name goes on a plaque to be immortalized forever as to make the painful hours of creating content for which people will likely never read seem worth it.

I set it out as my goal this term to try to acquire The Iron Pen award as to complete what IW staff call the "Threepeat" which is to have you name on all three plaques – Editor, Editor's Award and Iron Pen. Jacob has kept me on my toes this term, with him and I being neck and neck for most of the issues in terms of word count, so that's pretty much why I seem to appear on most pages in the last issue – sorry about that.

Anyway, Jacob is a great guy. He came to The Iron Warrior in first year with great enthusiasm and always showed initiative. We accompanied each other to tour QNC back in June, and he wrote a solid article to accompany some pictures I took of a building that really should have been completed close to two years ago.

He was a great help over the winter term garnering the Editor's award while in 1B and has recently be shoulder-tapped to be the next Editor for BSoc in the Spring of 2012. He'll be the first editor in over 3 years to have me not involved – I bet he can't wait.

Apart from that, he's got a great sense of humour and can really roll with the punches and for that he will make a great editor and deserves The Iron Pen award for his extraordinary efforts at The Iron Warrior.

Animal Wrangler's Note: *Point Vs. Point* is a feature meant to fill space in the paper when you have already put in an insane number of sudoku puzzles. The views and opinions expressed here were forced under torture for a specific wordcount, therefore *The Tin Soldier* denies all allegations of cruelty to writers. We have lawyers and we're not afraid to use them.

THE IRON SUDOKU

EASY

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

MEDIUM

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

HARD

					6	7		3
3					5		4	
	7	6	4			8		
	3			2	8		9	
		8				4		
	6		5	7			8	
		7			2	5	6	
	2		9					8
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DIRTY BURGER DAYS
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Taking a Step Back as the Keystone XL Moves Forward

BRENDAN GENTILI
EWB CONTRIBUTOR

Fighting against protesters and political pressure every step of the way, TransCanada PipeLines has decided to implement its newest strategy in developing the XL Keystone pipeline: a reroute.

As of last week, TransCanada announced that it is considering alternative routes for its extension of the Keystone pipeline that will cross the Canadian-U.S. border. Once in place, the XL Keystone pipeline is planned to deliver 700,000 barrels a day of crude oil from Alberta's oil sands to refineries on the Texas Gulf Coast.

The plan to adopt a new route for the pipeline has allowed some breathing room for TransCanada, who was first met by many critics concerned with environmental issues. Nebraska was one of the toughest

critics, citing safety concerns regarding the prospect of contaminated drinking water from the Ogallala aquifer, which supplies millions of residents.

The newly proposed routes will allow the pipeline to avoid large sources of drinking water such as the Ogallala aquifer, but it will still undoubtedly result in the crossing of over 1,000 rivers to reach its final destination, no matter which route is chosen.

It would seem that the argument has now been reduced to its core. Going forward with the project would create thousands of jobs for both Canada and the U.S. and increase the energy security of the United States, but at the cost of potentially polluting the environment.

But there is a much greater issue to consider which was present upon the inception of the idea for the pipeline extension. Wasn't it the goal of the Kyoto Protocol to

reduce our dependence on fossil fuels? The fact that the global climate is changing due solely to the burning of fossil fuels is now well known and supported by nearly all climate scientists. Even with the alternate routes, the existence of the XL pipeline can only mean one definite thing: our dependence on fossil fuels will increase for decades to come.

Yes, this pipeline will create numerous jobs and improve the economies of both countries, but an economy that is based on the price of oil is a very unstable one. On the other hand, an investment in renewable resources not only has the ability to help the environment, but it will also stimulate the economy by creating more jobs in various industries than a pipeline extension would.

At a time when we should be searching for alternative fuels and renewable energy, this pipeline takes us a step backward by in-

creasing our ecological footprint. In a world that has been stepped on more than enough, time is running out to reverse the effects.

We now live in an age of responsibility and accountability where we must fix the mistakes of the past and seek sustainable resources. The responsibility now falls on engineers that have a global perspective and the attitude to accept sustainability. They need to see the effects their decisions will have before a pencil ever touches paper. It is the duty of today's engineers to predict the implications of their decisions before they are made and avoid projects like the Keystone XL pipeline that lead us away from sustainability.

In a world that is becoming ever more fragile, forward-thinking engineers are needed now, more than ever, to stop the reverse progress that projects like the Keystone XL pipeline will cause.

Bees or Humans

What we can learn from the bugs that bring us honey



NOAH MACCALLUM
2A NANOTECHNOLOGY

Bees have always intrigued me; they are more advanced versions of ants, who, in their own right, are no slouches as advanced life forms. As a colony, ants are capable of anything. They can conquer and consume animals thousands of times larger than any single ant. They need to cross a bridge? Make a bridge of ants. They want to find food? They send out hundreds of scouts and scour the surrounding square kilometre. Bees add to the hive-format civilization biologically based weaponry and flight. Think about humans with similar modifications!

Bees have the ability to create their own houses anywhere they please. They can make all their own food. They can go to war with neighboring colonies and deter or kill any intruder of any size. On a nature show once, I heard a fascinating story of survival in Japan. European honeybees were imported because their honey yield is twice that of the native honeybees. Also present is the Japanese Hornet, a three-inch long beast that can decapitate tens of thousands of honeybees in an hour. Of course, a few of these could decimate an entire colony if left unchecked. The Europeans were going about a Japanese Hornet invasion by lining up to attempt to sting it. In effect, they line up to die. Conversely, the Japanese honeybees have evolved an effective and elegant method of dealing with this terror. They wait until the Hornet enters the hive, and they all swarm onto it at once. They don't sting, but vibrate rapidly to generate heat. Things get too steamy for the Hornet and it dies once the temperature exceeds 47 degrees Celsius; the defenders can survive to 52 degrees Celsius.

Bees have the ability to adapt to any natural stimulus and survive. This can be said of any animal still alive, but most creatures accomplish this by some simplistic mechanism. Lizards (Leopard Geckoes?), if faced with danger, detach their tail and run. The milk snake evolved to have bright colours so it appears poisonous. Cats evolved to have rough tongues for maximal grooming and water drinking. While these can be appreciated with the less-is-more mindset, I feel that the adaptations made by bees are much more complex and nuanced. If cats were like bees, they would not have evolved rough tongues, they would have created communities where some cats were in charge of grooming and others in charge of gathering water.

Humans have slowly evolved to catch up

to and surpass the degree of civilization of bees. Earliest caveman fulfilled all his own needs, being responsible for food, shelter, tool making, protecting of his family, etc. If you look at the human race today as an endpoint, it is clear that the key to advancing as a species is to specialize more. If you need to learn how to make shoes, sew, farm and grow food, and do everything else required to meet one's needs, it is logical that you will be worse at any one skill than you would have been had you focused on gaining proficiency in any single task. This is why cities were key in human progression; one person could enjoy items all made by specialists. All of one's needs could be met to a greater degree. Henry Ford took this concept to the extreme in the assembly line. His success is evidence enough of the benefit of specialization.

The question is, who has a more effective society, bees or humans? It is a sensitive subject, and one in which nobody can escape personal bias. We have art, music, science, and other things that would not be possible without an advanced society. But at the same time we have many social problems. In human societies in general, there is greed, corruption, murder, and generally flaws in the system - all of which, it seems, is not present in beehives. So there are pros and cons to being a human.

One could argue that the flaws don't matter, that such is the cost of having such an ambitious and intelligent brain at our disposal. I would be inclined to disagree with this. There was an old Greek myth about a man who was punished by the gods by and forced to push a rock up a hill, only to have it fall down the other side, for all of eternity. But, the story goes, the man became more and more accustomed to his situation, until he forgot about his past life and became happy with his new life. The point of this is that happiness is a state relative to one's experience. Therefore, the mother holding her newborn child, the man pushing the rock, and a bee all have the same maximum capacity for happiness. Living a life where you are forced to do nothing but fill a contributing role to the hive, as long as you weren't exposed to a more fulfilling existence at any time, you would be as happy as a human Nobel Prize winner; both are filling their perceived maximal potential. The only difference is that the bee is guaranteed fulfillment of this potential, while the human is will almost certainly fall short of his/her goal.

Happiness should act the compass with which one navigates the seas of life. So in this instance, if one is use happiness as a guide, it has been demonstrated that it would be better to be a bee than a human.



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Seasonal Sadness and Brinicles



ZAC YOUNG
2A NANOTECHNOLOGY

THE EL NAÑO EFFECT

It's that time of year again. From the beautiful snow floating through the air to the arctic gale that freezes every square centimetre of exposed skin to the sunshine that rises and sets in what seems like the same hour of the day, winter is well on its way. These seasonal occurrences are a part of being a Canadian and the type of things that lead those of more southern latitudes to think we live in an endless winter wonderland. While much of winter brings out the beauty and power of nature, other parts are much more subtle in how they task us.

Seasonal affective disorder (SAD) is something that makes itself home in the north. As our seasons change, so do our daylight hours and our proximity to the sun due to the Earth's tilted axis. The reduced daytime hours and intensity of the sun lead to a recognizable effect on mood and energy levels. Have you noticed that your calculus lecture is that much more sleep inducing this time of year or that those early morning labs make you all the more agitated to start your day? While the actual incidence of clinical cases of SAD are 1-3% of the population, you are likely subject to some smaller magnitude of these symptoms.

Unless you book your ticket to our Dubai campus for every wintery term, there isn't much you can do to manipulate nature, but being aware of this and compensating with a little extra sleep or some exercise during the precious few daylight hours can help neutralize things.

Supplements are also an effective way to manage this disorder. Vitamin D is an essential nutrient produced through exposure to UVB rays from the sun. In the fall and winter, there is a lower production of this, which can be countered by a daily supplement. The



BBC

Canadian Cancer Society has recommended an intake of 1000 IUs per day in the latter two seasons. This not only gives the benefit of summer month supplements, but has also been linked to reduction of common cancers.

Being conscious of SAD as the term moves into final exam season should help you stay healthy and ready for the challenges that they bring. If you feel like you are being seriously affected by SAD or it is making an existing condition worse, be sure to seek medical assistance as there are more extensive treatments available.

On a less depressing note, although in no way free of morbidity, is one of the wonders



BBC

of winter found in our polar oceans. Brinicles are giant underwater icicles that grow from the bottom of sea ice. When sea ice forms in the cold arctic air at the ocean surface, brine (highly saline water), begins to flow out of the bottom of the ice pack at the super cold air temperature. Due to the high salt content, it sinks in the warmer, less saline water. If the flow is large enough and lasts for a long time, it super cools the surrounding seawater as it sinks to form a tube of ice.

This happens fast enough to see it growing below the icepack, reaching to the ocean floor. The tube thickens with time and forms an icicle shape that, under the right condi-

tions, can extend as far as 30 feet to the ocean floor. Once it reaches the bottom, the brine flow continues out onto the floor, creating a river of ice that traps unsuspecting starfish, crabs and other bottom dwellers on contact. While morbid, these little critters fall victim to one of the coolest (literally) forces of nature.

Until recently this phenomenon was only reported in writing, but the documentary crew of Doug Anderson and Hugh Miller working for BBC's "Frozen Planet" documentary have now captured it on time lapse video. Check out a rough edit of the shot on YouTube. You'll be glad you did!

US Proposes Cleaning Websites With SOPA



JACOB TERRY
2A NANOTECHNOLOGY

T CUBED

It has become clearer over the last decade that content businesses have had a growing problem keeping control of the copyrights they hold on their content. To combat this issue, governments and businesses alike have tried many methods to control how much of their content appears freely on the Internet, to varying levels of success. The latest attempt that the American government is making is through a bill in the House of Representatives called SOPA, or the Stop Online Piracy Act. Although it's targeted towards "combating the theft of U.S. property", opponents of the act have claimed it could lead to an American version of the Great Firewall of China, the huge Internet censor that the Chinese government employs on its citizens.

The meat behind the debate over SOPA is that it allows the entertainment industry to censor sites that "engage in, enable or facilitate" any form of copyright infringement. So if The Iron Warrior, for example, was accused of having an article encouraging piracy, the U.S. government would have Internet service providers (ISPs) block the [ironwarrior.uwaterloo.ca](http://www.ironwarrior.uwaterloo.ca) domain. This in itself would be a rather effective way of discouraging piracy in the U.S., but the bill is unable to block IP addresses. This means that if you know the numeric IP address for a website, such as The Iron Warrior's website, you would still be able visit it by entering the IP address into the address bar.

Essentially, this doesn't block committed pirates at all, because they will still be able to access the website in some form, but it makes it a lot easier to censor websites that even suggest the promotion of piracy by blocking mainstream access to the site's domain.

Perhaps SOPA's greatest strength is its financial power. If a copyright holder feels that a website is infringing on its rights in some way, it can request that payment and ad services close off financial support. These services have five days to comply after receiving a notice from the copyright holder, and most likely services will simply shut down whole accounts instead of being given a specific subset of payments to freeze. Websites have five days to file a counter-notice, which is already a very short amount of time, but financial services do not have to comply with the counter-notice. This is because there are provisions that allow them to unquestionably choke a site if they feel there is "reasonable belief" that the site, in some way, enables copyright infringement.

The most vulnerable sites are not sites that directly host pirated content but social networking sites. If someone uploads a copyrighted photo to Facebook or video with copyrighted content to YouTube, those sites could potentially be targets for SOPA. While these ones are large enough to be able to fight off legal threats, the next Facebook or YouTube will probably be too small to defend itself from financial account freezes from SOPA notices. The long-term effect of this is that SOPA will effectively kill off any socially-based startups as they will all potentially be targets for some form of copyright infringement.

From a security perspective, internet secu-

rity specialists worry SOPA will destabilize the Domain Name System (DNS), which acts as a sort of Internet phonebook and backbone. For ISPs to blacklist websites, they will have to alter the records in the DNS so that when their users attempt to visit the website, the DNS will send back essentially incorrect data. Many claim modifying the DNS with false information would ruin the system's ability to provide a universal naming system, which is a primary value of the Internet as it is today. It would also throw a wrench into efforts to release DNS-SEC, which acts as a veil over the DNS that prevents hackers from modifying DNS entries to send users to incorrect sites.

SOPA isn't an entirely new concept or bill, but builds upon past bills and acts that have their roots as far back as the PRO-IP Act sent through the House of Representatives on May 8, 2008, the Senate on September 26, 2008 and signed into law by George W. Bush on October 13, 2008. The PRO-IP Act was introduced with the purpose of increasing the penalties for copyright and intellectual property violators due to increased sophistication in piracy and counterfeit products. The PRO-IP Act was followed by the proposal of the PROTECT IP Act on May 12, 2011, a Senate-side companion bill to SOPA that caused a stir this summer when it tried doing many of the same things that SOPA is proposing. It was put on hold but a Senate vote on the bill will likely follow sometime in December. Senator Ron Wyden, who put the hold on the bill, is the primary Senator against its implementation and has proposed an Internet-rooted filibuster to delay voting on the bill. It seems quite likely that the Senate will pass the legislation otherwise, given that 40 of the 100 senators

are cosponsors of the bill, let alone the other senators who will likely vote for it.

The might of the tech community is also primarily openly against the passing of SOPA and the PROTECT IP Act, with Twitter, Google, Tumblr, Mozilla, Facebook, and many other organizations outright opposing the bill. The Business Software Association (BSA), which includes large companies such as Intel, Adobe, Microsoft and Apple, originally supported the passing of the bill, but at the end of November changed their stance due to the wording of the bill and its ramifications on free speech and privacy. While there's not much we can do in Canada if we're against it, encourage your friends in the U.S. can write letters and emails to their Senators and Representatives and sign Senator Wyden's petition at <http://stopcensorship.org/> to be included in his proposed filibuster. If the bill does pass, it would set a precedent for governments around the world to introduce their own "intellectual property protection" laws, forever fragmenting the Internet to a greater degree than it is now.

For a medium that encourages freedom, thought, community and openness, it is uncomfortable to see the powers that be attempt to change it to a departmentalized, splintered, unstable network. Canadians and citizens of other nations should be watchful of their governments and stay informed of government agendas to prevent bills like these from simply passing without any meaningful debate. If we let these bills become law without questioning them or rewording them to avoid ambiguity, it's only a matter of time before we realize that the privileges we once enjoyed are no longer available.

Top Ways to Win at Interviews



After months of crushing disappointment from Jobmining, you might (and should) be asking yourself, "What went wrong?", "How did I get the black lung of unemployment?" Chances are that your interviewers were just not that into you. Maybe it's time to buckle down and become a better student; maybe it's time to join more teams and activities; maybe it's time to put down the newspaper and start finding the job of your dreams through hard work and determination ... of course not; don't be ridiculous. The problem is that you didn't effectively manipulate your would-be employer during the job interview, dummy! Don't worry though, because this week we're going to give you our exclusive guide to the top ways to win a job interview!

Do Your Research: Although winging it is sufficient for such trivialities as wedding proposals, final exams, and court dates, a job interview is no winging matter. First-off, take advantage of the information Jobmine gives you; we mean, of course, to look up the other people being interviewed and find ways to insult their

experiences and them personally. Just casually mention to the interviewer, "and unlike some candidates, I never got drunk and broke into a McDonalds" or "I think, with my mom still alive, I'm the strongest candidate for the job". Also, be sure to research into the personal life of the employer so that you can be more relatable and easy to talk to. Imagine if you were an interviewer and a candidate dropped this line: "As I'm sure you learned on vacation in the Bahamas, balance is of the utmost importance to staying efficient and innovative. Why, imagine if your son, Timmy, didn't spend recess exercising and getting fresh air; his performance in Mrs. Nesbitt's second grade class would surely falter!"

Dress to Impress: Now this one is difficult, as there are two possible directions to go. If interviewing for a small company or programming position, we recommend that you better represent yourself by forgoing the tie and/or jacket. Yes, show your interviewer that you're able to dress smart without dressing disingenuously by showing up in a sweatsuit and undershirt. Stains are a great way to say "I'm too busy and important to have my mom wash this outfit". If, on the other hand, the company is bigger and more formal in their conduct, we recommend dressing sharp. A tuxedo might suffice if you want to be their second or third choice, but to really make a splash dress to

the tens. Ladies we recommend select from the Gaga collection, and gentlemen the Gaddafi. Yes, employers will be so impressed by your gigantic Africa pendant that they'll forget the fact that you're dangerously underqualified for the job and that in your 90-minute rant you referred to their security firm as a "terror firm".

Make Yourself Look Important: An employer isn't running a charity, unless the job is working for a charity in which case the employer is in fact running a charity. But regardless [sic.] of this fact, they are looking for someone whom they want. As such, your job is to make them think that they want you. How? First of all, show up fashionably late to make them wait for you. Then, when you do arrive, never be the first to speak: it's a sign of weakness. The longer you wait to talk, the more effective this is. How else do you think Gandorf is constantly thwarted? Later, during the interview, have a friend call you and five minutes into the conversation say "I'm sorry, Oprah, but I'm in the middle of something very important. I'll talk to you later, boo". Finally, exaggerate your experiences. If you worked at McDonalds, say you're experienced handling fiduciary responsibility and operating large machinery; if you built a model rocket say that you worked for the Canadian Space Agency; if you worked as a green grocer say that you invented the Facebook.

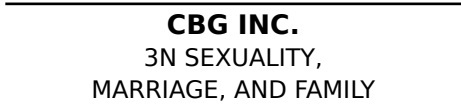
Show Your Enthusiasm: Employers want to know that their employees are eager to work for them and really want the job. You have to trick them into thinking that you just aren't trying to fund your coke habit. One move that we recently saw in a short-film is to put your hand on the interviewer's leg (to establish camaraderie), and emphatically say that you would do anything for your boss. Another thing to do is send an e-mail afterwards thanking the employer for the interview, say that you appreciate that they took the time out of their day, and tell them that if you don't get the job you'll _____ their _____ in the _____ ... twice.

Lie.



Evelyn Shifflett from Rhinolnk Illustrations Ltd

Advice for Your First Date



Howdy sexy plummers,
If you have been following our advice, you may have procured the elusive "first date" with that person of your dreams. Obviously this means a lot to you and is the first step in a long and meaningful process to achieve the relationship of your dreams with your soulmate. One of your fellow readers wrote in and had this to say;

Dear CBG, your advice has been invaluable and has helped me with my mission of finding my ideal girl. I found this super-hot girl working out in the gym and I did exactly

as you suggested. I stalked her and obtained her address. When I arranged to "bump" into her by accident, she seemed really happy with my outgoing spirit and asked me out on a date. What should I do to avert disaster?

First of all, we would like to commend those of you that have earned this achievement. We would like to thank all our readers for all of their tremendous support. Anyways, getting down to business. It is important that you take this opportunity extremely seriously. This what we in the upper echelons of corporate management called "make or break". You need to be at your best behavior despite not losing your self-identity. The following advice should assist you in your

quest for "The Perfect Date".

Make sure you dress well. If you are into that kinda thing, you should dress up in your most crisp dress shirt with all the creases ironed out and a sharp well-fitted pair of trousers to go with it. If the date is at an upper class place, make sure you dress somewhat formally with a blazer or a sportjacket on top. Try not to go with a necktie or bowtie as that would deem the date as a professional meeting. A good buttoned down shirt with the top button open would be the best bet. If you are into dresses and such, your best bet would either the classic "LBD" or a silky smooth red outfit. For a more informal feel, sundresses are an excellent option. However, be careful to dress somewhat modestly; you

don't wanna exude the aura of a "floosy".

Make sure you pick up your date from their house and take them to the destination. Make sure you are courteous all along, opening doors and arranging for their seating etc. Once you place your order, make sure you ask your date what they would like and accordingly decide on the choice of wine to go with the food. Make sure you maintain utmost table etiquette with elbows off the table while eating. Once you feel comfortable, cup your date's hand to make them feel more comfortable. At the end of the date, drive your special someone home and before saying goodbye, hug your date. Hopefully, it all goes well and you get a second date with that special someone.

Spinosaurus

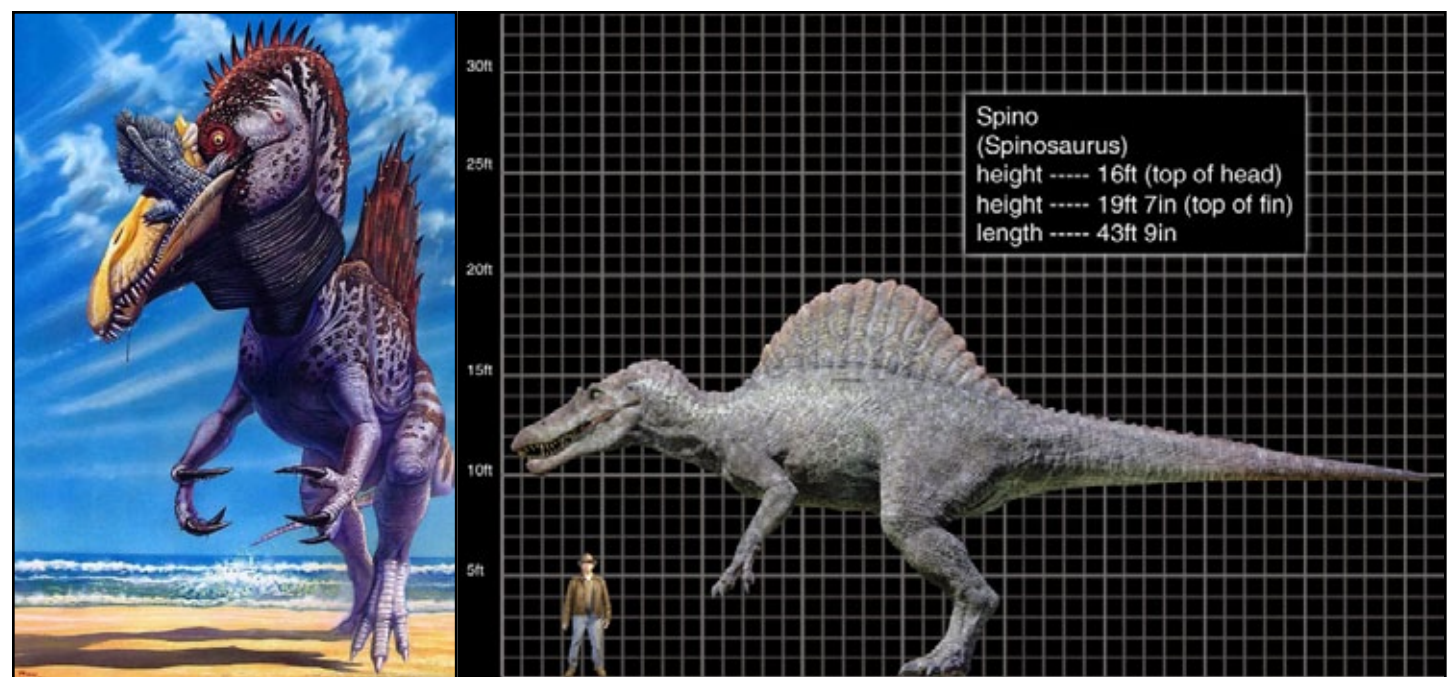
(not some lame ass plant eating dinosaur)



Guys, I've been flooded with literally thousands of requests to write about a dinosaur. Personally I think dinosaurs are pretty dumb animals that just stood around eating and getting bigger. The Spinosaurus (meaning spined lizard) seemed to be the coolest and largest meat eating dinosaur. Check it out.

As you can see from the picture, the optimum riding position would be on the neck just before the spiny bit. The Spinosaurus actually has decently sized arms (unlike the useless T-Rex) allowing for excellent missile launcher mounting locations. Honestly though, the 40,000 lb maximum weight of the Spinosaurus is its greatest weapon. That's about a Russian T-34 main battle tank and change.

Nobody really knows how fast this thing could run, but does it really matter? It's like debating if a building can run at 10 or 15 km/h. No matter if it reached you in 30 seconds or a minute, it's guaranteed to ruin your day. Most of the time the Spinosaurus would use badass super sensitive pressure sensors in its nose to locate and eat gigantic dinosauric fish. Sometimes though, it would eat bigger



Luis Rey

Jurassic Park Legacy

stuff.
The Spinosaurus could take down the Carnotaurus if it was feeling particularly peckish. I've calculated that as the equivalent of pounding back 53,988 baconators. If a caterpillar can eat several times its own weight in leaves and transform into a butterfly, I'm pretty sure that if a person consumed a few thousand baconators they would eventually

break through the layers of their own fat and emerge as a Spinosaurus. I challenge all of you serious dinosaur lovers out there to try.

I don't even know how, but apparently this thing can swim too. Upwards facing nostrils allowed for easy breathing on the surface while it was taking a break from snaking on sharks. If I were a Spinosaurus though, I'd probably just drink lakes dry and load up on

beached fishes. There is no doubt that this 20 ton amphibious killing machine was the greatest predator of all time.

Well there is your precious dinosaur article. Now I'm sure you'll want to go watch Jurassic Park again instead of studying (note how the Spinosaurus annihilates the T-Rex). Hopefully everyone has enjoyed another semester of Big Things!

Robin, the Boy Wonder



DANIEL OSORIO
2A NANOTECHNOLOGY

UNSUNG HEROES

Superheroes usually get the short end of the stick. They are made fun of and called useless, but there is a whole separate class of heroes that fall below superheroes: the sidekicks. Now, Batman may be one of the most beloved heroes of this day and age - he's got tons of gadgets, mastered several martial arts, is a billionaire playboy, and has one of the best secret lairs of all time. However, his sidekick is always outshone by his mentor, but does anyone really know who Robin is? Robin has had four different incarnations over time, however the original stands out from the rest - Dick Grayson.

Grayson, unlike most sidekicks, suffered a traumatic loss in his life much like Batman's. When he was only 12 years old, Grayson's parents were murdered by a mafia boss who was extorting Grayson's parents for money. Batman apprehended the mafia boss and adopted Grayson as his son and heir apparent. After becoming Batman's adopted son, Grayson began training.

Grayson received the exact same training as Batman. It took Batman sixteen years to learn everything he needed to know to fight crime, whereas it took Grayson eight times

less to learn the same, and in some aspects he is even better. Grayson has mastered fourteen different martial arts, rivalling Batman in every form and even surpassing him in aikido. Grayson also has a vast array of skills ranging from stealth and disguises to criminology and computer expertise. As far as gadgets go, Grayson may not have a vast array like Batman, but his arsenal still consists of his personal version of bat-o-rangs, gas pellets, tranquilizer darts, brass knuckles, smoke bombs, and eskrima sticks (made of an unbreakable polymer). Even though Grayson has significantly less equipment he still pulls half the weight. Not to mention, as Batman's sidekick, he's still in his teenage years and fighting the worst that Gotham has to offer. Grayson is also an athletic prodigy, known as "The Best Acrobat Alive". He's able to pull off impossible stunts such as quadruple somersaults and jumping from rooftop to rooftop, not by some sissy grappling hook, but by climbing and scaling walls with ease. In essence, Grayson pulls off what Spider-Man does, but without the radioactive spider bite. Finally, on top of all that, he is a master of languages knowing English, French, Mandarin, Cantonese, Japanese, Spanish and Russian.

After a few years of being Batman's sidekick, Grayson decided to become a full-fledged superhero and watch over his own city, Blüdhaven. Blüdhaven is very similar to Gotham City, only worse off because it hasn't had a hero watching over it. Grayson entered



leandro-sf

a worse-off city, made it a safe place to live, and lowered the crime rate to be lower than Gotham's. Overall, Robin turned out to be a better protector than Batman. When Batman got his back broken by Bane, Batman asked Grayson to take up his mantle and he ended up watching over both cities. In addition, when Batman was believed to be killed by Darkseid, Grayson again took upon the mantle of Batman and trained Batman's estranged son Damien as the new Robin. However, becom-

ing Batman wasn't easy; not because he had big shoes to fill, but because Jason Todd, the second Robin, became a homicidal sociopath bent on hunting Grayson down and killing him. And fun fact, Todd knows exactly where Grayson is at all times because he knows his secret identity. This example is just one of the many villains that Grayson has faced on top of Batman's entire original cast of villains, alien kings, Dark arts mages, and the mob.

It's a known fact that when it comes to superhero teams, the most reputable is the Justice League, with Superman as the leader. This is true, but Robin has in fact also led the Justice League for a while under his Nightwing persona. He has also led two other teams, the Teen Titans and the Outsiders. He was also the only one without superpowers on either team and when questioned about his "weaknesses", Robin challenged them to one on one battle without equipment and allowing full use of powers. Needless to say, he never lost his leadership status. Also, if you think Batman got game, Grayson has got ten times the amount! He has been with countless women, such as Batgirl and Starfire. Grayson had one of the only aliens on Earth fall in love with him, and this is no easy task considering Starfire has weak short term memory where she can not even remember the names of her fellow allies. So, next time you want to make fun of Robin for being a wuss or useless remember he's better than the Bat himself and has got more game than Captain Kirk.

Top 5 Holiday Movies



NANCY HUI
2A CIVIL

MOVIES THAT DESERVE MORE LOVE

Bah, humbug.

I don't always watch holiday movies because sometimes they pull all the wrong heartstrings, feature stupid kids or hit schmaltzy pratfalls. But occasionally - very occasionally - someone in Hollywood gets it right. The following are five movies ranging from full-out seasonal cheer to questionable picks in the name of easy entertainment, sorted in order of increasing personal preference.

Click (2006)

Adam Sandler plays a man who finds a magical remote control in a Bed Bath and Beyond store that allows him to pause, rewind, and fast-forward time. While initially convenient in skipping corporate meetings, traffic jams, and foreplay, the remote control eventually goes rogue and proceeds to skip past best parts of his life, including watching his children grow up.

Click isn't actually a holiday movie - it takes place in the summer - but plot-wise it feels like a heartrending reinterpretation of A Christmas Story, which is good enough to put it on the list. I can't believe that Adam Sandler could pull that off. Adam Sandler is not a mature guy. He's shameless and self-indulgent when showing off things like humping dogs and flapping empty belly-skin. But he's equally shameless in pulling heartstrings in Click, including the universal but seldom-addressed fear of aging and missing family. I dislike Adam Sandler yet I still cried like a baby.

Make the Yuletide Gay (2009)

The unfortunately-named Olaf is an openly gay college student who hasn't actually come out to his parents. Then his boyfriend Nathan arrives unexpectedly for the holidays, while Olaf finds it increasingly difficult to maintain his heterosexual façade.

The budget is visibly low but the acting is enthusiastic, which is good since there's no other way to pull off all the "innocent" innuendos that keep popping up. If you took a drink every time Olaf's mother made an off-

hand remark about top vs. bottom bunks or cocktail sausages, you'd be hospitalized before the halfway point. Also notable is Olaf's father, a pot-smoking philosophy professor who whispered the meaning of life into Olaf's ear when he was a baby and promptly forgot it because he was "high as a kite".

Make the Yuletide Gay is a cheerful comedy about the importance of family, and by extension, is an excellent holiday movie.

Lethal Weapon (1987)

Murtagh the cop, on the verge of retirement, is paired with the self-destructive Riggs. They spend about 48 hours bonding over bullets, beer, and boat repair.

Perhaps you wonder why Die Hard (1988) isn't on the list. Well, Lethal Weapon has a stronger holiday connection and less extraneous characters like that idiot cop on the ground in Die Hard, even if Die Hard does have the Alan Rickman advantage. Besides, Lethal Weapon sports a hauntingly mad-eyed and bushy-haired Mel Gibson as Rigg, who I'm sure evens out the odds somewhat.

Comparisons aside, I'm continually amazed at how much plot Lethal Weapon energetically stacks on top of bullet casings on top of male bonding on top of the eternal importance of family. There's a holiday dinner, a tree-chopping scene, and possibly the most poignant Christmas gifts ever presented in the history of action movies.

The Day After Tomorrow (2004)

An Ice Age descends upon the Northern Hemisphere, trapping Jake Gyllenhaal and his academic decathlon team in New York while his father treks across the Frozen States of America to rescue him.

This is a Roland Emmerich movie. It is also my favourite Roland Emmerich movie, though it that isn't saying much in terms of the quality of this movie. And the only thing that qualifies it as a holiday movie is how massive and scenic amounts of snow delay a heart-warming family reunion, and that the scenes with Ian Holm and his fellow Scottish meteorologists getting snowed in around a fireplace are very cozy. Plus, Jake Gyllenhaal hooks up with fellow academic decathlete Emmy Rossum. Overall, The Day After Tomorrow manages to be as satisfying as drinking tea under a quilt by an electric roaring fire.

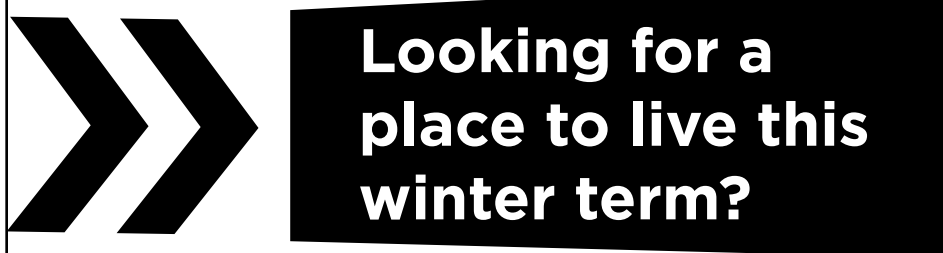
Love Actually (2003)

At least a dozen strangers rediscover the many meanings of love as the clock ticks down to Christmas Day. That's the best I can do, sorry.

I think Love Actually wins over my heart for being unafraid to pack itself to the gills with storylines. It keeps the movie from drifting into the boring and contrived at the minor cost of being unable to keep track of charac-

ters. But who cares? Love Actually is populated by a cast of highly capable British actors playing decent human beings. The storylines are warm and lovely and beautiful. There's something for everyone, including the bitter critic writing this article. And if Love Actually doesn't embody the togetherness of holiday season, nothing does.

Happy holidays, everyone!



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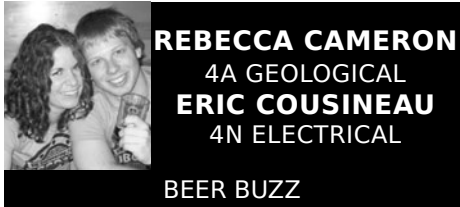
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What is an Adjunct and How is This Beer so Cheap?!



If you're anything like us, you can't afford to drink expensive beer all the time. Just because you can't afford the most expensive beer all the time, it doesn't mean you should have to drink terrible beer instead. In this article, we want to explain what brewers add to their beers to make them cheaper.

Have you ever wondered why some beers just don't taste that great, or have very little taste at all? Well the cause isn't your picky taste-buds; there actually is a difference in the ingredients they use. As you may know, the main ingredients of beer are water, malted barley, hops, and yeast. What you may not know is that many larger scale brewers supplement the malted barley with cheaper fermentable materials referred to as adjuncts. Usually the goal of adding adjuncts is to make the recipe cheaper and more stable, but adjuncts can have other uses. In general the use of adjuncts in the beer process will have one of three goals in mind: 1. to add flavour, 2. to supplement a beer characteristic, or 3. to save money. For many large brewers, this allows brewers to maximize their profits, while establishing a signature taste that beer drinkers can associate with their brand. Adjuncts are added to the wort partway through the brewing process to supplement the malted barley. Some examples of adjuncts in use today are: corn, rice, rye, wheat, unmalted barley, and oats.

Two of the most common adjuncts are rice and corn because they provide fermentable material at a cheaper price point than malted barley. Another reason to use rice and corn as adjuncts is that they contribute less dissolved protein to the beer than other adjuncts like barley and wheat. This means that their addition results in a more stable product (due to less dissolved protein) to achieve that signature (ie. constant) flavour associated with their brand of beer. Many large brewers strive for that "crisp/clean/smooth" taste (ie. weaker flavour) that the general population seems to enjoy. With this goal in mind it makes most sense to use rice or corn adjuncts since it allows them to achieve their desired alcohol content while avoiding a strong or bitter flavour. A fun fact to illustrate the use of adjuncts in beer is that Anheuser-Busch (maker of Budweiser and other big label beers) has been known to be the largest buyer of US rice (according to Wikipedia). The Budweiser label honestly states they use rice in their brewing process, as you can see in the picture accompanying this article.

As we mentioned above, not all adjuncts contribute negatively to the quality of beer. Goals 1 (to add flavour) and 2 (to supplement a beer characteristic) of adjuncts can contribute positively to beer. Adjuncts are commonly used by craft brewers to create unique flavours, increase head retention, or change the texture (mouthfeel) of their beers. Unmalted barley can be added as an adjunct to contribute a grainy flavour as well as increased head retention. A common example of a positive adjunct is pumpkin, which is used to create those pumpkin flavoured ales you can find in the fall season. Another example of adjuncts used to

enhance a beer characteristic is using oats in Oatmeal Stouts to make them feel heavier in the mouth. This is due to the high amount of dissolved protein oats add when used as an adjunct.

Breweries in Canada that aren't as honest as Budweiser often using tricky phrases like "starting with the best hops, barley, and water" to avoid mentioning their use of adjuncts. In order to write this article we searched for the ingredient lists of many popular Canadian beers. As it turns out, Health Canada makes an exception for beer and does not require its ingredients to be listed anywhere. The brewers (or at least their lobbyists) claim there would never be enough room on labels or cases to list the ingredients in their beer. The advertising campaigns of these big brand breweries would

have you believe that their product only uses the best ingredients, and that they only brew beer in its purest form. If this was true, there would be plenty of room on their label for the four words: water, barley, hops, and yeast. In fact the Canadian government allows as many as 108 different ingredients in beer which makes for a very different story than the picture painted in your head by expensive advertising campaigns.

Since we had so much to say about adjuncts we don't have any room to review a beer in this article. However, look forward to next term's Beer Buzz articles - Eric will be returning to Ontario from co-op so we can have epic, non-Skype beer tasting sessions :) As we always say, Fear No Beer (but be wary of corn or rice adjuncts)!!!



Gaming During Exams? Of Course I Can, I'm Batman!!



Its amazing how time flies as we are now in the last weeks of classes, with exams starting in just a few days and holidays coming soon. The biggest change that I always find at this time in the term is the sudden increase in available gaming time, sometimes at the expense of study (wait, that's a secret, don't tell anyone - that's how newspapers work right?)

Anyways, it is possible to balance both gaming and study during the exam period, and gaming can actually offer a great way of getting away from all that studying. Countless people will tell you that it is important to get away from studying for a while, otherwise your head will explode - well maybe I spiced up the ending of the advice a bit, but no one is going to contradict me. The perfect style of game for those exam period breaks is a short level or stage based game. Just be careful that you don't fall into the 'Just one more' trap that is way too easy in games like Angry Birds and Cut the Rope (this game is an interesting physics type game that has occupied a large percentage of one of my classmates' time recently).

One of my favourite series of games for quick breaks are the LEGO games. I know people view them frequently as children's games, which they kind of are, but they are also very well made and can be a great source of simple fun. I am talking mainly about the main Star Wars (not LEGO Star Wars 3: The Clone Wars) and Harry Potter versions. Additional games have been released in the genre, including two Indiana Jones, and one each for Batman and Pirates of the Caribbean. Often these other games in the genre have failed to keep me interested because they either haven't had a cohesive story line to follow, or they seem to have been rushed in order to cash in on the LEGO craze. This craze seems to have died down recently, and the games have started to

return back to their previous higher quality levels. Currently I am playing LEGO Harry Potter: Years 5-7, which has broken away from the chapter style of earlier LEGO games. While the game still stops and tallies your score, every once in a while it is much less often, and not very obvious. Other than that, the game does a great job of embracing the Harry Potter stories (exponentially more than the EA games have) and telling it through the standard LEGO humour.

So off of LEGO, and over to more serious gaming. This month has seen the release of both Batman: Arkham City and Skyrim, the latest entry in the Elder Scrolls series. With *The Iron Warrior*, class representation and classes themselves, I am waiting on playing Skyrim until next term when I will be on co-op, maybe I will discuss it a bit then. I have been playing Arkham City though, and it is an amazing game. I have previously mentioned Arkham Asylum as one of my favourite games, and definitely my favourite superhero game of all time.

Quick aside, I have to also mention the "Adventures of Batman & Robin" for the Sega Genesis. Back in elementary school my best friends and I both had the Sega Genesis, and I had Jurassic Park, while they had this game. Needless to say many days were devoted to getting as far as possible through both games in co-op mode, while secretly hoping that the other group would lose so that it was your turn again - the main downfall of two player co-op among three friends. The Batman game was based off of the Batman Animated Series, which had some of the best characters and storylines ever. The show was definitely focused towards a more adult audience and dealt with some very heavy issues, like whether or not Batman was actually the cause of all the horrible things in Gotham by actually causing the creation of many of his greatest super-villains.

Back to this decade, and Batman: Arkham City, which has taken everything I liked about the first game and refined it, taken everything I found annoying about the game and fixed it, and changed things that I didn't even real-

ise needed refinement until they had changed. Asylum had a much more linear storyline, with you taking Batman through Arkham Asylum facing each enemy in a very haphazard way. Each villain was an enemy because they happened to be in that area of the building when you arrived, not because you were specifically searching for them. Also, boss battles tended to be very straight forward once you figured out the pattern, with many of them entirely focused on getting the giant stupid brute to charge at you, then dodging out of the way as they collide with an electrical panel.

In Arkham City, the game is more of a sandbox style with the entire quarantine zone open to you to run around in - or grapple and glide as is more often the case. Because of this set-up, the linear storyline can take you in non-linear directions. Early in the game, Batman has to find Mr. Freeze for the Joker (don't ask why, it will ruin the drive of the game). This leads into a simple game mechanic where Batman's cowl can measure ambient temperature changes in the air, so you traverse the city to reach the coldest point. It's a simple mechanic that seems very Batman-esque but also allows you to abandon the search for a while to do some side missions. When you do find Freeze's hide-out you find that he has been captured by the Penguin, alright, go and find the Penguin. Throughout the game traditional villains are sometimes short-lived allies, they each have their own motivations throughout the game, and their stories are all weaved together to make one story.

To tie it back to the other game I mentioned, the writer of both Arkham games was also the writer of the Batman Animated Series, so no wonder the writing is so great. The story interweaves so many of Batman's rogue gallery while preserving each of their back stories and even making them an integral part of the story. Many people don't know that Harley Quinn, Joker's second in command, was actually introduced in the animated series, she never existed before then. Similarly, Mr. Freeze's entire back story was changed in the animate series, with the introduction of his terminally ill wife

who he cryogenically freezes before an accident alters his biochemistry so that he requires extreme cold to live. Freeze was changed from a gimmicky villain with an ice gun to a tragic character who's entire motivation for crime is to save his wife.

This kind of writing is what creates such a cohesive story in Arkham City, balanced with great game play that really allows you to get into the character of Batman. The greatest detective in the world, master of so many combat styles, that personae comes through so much better in this game than any Batman game, or any superhero game that has come before. So that is my quasi-review of Batman Arkham City, even though I've mentioned that this column is not meant for reviews - but it's a great game that is available for multiple consoles and deserves a look by any fans, and non-fans alike.

A final quick comment on consoles in general, Black Friday sales have come and gone, but the console battle seems to be at a standstill, and it has been for a while now. Neither Sony or Microsoft have done anything to boost hype for their consoles, I think they are just watching the upcoming Christmas sales. Nintendo has also been fairly quiet, continuing to lose market share against the PS3 and Xbox 360 (which has been the leader in sales for several months now). Maybe Nintendo is just focusing on the release of the Wii U and hoping that the introduction of a system to rival the graphics and power of the other two will be the edge they need to get back into the market. I doubt that this will be enough, as both the PS3 and Xbox 360 have their own motion control systems, and Nintendo has historically benefited from the casual market. The amazing level of approachability Nintendo achieved with the Wii enabled them to top the market for a long time, but I think it is now going to cost them as that same crowd is not going to see any reason to upgrade to the new console, and the hard-core gamers are still going to look towards PS3 or Xbox 360 for triple-A games.

Nintendo has to step up their game if they want to survive into the next generation of gaming. Until then, just keep on gaming!



The Iron Sudoku Extreme Difficulty

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

Testing 1, 2, 3

STUART LINLEY
2T NANOTECHNOLOGY

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14				15						16					
17				18						19					
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	51		52					53	54	55					
56						57								58	
59						60								61	
62						63								64	

Want to Write for the Iron Warrior?

Winter Term Meetings will be starting in January so come out and write. Not on A-Soc? Who Cares? Write for the Paper anyway!

What else are you going to do anyway - write for Imprint?

- 39 Useless, as paper
- 40 Upset
- 41 Survey
- 42 _____ tiny
- 44 Agenda bullet
- 48 Escalade or Suburban
- 49 Cheesehead, for example
- 50 _____ Gay (WWII Bomber)
- 51 *Test to validate results*
- 56 Mediterranean republic
- 57 Except (from)
- 58 Company bigwig
- 59 Chicago or New York
- 60 Robin Williams role
- 61 Obama transit proposal (abbr.)
- 62 Short
- 63 Trimming tool
- 64 UFO pilots
- DOWN
- 1 Ruffle, as hair
- 2 Black or short go with
- 3 Sever
- 4 Boutonniere site
- 5 Emulates humanity
- 6 Border
- 7 Pop
- 8 Styles
- 9 Basic chord
- 10 Berlin mister
- 11 World of knowledge

- 12 In a _____ (basically)
- 13 Before, poetically
- 21 Decimal base
- 22 Outstanding
- 26 Late night comedy
- 28 Before prefix
- 29 Tell on, with out
- 30 More than fat
- 31 "..., __ walk!" (ulimatum)
- 32 French mount
- 33 Rapper with a PhD in rhymes
- 34 Spot on
- 35 Nomad
- 36 He shot first
- 37 Theseus, to Aegeus
- 38 Rugby TD
- 39 Mamba mumble
- 42 Mai _____ (cocktail)
- 43 Imprison
- 44 Typical RPG magic stat.
- 45 Riposte response
- 46 Eragon sequel
- 47 Ford and Bloomberg
- 49 Frosted or snow go with
- 50 Common plastic bond
- 52 Sch. societies
- 53 Mimiced
- 54 Tropical fish
- 55 Great Lake
- 56 Calgary time zone

- ACROSS
- 1 Ma export
- 4 Minimum
- 9 Scottish chief
- 14 Lamp need
- 15 Garden trellis
- 16 Happen again
- 17 Operate
- 18 Puritan
- 19 Fuming
- 20 *Ohio's SAT results, for example*
- 23 1 is generally the easiest
- 24 Lemon
- 25 Canadian sentence enders
- 27 Paradise
- 28 Common speech
- 31 Augury
- 32 Yemen or Egypt resident
- 33 Practice
- 34 *Sports team tryout*

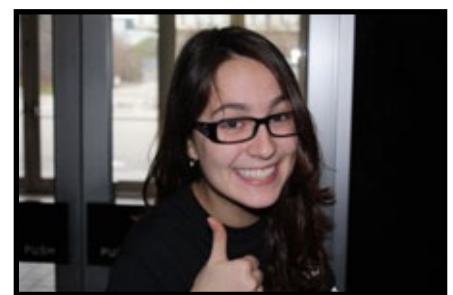
"What was your favourite part of EngPlay?"



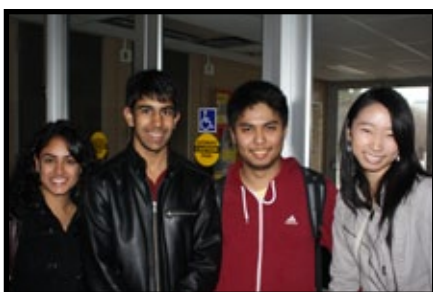
Very Witty and Well put together, unexpetedly funny
Cody Shaw, 1A Electrical



I Loved it, Lots of death, undeath, and rebirth
Michael Smart, 4A Systems



Shoving a pie in Logan's Face!
Anamaria Reda, 2A Chemical



We liked Macbeth! OUCH!!
Anakha Palissery, Alykhan Kanji, Alice Yuan, Darren Peralta, 1A Software



Ben dragging off Cat at the end of the Dating Game
Patrick Mikolajczak, 2B Computer



BAKE SALE!!!
EngPlay Crowd