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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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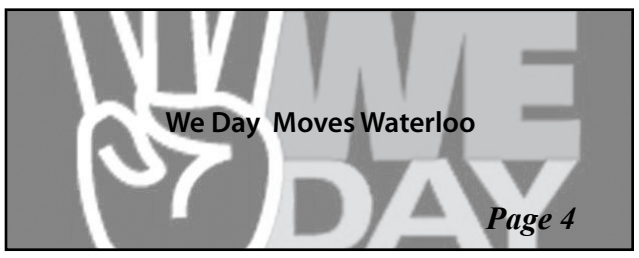

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UW Releases New Homepage, Sparks Mixed Reviews

BHAVYA KASHYAP
STAFF REPORTER

It was only last summer that *The Iron Warrior* interviewed VP of External Relations, Meg Beckel, regarding the university's controversial new branding campaign. She had talked candidly about the usage of bold lettering and colour as a way to build on our image of originality and innovation. At the time, it had only been a year since the first images of the school's new identity had emerged; these were images that had left the student body upset and divided.

The latest renovation in this rebranding process has been no different with regards to the response it has received. The school's new website, now open to the web, not only provides a fresh face for the public to view, but also gives the students and faculty a greater understanding of where the branding is headed as a whole. The site's new

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Hate Crimes on Campus Prompt Public Forum

IRON WARRIOR
NEWS BUREAU

In response to the recent crimes on campus targeting women, a public forum on hate and misogyny was held in the Student Life Centre on Friday, February 18th from 12-2 pm. This forum brought together many campus leaders and community members to discuss the crimes, the administration's response to them, and steps forward in preventing these actions from recurring.

The forum consisted of an hour of discussion from a panel of university representatives and community members. This included Bud Walker, Associate Provost of Student Services, Police Services Director Dan Anderson, two representatives from the Women's Centre, a faculty representative, and two representatives from the Waterloo Region Sexual Assault Support Centre. Shannon Dea, faculty representative and member of the Status of Women and Gender Equality Committee urged students to take the incident seriously rather than dismiss it as a trivial prank, a sentiment that was shared by the rest of the panel.

Campus police are currently investigating the incident concerning discriminating posters being placed over top of those advertising the campaigns of women running for positions in the FEDS election. These actions are considered a breach of Policy 33, which ensures an environment of tolerance and respect for all students on campus, and as a mischief under the criminal code. The police are urging anyone with information regarding these crimes to come forward. The posters have been collected for forensic evidence and surveillance videos are currently being reviewed.

The university's Campus Diversity Committee has been working for the past six months on addressing diversity issues including gender equality. This committee is working towards an "umbrella approach" of dealing with all diversity issues, rather than singling them out individually, says Associate Provost Bud Walker. Walker also warned students to be aware that not everyone may be sympathetic to this issue, and that services like the Women's Centre are there to help students stay away from putting themselves in compromising positions. The university provides services, such as Counselling Services, to liaise between parties on issues such as gender equality.

It was made clear during the question period following the forum that many female

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Robotics Competition Inspires Students

DANIEL DELATTRE
FIRST ROBOTICS

On Wednesday, February 16 2011, students from the Faculty of Engineering, together with high school students from St. David Catholic Secondary School started testing their newly developed robot in E5. Their robot, nicknamed 'the Hoff', will be competing at this year's FIRST Robotics Competition to be held on March 24-26, 2011 at the University of Waterloo. The team has been designing and building their robot for this year's FIRST challenge since January 2nd.

With the opening of the Faculty of Engineering Student Design Centre (SDC) in E5, the possible links between high schools and the University Of Waterloo (UW) have increased dramatically.

So when St. David Catholic Secondary School started their rookie FIRST© Robotics Competition (FRC) team 3683 named "Dave", they automatically looked for current and alumni student mentors from the Faculty of Engineering, as well as for a connection with the Student Design Centre.

St. David's FRC team is currently the only team in the City of Waterloo and they have 7 mentors who are enrolled in Engineering at the University of Waterloo, as well as 3 alumni from Engineering. Even the teacher at St. David, Alex Matan, is an alumnus from the University of Waterloo! The robot is being built by students from St. David together with their mentors from UW, the high school and local companies, such as Aeryon.

One of the issues the team had initially was space for testing the robot on a playing field. After a meeting with Peter Teerstra Ph.D., P.Eng., Director of the Student Design Center, it was decided to use the open area in the Student Design Centre as the solution.

Although only part of the robot was working, on Friday February 18, the robot was shown to St. Matthew, a local Elementary School. This sparked a lot of interest in the students for Science and Engineering.

On February 21 (Family Day) Team Dave invited other FRC teams over to play a scrimmage on the playing field in E5. Team 2609 from Guelph (http://www.lourdeschs.com/crusader/), Team 3161 from Oakville (http://www.htrobotics.ca/) and our own team 3683 (http://www.teamdave.ca) shared experiences, tips and lots of encouragement during that day.

The next day, Tuesday February 22, was the last day of the build season and at

See ROBOT on Page 3

Letter From the Editor

The Academy Awards and How Quickly Cinema is Changing

CAILIN HILLIER
EDITOR-IN-CHIEF

Welcome to issue four of *The Iron Warrior*. The term is now past the half-way mark, with the relaxation of reading week a distant memory and finals looming on the horizon. Hopefully by now we all know where we will be next term, whether it be travelling, on co-op or back in Waterloo for another term of school. I cannot believe that my contemporaries and I are now entering our final year as undergrads. I am starting my last co-op term this spring but it seems like only yesterday I was looking for my first co-op placement. It really is startling how time flies.

Over the past year, I have had intermittent interludes of free time. With this free time, I attempted to learn more about filmmaking and the history of film. I am by no means an expert in this field; however, I have observed a few things. Since the summer, I have asked almost everyone I know what their favourite must-see movies are and I have compiled quite the list, containing everything: the black and white classics; films created from literature; science fiction phenomena; comedies of the 80s; foreign films from across the globe; and newly animated hits. If I had to narrow this down to a varied group of top ten movies, they would be: *Singin' In The Rain, Up, Ferris Bueller's Day Off, The Darjeeling Limited, Amélie, The Dead Poets Society, The Departed, The Shawshank Redemption, The Princess Bride,* and *Into the Wild*. Wow, that was difficult to do since there are definitely hundreds of amazing movies worthy of being viewed. And what are rainy afternoons for anyway, right?

It is remarkable to think how much the movie industry has changed since it started out, not that long ago at all. I mean, so much of what I learn takes place on a geologic time scale, completely unfathomable in comparison to a human life. But movies are changing so rapidly, it is amazing to be seeing these changes happen in our lifetime. Technology is the way in which this art form has been allowed flourish. Just to put it in perspective, silent films gave way to synchronized sound at the turn of the century. The first talking picture feature film was *The Jazz Singer,* released in 1927, around the time when our grandparents were born. This was followed by modern day colour motion pictures, which were common in theatres by the 1930s. A big advancement that we have all observed is the introduction of special effects. Anyone who has seen all of the *Star Wars* films can attest to this (although whether these improved special effects have lead to better movies in this particular case is questionable).

Animated movies have visibly advanced the most of any form since we were young. This medium is no longer restricted to the typical kid movie. Don't get me wrong, I can definitely appreciate *Bambi* and *Cinderella* as much as the next person, but the new wave of Pixar and DreamWorks pictures are hilarious for those of all ages. *Toy Story* triggered what seems to be an endless wave of these new animated movies. *Wall-E, The Fantastic Mr. Fox, How to Train Your Dragon* and *Despicable Me* are just four movies that are slightly more unconventional than the average animated film, containing messages of true value, like environmental protection, as well as pushing the bounds of hilarity with larger than life characters and story lines. "It's so fluffy!!!"

Interestingly, small, independent films are being viewed more than ever before. The availability of information through the internet has contributed to this immensely. One of my favourite ways to find movies I would like to rent or see in the theatre is by watching trailers on YouTube. Another great way to find movies is by searching for similar films based on theme, actor or style. *Clerkdogs.com* is a great site for this, where you can search for movies with commonalities to one another. The site even says whether its recommendations are darker, wittier, or more mainstream, and can match based on character depth, pace, mood and cinematography.

Movies such as *Black Swan* and *Barney's Version* are shown in major chain movie theatres across Canada now too. In part, this may be the result of famous actors and actresses taking pay cuts to star in lower budget films. Natalie Portman and George Clooney are a few in the movie business who have taken on these types of projects, starring in *Garden State* and *Burn after Reading*, respectively. Small movie theatres are ideal, whether you want to see foreign films or other unique movies that are rarely seen outside of film festivals. We are lucky enough to have the Princess Cinemas in Uptown Waterloo that offer a new spin on the classic movie-viewing experience.

Inversely, mainstream blockbusters are becoming more and more recognized by critics. Long ago, this was always the case, where studios like MGM dominated the box office but in the more recent past, blockbusters were tossed aside by critics as being mass produced money-making machines. Lately, this has changed and a balance exists between larger and smaller movie productions. This is due in part to the efforts made by productions such as the Academy Awards who are attempting to increase viewership to their programs. Having younger hosts, like James Franco and Anne Hathaway, have drawn larger crowds to their television sets in hopes of boosting the dwindling ratings of the past decade. The recognition of large scale action movies such as Avatar and Inception, in conjunction with the smaller, offbeat films, also entices a variety of people to tune in.

The question could be raised as to whether this is hindering or helping the movie industry. Is the further promotion of big budget movies holding back smaller movies made by newcomers to the film world? Is quantity being favoured over quality? Is money being valued over creativity? That could definitely be disputed. However, I feel that the continual growth of international film festivals, like those in Toronto and Cannes, is a sign not to worry. More and more people are watching all types of movies, regardless to their star power or genre.

On February 27th, the 83rd Academy Awards were held once again at the Kodak Theatre in Los Angeles. As I mentioned above, James Franco and Anne Hathaway hosted this year's Oscars. I was really hoping that they would do a spectacular job but I, like many others, was disappointed. There were many costume changes with lots of very big and expensive looking smiles, but I found it light on the actual joke content. Perhaps it was just nerves, but Franco appeared to be rather lost throughout the entire show. Hathaway, in an eager attempt to drag along her less conscious co-host, was overly bubbly, like a clown at a kid's birthday party. I found myself wishing that Billy Crystal would have just stayed on stage to host after he introduced a small Bob Hope vignette.

There are a few shining moments in the program. The attempt to reach out to the younger audiences lent itself nicely to an auto-tuned mash-up which made fun of the lack of musicals released in 2010. So instead, a mix of *Harry Potter, Twilight,* and *Toy Story* clips were compiled into a hilarious song, if you can call it that. It was also nice to see *Toy Story 3* win for Animated Feature Film and Best Song, by Randy Newman. Actually, his acceptance speech was my favourite of the night, poking fun at the music that begins during the speeches to coerce the winners to wrap it up.

Overall, it was a somewhat mundane show and I was disappointed by the lack of excitement. There was no distinct 'winner' of the show, with *The Fighter, Inception* and *The Social Network* all performing respectably. *The King's Speech* received the top honour with Best Picture. Predictably, Natalie Portman and Colin Firth won for best acting, both giving very sweet, heartfelt acceptance speeches. Personally, I would have loved to have seen the Coen brothers win in the Best Director category for *True Grit*, an amazing dark humour spin to an old western. Although *True Grit* did not win in any category, this movie was one of my favourite Oscar hopefuls, having been nominated for ten awards.

I really hope that some of this rambling has been interesting. I know not everyone enjoys watching awards shows or even watching movies necessarily, but for me it is one of the best ways to escape for two hours or so. If you have any good movie suggestions, be sure to let me know!

Apology and Retraction:

In the last issue of *The Iron Warrior,* released on February 16th, 2011, a misquote was printed in the prof*Quotes* section of the newspaper. *The Iron Warrior* would like to formally apologize to Professor Vale for this misquote and retracts the quote in its entirety. Any offensive tone that this quote may have had was completely unintentional.

Issue #5 Deadline: Thursday, March 17 at 6:00pm for publication on Wednesday, March 23, 2011.

Send your submissions to iwarrior@engmail.uwaterloo.ca

THE IRON WARRIOR

The Newspaper of the University of Waterloo Engineering Society

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

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

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

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UW's New Face?

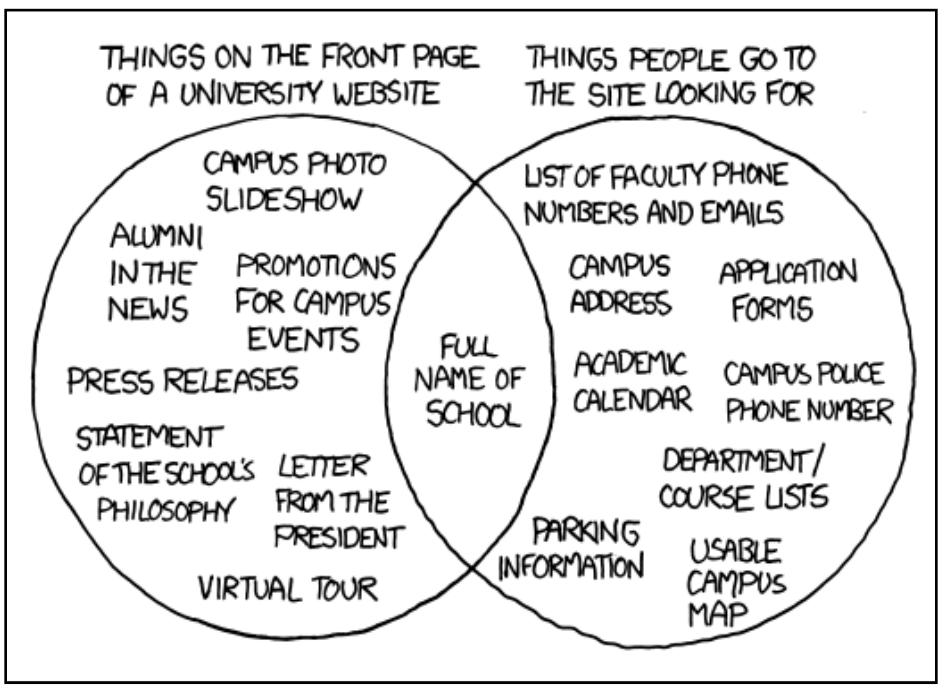
WEBSITE from Page 1

layout has taken inspiration from clean, modernistic themes, and uses the straight lines and solid colours described by the school's aesthetics guidelines.

Feedback has ranged from glowing praise to virulent disapproval, with many criticisms referencing the main page's striking similarity to MIT's web portal. Some have merely objected to the page's layout, stating that the darkness of the theme and the main content's anchor to the left is unattractive. New criticisms about the overall brand have also come to light. The main web-page currently includes an amateur photograph taken by Jana Kriz, and encourages students to submit their own photos and perspectives on the school. It's supposed to be a step towards a more interactive experience; they want students to contribute to UW's identity in the hopes that they will be more inclined to claim it as their own. Ironically, many students have begun to state that this identity, in light of the new website, does not represent them or their perspectives; it seems to them as if the University of Waterloo has shed its skin as a more comprehensive institution in favour of a colder, more technical one.

The positive reactions to the layout have been nearly equal in number, however, with focus on the clean new menus and eclectic look. Many are relieved that the school has finally opted for a makeover, stating that that the old design lacked character and made the university seem uninspired.

Whether or not the new aesthetic is seen favourably, the one thing that can be agreed upon is that the university's proclivity for presenting unfinished ideas is not optimal. The new layout is still highly buggy and in great need of tweaking- aside from the fact that it is the only page on the site that has actually changed (with the exception of page headers, that is). While it is understandable that UW designers would want to test the waters, an institution's website is essentially its face to the world; it provides everyone who visits with a first impression, and first impressions are the hardest to shake. A completed redesign would have given everyone- students, faculty, and outsiders alike- an even better idea of UW's vision for itself in the world. Instead, the decision was made to display a work in progress, and the result was nitpicking and an unnecessary focus on things that won't really matter in the end.



Courtesy of XKCD

FIRST Robotics

ROBOT from Page 1

11:59PM the robot was sealed in a bag until March 24th. In the meantime, our team will continue to tinker with ideas and small improvements that could be added on the day of the competition.

For more information on FIRST Robotics Competition visit their website at http://www.firstroboticscanada.org

For information about team "Dave" 3683, visit *http://www.TeamDave.ca*.

Philip Wang

Students assemble their robots in the E5 Student Design Centre.

Sexism at UW

CRIME from Page 1

students do not feel safe on campus and are looking to the administration and campus police to address these issues. The current climate of fear on campus caused both the Women's Centre and GLOW to close their doors last week due to safety concerns. Volunteers at both centres are still very active, however, and urge those in need to make contact via email for assistance or guidance. They feel it is important for the student body to know that volunteers are still available even when the centre is closed.

Ashling Ligate, representative from the Sexual Assault Support Centre of Waterloo Region, recommends that students who have been angered by this incident deal with these emotions by becoming involved with the centre as a volunteer by visiting www.sascwr.org. The centre offers support to victims of sexual and domestic violence, as well as running educational activities and the annual Take Back the Night march. The organization Male Allies Against Sexual Violence, which is associated with the Sexual Assault Support Centre, also offers volunteer opportunities.

As of Wednesday morning, another picture depicting Marie Curie and a man with an insert of an exploding atomic bomb and the slogan "This is Eve leading Adam to the forbidden apple of our age. Can you now see how women leading men is a patently bad idea? Without sexism we will lose the entire planet!" was sent to the facebook accounts of many people on the University of Waterloo network. Police Services has been informed, and the investigation is ongoing.

Letter to the Editor

Re: Waterloo Works

To the Editor,

At times like this, I am disappointed and angry at my decision to come to the University of Waterloo. Our school claims to be "risk-taking", "innovative" and "collaborative". Our school was founded on co-op and co-op continues to be a cornerstone of our school's value proposition. The cancellation of Waterloo Works is a clear message that certain members of the administration of this university care little for the opinions and needs of its students, external employers and even employees.

Jobmine is broken. In addition to general frustration for students resulting from formatting, usability, bugs and file types detracting from our ability to dedicate our time to academics, the system is equally unusable for employers, who frequently rely on overburdening CECS staff to post their jobs. Though less noticeable, Jobmine's inability to collate and export data severely hampers the ability of CECS to improve their service to students and employers.

The official cancellation reasons are concerns about scalability, usability and sustainability. These are all legitimate concerns. I've had the opportunity to discuss Waterloo Works with the lead architect, Ken McKay and learn about the system. While there have been concerns about usability, I have seen the system and can attest that it is far more usable than Jobmine, and more importantly, is designed in such a way that improvements can continue to be made. Unlike the decision to cancel, there was intense consultation with employers, students and CECS in designing and improving the user experience of the system.

The scalability argument is even more ludicrous as it has been painfully obvious for years that Jobmine is not scalable to our current size. Furthermore, the inability to correct bugs and deficiencies in Jobmine indicate that Waterloo Works could be no worse. While Waterloo Works of course has bugs, it has been designed with modularity to allow fixing of sub-components without drastically impacting the overall system and has made drastic improvements over the past 8 months, with a fierce emphasis on incorporating student and employer feedback.

This decision was clearly made without advanced thought or consultation with key players. This apparently irreversible decision was announced to those of us on the co-op education council with no warning on February 22nd and the university at large on February 25th. An update sent from Dianne Bader (Director of CECS operations) on February 7 outlined the very real challenges facing Waterloo Works, and more importantly, how they would be addressed, which was apparently ignored by the decision-makers. Peggy Jarvie, executive director of CECS, was not informed until the 22nd and was not a part of the decision to cancel.

The excuse as to why it was cancelled so hastily, with little warning and in the middle of term, is that it was done to protect architecture students. This argument is ludicrous as architecture and CECS must scramble to accommodate the sudden change and architecture students are much better off under Waterloo Works. Notably, the portfolio which they had previously been able to upload to Waterloo Works is now lost.

This decision was made by Bruce Mitchell, Associate Provost Academic Affairs (*mitchell@uwaterloo.ca*), Geoff McBoyle, Associate Vice-Provost Academic (*gmcboyle@uwaterloo.ca*) and Alan George, Associate Provost of IST (*alan.george@uwaterloo.ca*). When asked to indicate who else had been involved with the decision or what specific groups had expressed concern, the question has been repeatedly avoided. It is clear that the needs of employers, students and CECS staff were not considered in this decision. Similar evasion was used when asked what alternatives were considered and if the problems facing Waterloo Works had been compared to those of Jobmine.

The $2.7 million invested in this project is a shame, but more important is that students will continue to suffer the vagaries of Jobmine with no clear replacement or improvements planned. This move shows a fundamental lack of recognition of the importance of co-op to Waterloo students and employers, and is especially irresponsible given the lack of a plan for moving forward and lack of consultation with key stakeholders. I have verified that my frustration is shared by many at the university and students are not alone in their anger. As my voice, like those of the faculties, CECS and other student representatives were not listened to, or even asked for, I hope it finds sympathetic ears here.

Sincerely,

Alexander Hogeveen Rutter

Vandalism on Campus Hurts Engineering Reputation

ADRIANA CAMERON
3T MECHANICAL

From mid February until recently, there have been a series of acts of vandalism on campus, by a person or a group of people, which appear to be misguided attempts at expressing pride in engineering.

Just prior the start of reading week, students discovered that the sign outside the Modern Languages Theatre for the Arts had been spray painted over in black spray paint, with the word "ENGINEERS".

On the same day, it was discovered that Porcellino, the boar made of bronze located outside the entrance of the Modern Languages Building, was spray painted white with black stripes, almost to resemble a zebra. Similar vandalism has also graced the purple statue outside of CPH. This is not the first time that Porcellino has been subject to abuse; over the years it has been painted and kidnapped several times. Porcellino is more than just a bronze casting; it is also the mascot of the Faculty of Arts. Porcellino is prominent in Arts Orientation Week, and is also beloved by many students who rub the nose of the boar for good luck before exams.

More recently, vandalism was also discovered in the Math and Computer Building. The words "MATH SUCKS, ENG Rules" were scrawled across the window in a door.

Over the past few years, there have been many pranks or, more accurately, acts of vandalism carried out to express pride in engineering. However, there is a difference between putting a purple car around a tree by the BMH Green and spray painting Porcellino, the beloved arts mascot. The car around the BMH Green reflects engineering spirit in a light hearted way, which does not put anyone down. On the other hand, spray painting Porcellino and spray-painting the words "ENGINEERS" on the modern languages sign is simply disrespectful and a waste of resources.

These recent acts of vandalism reflect poorly on the individuals who performed them as well as engineering students in general. So to the person or people responsible – please stop, your actions are just plain disrespectful. And to everyone on campus from engineering students, Engineering loves you.

Kristen Leal
Vandalism on door into Physics building.

We Day Inspires Waterloo Region

JACOB TERRY
1B NANOTECHNOLOGY

Many of you may be unsure about what We Day is, but there is a good chance you've heard about it before or have even supported its cause. Over 590,000 Canadians have liked Facebook's We Day page on Facebook, where Facebook promises to donate a dollar for every person who likes the page, aiming for one million likes totally in $1 million.

We Day is a Free the Children event created to inspire young people to make a positive change in the world. Every year, more than 50,000 students attend the inspirational concerts held in Toronto, Montreal and Vancouver, and this year marks the first time that the event has been held in Waterloo Region. This event, held February 17 by Free the Children, had 6,000 kids from 250 schools cheering, screaming and dancing in support of freedom and social change at the Kitchener Memorial Auditorium Complex.

Free the Children was founded in 1995 by Craig Kielburger at age 12 when reading about Iqbal Masih, a 12-year-old factory worker from India who got murdered for speaking out against child labour. Craig founded the organization soon after with his classmates and brother Marc with the mentality that "every single child deserves to hold a pencil in a school instead of a tool in a factory." 15 years on, 650 schools provide education to over 55 000 children. Infrastructure projects have helped over 1 million people obtain clean water, health care and sanitation. Free the Children avoids being labelled as a charity because it aims to provide long-term solutions instead of short-term funding. They accomplish this through their Adopt-a-Village program, where they work with villages to build solutions to significant infrastructure problems.

We Day Waterloo was headlined by many influential speakers, from Al Gore to Reverend Jesse Jackson. Africa's first elected female president, Ellen Johnson Sirleaf of Liberia, was one of the most anticipated speakers but was unable to attend due to political events in West Africa. A more unique speaker at the event was Michel Chikwanie, a former child soldier from the Democratic Republic of Congo forced to kill his best friend. After five years in service, he ran from the jungle and became a student at the University of Toronto. The Minister of Education and a member of the National Assembly of First Nations emphasized Aboriginal education and improvements that could be made in that field in addition to African education.

Research in Motion (RIM) was the major sponsor for the Waterloo event, but funding the event wasn't the end of RIM's philanthropy efforts. "RIM sponsored 50 kids to go to Kenya and India [this summer]," said their chief operating officer Don Morrison. 175 employees from the company volunteered at the event, and while RIM declined to announce the company's spending towards Free the Children, their staff commitment demonstrates strong dedication to their charitable endeavours.

A common theme among speakers was that youth can make a difference no matter how young they may be. They strongly believe young people are not just going to be the leaders of tomorrow, but that they can be the leaders of today. They also destroy the myth that money is the only way to change the world. By bringing children to the regions in need, young people can be primary sources of assistance by directly helping build schools and seeing the situations first-hand. Free the Children and We Day enables them to help others at an early age and make a difference in society. Mike Clemons of the CFL perhaps summarized this sentiment best: "The opportunity of life is to dream. The spice of life is to dare... But the true beauty of life is to give."

Krishna Iyer
Al Gore addresses the cheering crowd at We Day.

Developers, Developers, Developers!

JAMIE MURAI
GUEST REPORTER

This famous line was issued by Steve Ballmer, CEO of Microsoft, at a developers conference where he ran around the stage screaming "developers!" like a big sweaty gorilla. He had a point though: The success or failure of a software platform often depends on the quantity and quality of the third-party developers it can attract. I made a big splash last week after posting a rant about the process of developing an app for RIM's upcoming Playbook tablet. So far, I've received just over 80,000 unique hits on my blog, and have been linked to by Daring Fireball, Slashdot, Business Insider, and countless others. Based on the comments and emails I've received, I'm not the only who has had problems with RIM's developer tools.

If you want to read more about my experience, just Google for "You win, RIM". This article is about how RIM can improve their positioning in this new market for mobile app developers. I think we can all agree that the iPhone changed the game when it came to developing application for mobile devices. Previously, mobile development was the realm of in-house developers at banks and government. It was a day job. Post-iPhone, it is now the realm of the latte-drinking hipster you see permanently parked on a table at your local Starbucks. These independent developers are now in the driver's seat and if you want them to add value to your platform, you're going to need to provide them with a similarly seamless experience that they're used to getting from your competitors.

So what does this mean for RIM? Well, RIM can no longer depend on corporate lock-in to provide them with a large pool of third-party developers who will play a critical role in attracting new customers to their platform. RIM must now compete against the likes of Apple, who have a long history of attracting talented developers. RIM is, by and large, the underdog in the market for mobile app developers and when you're the underdog, you must try 10 times as hard, not 1/4 as hard. There are three things that RIM needs to do to get more traction.

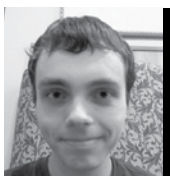
First, they need to make the registration process simple. Apple requires you to enter your personal information once and a credit card number. For RIM, anything more complicated than this is too complicated.

Second, they need to make their tools simpler and more integrated. I'm sure that as Waterloo engineers you're all accustomed to using complicated command line tools, but the hipster at Starbucks isn't, doesn't want to be, and shouldn't have to be.

Third, their documentation needs to be checked and rechecked. Erroneous and incomplete documentation is one of the most frustrating things a developer can experience, especially when it comes from the company itself.

Obviously, there are many other factors that come into play when a developer is choosing a platform to work with, and I can't tell RIM how to fix their developer program in 500 words, but executing on those three things would go a long way to showing the developer community that RIM cares about making their development process both smooth and, more importantly, competitive.

Microsoft and Nokia Announce Mobile Agreement



JACOB TERRY
1B NANOTECHNOLOGY

With Symbian still the largest mobile operating system in the world (as Nokia's preferred Operating System), it came as a surprise to many that Microsoft and Nokia announced a shared mobile future agreement on February 11, which will see Symbian reduced to a sliver of the market share it currently holds.

Nokia has agreed to have Microsoft's Windows Phone as its primary mobile operating system, with the ability to modify on top of the platform in the fields they perform well in such as imaging. Nokia will be a primary hardware manufacturer for Windows Phones, helping the two companies tackle Apple, Google and RIM for smartphone dominance. Microsoft's Bing search service will power Nokia devices in exchange for Nokia Maps to power Microsoft's mapping service, and Nokia's content store will be integrated with the Microsoft Marketplace to further converge the two companies' product and service lines.

The deal has many Symbian users threatening to boycott future Nokia phones, frustrated because of how easily Nokia appears ready to abandon Symbian. In particular, they point to a slide Nokia CEO Stephen Elop presented at its Capital Markets Day which shows Symbian slowly losing market share and Windows Phone taking what it once had. While low-end phones in developing markets and feature phones (the kinds of phones most of us have or used to have before smartphones) will have Symbian on them for the foreseeable future, Nokia smartphones will almost assuredly have only Windows Phone on them and it's only a matter of time before Windows Phone is compact enough to be pushed down to the lower ends of the market, or feature phones lose popularity. Nokia is said to be hoping to move the 200 million Symbian users to Windows Phone by the end of the transition.

Symbian fans with good foresight should have prepared for this for months now, as this is just another step towards the end for Symbian as Motorola, Samsung, LG and Sony Ericsson have either shifted to development for Android or simply stated they are no longer using Symbian. Symbian has had trouble keeping its market dominance for a while, dropping their market share dramatically from 2006. Nokia stopped development of Symbian^4 in October, pushing all updates to its current Symbian^3 system, already raising eyebrows then about its commitment to the platform.

The agreement raises questions not only about Symbian but Nokia's other mobile operating system, MeeGo, which it was developing with Intel. While Nokia hasn't pulled out of the MeeGo project, their MeeGo team manager left and their close relationship with Microsoft puts their commitment to MeeGo in question. The future of their MeeGo support seems stronger than its support for Symbian, since Nokia has given developers and engineers on their first MeeGo handset, the N950, bonuses and raises to keep the project going, which is likely to be the MeeGo product Nokia is committed to releasing this year in their press release for the agreement. Nokia could also be holding onto MeeGo support in case it decides to build a tablet or netbook, as MeeGo is designed for all sub-laptop devices, and Windows Phone 7 doesn't support those and doesn't seem to be on Microsoft's radar for tablets in the near future.

> ***"Nokia is said to be hoping to move the 200 million Symbian users to Windows Phone by the end of the transition."***

Nokia's support for Windows Phone may seem misguided, as Microsoft has been having trouble getting the operating system to stabilize. In a recent update at the end of February, 10% of Windows Phone 7 users were unable to update their phone correctly, leaving the phones from moderately faulty to completely unusable. Not only was this update damaging to many phones, it was also Microsoft's first update for the system that came out last November; around four months before. If Nokia wants to depend on Windows Phone to such a high degree, Microsoft had best provide more frequent and stable updates to mature the system so it is comparable in stability and features to its main competitors.

The focus on Windows Phone may be a good move for Nokia in the end, but in Finland it's hitting hard as nearly 1500 employees who had previously worked on Symbian walked out when hearing about the deal, realizing they'd be losing their jobs soon as Nokia has been shutting off support for various foundations and organizations for Symbian over the last year. If Nokia benefits from this deal it could end up hiring more people specifically in hardware or apps, so it remains to be seen how well this turns out for Finland. As for us in North America, if all goes well for Nokia and Microsoft, you may be seeing more Nokia phones on the street than you do now, joining those iPhones, Androids, and BlackBerries that dominate the mobile ecosystem here today.

Thinking Outside The Box:

A Cradle To Cradle Approach

NILAY MEHTA
EWB CORRESPONDENT

We've all at some point of our life been a target of the popular and accessible mantra of "reduce, reuse and recycle". For many of us, this is how the concepts of environmental awareness and sustainability were incepted into our minds. These slogans are continuing to promote the importance of environmental responsibility but unfortunately consumers do not form the bulk of the problem. When one considers the entire life cycle of a product that is deemed "recyclable", the consumers only represent the intermediate section. The post-consumption process is almost completely out of sight to the average individual. For example, the 20% of water bottles that actually get put in the Blue Box are often shipped overseas to be recycled in countries like India and China. Moreover, at our current state, the water bottle actually gets "downcycled" i.e. the recycled product is not the same as the original (closed loop) but rather is made into products that can't be recycled. In an evolved form of our world, perhaps in the near future, sub-optimal products should actually be upcycled to increase the purity of a commodity, decrease toxicity etc. Imagine a process that extracts antimony from a plastic bottle and puts a much safer and less toxic product back into the hands of the consumer.

When William McDonough and Michael Braungart, authors of Cradle to Cradle: Remaking the Way We Make Things, presented their goal: "create a diverse, safe and healthy world, economically, equitably, ecologically and elegantly enjoyed." to the White House, most officials expressed incredulity since it seemed too good to be true and more make-belief than pragmatic. Unfortunately, we have grown accustomed to limitations and restrictions in terms of the resources that are available to us and are foreign to the idea of abundance (abundance in the form of innovation or even abundance in the form of energy that can be derived from the sun). Even as engineers, we almost always envision ourselves in this finite box that has infinite limitations and that it would be our responsibility to magically solve this highly non-linear system. I'm definitely not implying in any way that we are short of problems, but that innovative solutions do exist. For example, the problem of waste is not its sheer quantity but the fact that it's non-biodegradable or non-compostable. If everything went back to the biosphere, then waste would not be the menacing heap it continues to remain. Waste could be for once embraced and littering would not be discouraged.

Nature itself can be a significant source of design inspiration, and it doesn't issue patents (although admittedly that doesn't stop companies from issuing them). When Ford's Detroit site, with an 80 year history of car manufacturing, was faced with the ultimatum to revitalise the plant or abandon it, the company's CEO turned to William McDonough. The site was transformed into an industrial park with an abundant plant life where wastewater was purified by the sun's natural energy. More windows were installed to allow the entry of natural daylight and a stronger emphasis was placed on waste flow. Although the capital costs were relatively high, it paid off in the long run as the company saved approximately $45 million due to the establishment of a much more efficient local ecosystem. This cradle to cradle approach of extending the life cycle of a product beyond its consumption all the way to its disposal has garnered tremendous attention primarily because it is successful on a business scale, proving to be a valuable long term investment. There are a lot of people with ideas out there but very few who can actually factor in some business sense into their models.

We live in a capitalist society and one of the ways of enacting positive environmental change is by making those changes economically appealing. To a person interested in making a profit, the very idea of a building that produces more energy than it requires and purifies its own water would only be amazing if it yields a high return on investment. This calls for engineers with a strong business sense who can market such ideas, prove economic viability and ultimately deliver results. As our culture continues to torture itself, it is evident that we should question our intentions during the design stage and consider going back to the primordial conditions in order to imbue our designs with inherent intelligence.

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IBM's Watson Dominates in Jeopardy Showdown

ADRIANA CAMERON
3T MECHANICAL

Who would you put your money on winning a game of Jeopardy – longest winning-streak record holder Ken Jennings, biggest all-time money winner Brad Rutter or, an artificial intelligence computer system named Watson? Well, you might be surprised to learn that the computer won.

Watson is named after IBM's first president Thomas J. Watson, which is appropriate as Watson was built by IBM. According to IBM's website, "Watson is an application of advanced Natural Language Processing, Information Retrieval, Knowledge Representation and Reasoning, and Machine Learning technologies to the field of open-domain question answering. At its core, Watson is built on IBM's DeepQA technology for hypothesis generation, massive evidence gathering, analysis, and scoring". Unlike supercomputers that can simply store a wealth of knowledge, Watson can operate on human terms, instead of just computer terms.

Watson does not pull information from the internet, as all of the information is self-contained. Watson has a 4 terabytes, or over 200 million pages of content including encyclopaedias, dictionaries, thesauri, literary works, other reference materials and the entire text of Wikipedia.

It is estimated that Watson contains over $3 million in hardware including ninety IBM Power 750 servers, POWER7 processor cores, and 16 terabytes of RAM.

During the Jeopardy game, Watson was given clues electronically in the form of text. Watson would then parse the text into keywords and sentence fragments used to find statistically related phrases. It rapidly and simultaneously executed thousands of proven language analysis algorithms to find potential answers, then selected probable answers based on the number of algorithms that independently found the same answer. A few of the most probable answers were then checked against reference material in order to figure out which answer made the most sense, and if the likelihood of the answer being correct was high enough to answer the question. During the Jeopardy game, Watson typically responded faster than the humans.

On Watson's first match, which was broadcast on February 14th, the game initially seemed to be close, with Watson, Brad Rutter and Ken Jennings having $5000, $5000 and $2000 respectively after the first round. However, during the Double Jeopardy round, Watson developed a large lead.

In the final Jeopardy round, Watson was the only contestant to answer the question incorrectly. The category for final Jeopardy was "U.S. Cities" and the clue was "Its largest airport was named for a World War II hero; its second largest, for a World War II battle", to which Watson responded "What is Toronto?". The word "U.S." did not appear in the clue, and the incorrect response "Toronto" came from there being cities in the U.S. named Toronto and Toronto having a baseball team in the American league. Despite this mistake, Watson won with a total of $35 734 compared to Jennings and Rutter with totals of $4800 and $10,400 respectively.

A second match was played which brought the scores to $77 147 for Watson, $24 000 for Jennings and $21 600 for Rutter. Watson ended up winning $1 million, and IBM decided to donate 100% of the winnings to charity. In the future, IBM hopes to implement similar question answering technology for applications in medical diagnosis, business analytics, and tech support.

From Disaster and To Deliverance

The Chilean Mine Rescue

JON MARTIN
3A CIVIL

The incredible story of 33 miners trapped in a copper mine for a record 69 days captivated people around the world in late summer 2010. The rescue attempts that ensued made use of cutting edge technology, as well as sound engineering judgement. The Faculty of Science hosted a talk about the mine on Tuesday, February 15, titled Disaster and Deliverance, with Maurice Dusseault and Steve Evans present to discuss the mine collapse as well as the techniques used to rescue all 33 miners successfully. Both Maurice Dusseault, P.Eng, and Steve Evans are professors in the Department of Earth and Environmental Sciences, and are experienced in the field of geological engineering.

The mine collapse occurred at the San Jose copper-gold mine in the Atacama Desert, located near Copiapo, Chile. The collapse itself occurred on August 5, 2010, though the safety concerns that led up to the accident started before that. The country of Chile produces approximately one third of the world's copper, and also contains about one third of the remaining stores of copper left to be extracted. As a result, mining is one of the largest industries in the country, with some mines run to very high standards and others to much lower. The San Jose mine fell into the second category, having been shut down in 2007 due to safety concerns and litigations, but was reopened in 2008 despite failing many safety regulations.

The initial collapse destroyed part of the spiral shaft leading down into the mine, preventing the escape of the miners. Subsequent movements during rescue attempts caused further collapses in the main access route. The miners found refuge in a secure room, organizing their food for long term survival. On the surface, numerous boreholes were drilled in record time. Modern technology allowed for precise aiming of the boreholes; as a result, rescuers were able to drill holes to areas throughout the mine where the miners were likely to be. After reaching an air pocket, a bore was withdrawn with a note from the miners attached telling rescuers that all 33 were still alive. While this initial bore hole, only about 16 centimeters in diameter, was used to provide food and entertainment for the miners, three new holes were bored to implement three concurrent rescue attempts.

Plan A utilized a raise borer type rig, which is normally used to drill upwards from one mine shaft to another. The drill was modified to be anchored to the ground to allow for downward drilling. Plan B utilized a percussion hammer drill, with a brand new configuration that allowed for much faster drilling through the process of crushing the rock through impact rather than trying to gouge away like a regular drill bit. Plan C utilized a Canadian built oil drilling rig, using a liquid slurry to collect cuttings.

Rescue efforts in progress to save 33 trapped miners.

Plan C was the one that eventually reached the miners first on October 9, requiring some help from the miners themselves. The drill used a number of stages to gradually widen the hole. During this process, all the cuttings fell down the hole and were removed by the trapped miners using equipment left in the mine with them. Some believe that this continual work helped keep the miners motivated, rather than just sitting and waiting for the whole time.

During the drilling process the rescue capsule, known as Phoenix, was being designed and constructed by the Chilean Navy and NASA. The capsule had to fit within the 66 centimeter (26in) diameter hole, while protecting each miner as they were carried up through the rough hole. On board oxygen, communication systems, as well as guiding wheels allowed the miners to ride up the shaft equipped for emergencies, and hopefully preventing impacts against the shaft walls. The rescue operation started on October 12, with several rescuers descending into the refuge area to assist the miners escape. Over a period of almost 24 hours all 33 miners were brought to the surface, to be greeted by their families. Some were immediately treated for medical conditions as well as dental infections.

One point that was stressed by Professor Dusseault was the honor present in the mining industry, and the call to help whenever an accident occurs. Many people believe that the miners were able to survive for as long as they did because they firmly believed that they would be rescued. They knew that their fellow miners would be searching for them and would do everything possible to help them. Much of the equipment used in the rescue was offered freely – if you expect others to come to your rescue then you better be ready to offer your help to rescue them.

The Chilean mining accident had the capacity to become a national disaster, but it was instead turned into a successful rescue operation. All 33 miners were safely brought to the surface, through human perseverance and technological innovation.

Discovery Makes Its Final Flight

Two More for the Space Shuttle

JACOB TERRY
1B NANOTECHNOLOGY

Some people might not be aware, but NASA's Space Shuttle program is coming to a close in the near future, to be replaced with a new program in the next decade. Space Shuttle Discovery, the oldest orbiter still in service, went up for it's final mission February 24, on a mission to transport modules to the International Space Station. This is the third-last mission for the Space Shuttle program, and not many chances are left to see these fantastic spacecraft operate.

Discovery began construction in 1979, when construction was awarded to Rockwell International in Downey, California. In five years, it was completed and tested, sent into orbit for six days to launch the Leasat F2, a communications satellite. After the Challenger disaster, it was three years before it launched again, putting more satellites into orbit, including the Hubble Space Telescope. After 1998, missions were moved from launching satellites to servicing the International Space Station and transporting crew members. After the Columbia disaster, Discovery was held from missions for four years, before being sent on more servicing missions.

For its final mission last month, it carried four primary modules: Leonardo, ExPRESS Logistics Carrier 4 (ELC-4), the SpaceX DragonEye sensor and Robonaut2. Leonardo, a Multi-Purpose Logistics Module, was installed to the Space Station as a Permanent Multipurpose Module (multipurpose is spelled differently in the naming of their components). PMMs allow space for storage and Leonardo relieves the storage demand the ISS has been suffering from for a while.

ELC-4 carried a Heat Rejection System Radiator and ExPRESS Pallet Controller Avionics 4. The radiator is a spare for the one currently on the Space Station. ExPRESS Logistics Carriers are payload platforms that provide mounting surfaces and power for Space Station science experiments.

The SpaceX DragonEye sensor was sent up as a final test run before it will be launched on the SpaceX Dragon, the first spacecraft sent into orbit and recovered by a private company. This was the third time SpaceX used a NASA Space Shuttle for unit testing. The sensor provides 3D images based on the time of flight of a laser pulse. SpaceX is comparing the data the sensor collected to the Space Shuttle's Trajectory Control Sensor to measure the DragonEye's performance.

Space Shuttle launch signifies the nearing of the end for NASA.

Perhaps the coolest thing NASA sent was the Robonaut2, a robotic astronaut assistant designed to help astronauts conduct experiments about microgravity. The robot's primary job is to show how dexterous robots can perform tasks. Robonaut2 may be able to help astronauts do external work if it performs well in the Space Station. Robonaut2 is made out of nickel-plated carbon fibre and aluminum, weighing around 130 kilograms. It begins its mission in the Destiny module of the Space Station but could expand to other locations.

After Discovery's current missions ends, it will be offered to the Smithsonian Institution's National Air and Space Museum as a replacement for Enterprise, the first Space Shuttle, which currently resides at the Smithsonian's Steven F. Udvar-Hazy Center. The next Space Shuttle launch will be Endeavour's last flight, scheduled for April 19, which will deliver the Alpha Magnetic Spectrometer and an ExPRESS Logistics Carrier to the International Space Station. The final Space Shuttle launch will be Atlantis in June, but budget costs may delay or cancel this mission. Schedule them in your calendars and see if you can watch them live on TV or online or if you can, visit Cape Canaveral and see the launch for yourself. It's truly something unique that you won't be able to see for much longer.

Point Vs. Counterpoint

Governments should fund science and technology programs.

POINT

JON MARTIN
3A CIVIL

Whenever there is any kind of financial problem or people don't like where they see their tax dollars going, we get a question of funding. Which groups deserve funding, which do not? Which projects will benefit society and which will not? Which projects are doomed to failure and which will hit that necessary breakthrough tomorrow, as long as they still have that funding?

In all of these questions the problem comes down to the fact that we cannot predict the future. If we could predict that an invention was going to fail horribly and never become a commercial success then the money would never have been invested in the first place. On the flip side, there are many projects that could have had the potential to change the world, but were shut down prematurely. It is for this reason that funding research and innovation cannot be limited to projects with clearly defined objectives and benefits: investments must continue to go towards projects even if they have no direct benefit to society.

One of the most controversial issues is definitely military funding, which is a huge business in the United States especially. When the pursuit of peace seems to require having the biggest weapon, it is easy to understand why people are against putting so much government funding towards weapons and other military equipment. But what are the benefits? Obviously, GPS is a classic example: technology developed originally for military use then adapted for civilians. Some may argue that GPS technology could have been developed without the military, but I think it would have taken a lot longer and cost a huge amount more. Which idea is going to get the necessary funding – Hi, I want to launch a series of satellites into geosynchronous orbit so that I can get directions to the movie store instead of looking at the map in my glove box. Or - Hello, we need money to launch satellites into geosynchronous orbit in order to accurately track military vehicles and personnel while in a battlefield situation. I think it is obvious which one gets the money. Down the road we still get the annoying voice in the car telling us we missed the turn – but the company didn't go bankrupt launching the first satellite.

Many will argue that money would be better spent on medical research, focused on finding specific cures rather than counting on accidental discoveries. But those accidental discoveries are what created many of the medicines we count on so much, and without happenstance circumstances, or funding for unrelated projects, they would never have been discovered. Penicillin is a common example, as it was discovered by Sir Alexandre Fleming, who was testing bacteria on petri dishes. Leaving without cleaning off the trays, Fleming returned to find that a mold had grown on some of the dishes so he threw them out. Upon closer inspection Fleming noticed that the mold had killed the bacteria he was studying – voila, the discovery of one of the most important medicinal products in history.

NASA is famous for the technological advancements that they have developed for space exploration, but they have also teamed up with private companies to adapt technology for civilian use. When astronauts needed to collect rock and soil samples from the moon, using an extension cord from the space station wasn't exactly a viable option. NASA worked with Black & Decker, which had recently developed preliminary battery operated drills, to optimize the technology for use in the space program, and we have obviously benefitted from that crossing of federal programs with private corporations.

It is very difficult to sit down and decide you are going to solve the meaning of life – 42 – or something more simple like world hunger. So it is crazy to propose limiting funding to projects with direct benefits to society-what is a direct benefit and what will eventually be recognized as a mistake? Pesticides are a great example of products that had great benefits for civilian use, especially in agriculture. Then people realized the contaminating nature of these products and the accumulating effects throughout the environment.

Innovation is a process of trial and error, success and defeat, which may ultimately lead to a great discovery that will change the course of humanity forever, or it could be something that gets swept under the carpet. Either way, it is impossible to categorize any project when it is proposed and people are seeking financial aid, when it is in the middle of development, or when it has been finished and is in use for its 'designated' purpose. Everything is in a state of flux, constantly being replaced or recombined with other ideas for create the next big invention. To stifle that process by limiting funding can only damage society in the long run – funding should be invested where a project merits it, not for its intended purpose alone.

COUNTERPOINT

ALEX HOGEVEEN RUTTER
3B ELECTRICAL

Western democracies have reached a critical impasse financially, with debt levels at their highest since World War II. At a time when countries are spending 6-12% of their budget just to pay interest on existing debt, it is incumbent to determine whether every dollar is being put to its best possible use.

We'd like to think our money is well-spent, but what about the money going to special-interest scientific-industrial causes, rather than for the good of the country's citizens? A prime example is NASA, with its gargantuan $18 billion budget. The Canadian Space Agency (CSA) has a relatively paltry but still significant $300 million. What do we have to show for this money? Our country's name on a hulk of metal up in space-far remote from the issues facing our world. That same money could have funded the entire education of 7000 engineers-greater than all the undergrads currently at Waterloo. Rather than being concentrated in satisfying the intellectual curiosity of a few of the scientific elite, the benefits could have gone to thousands of aspiring young professionals, each eager to make their mark on this world.

You could make the argument that this investment is still going to developing professionals, just at a different part of their careers. However, it is not clear that this investment would not happen without the government. A good example of this is Elon Musk's (founder of PayPal) company SpaceX which has successfully launched commercial shuttles and satellites, proving conclusively that private investment is capable of providing even the most substantial of scientific undertakings. In a phenomenon known as 'crowding out', government investments can actually prevent innovation and the development of the best technologies. Rather than allowing the citizens and corporations of a country to decide how best to accomplish a given objective (such as putting satellites into space), the government picks winners, often choosing less efficient technologies and stifling innovation.

A good example of the government picking winners is investment in biofuels, specifically corn-based ethanol. In the interest of investing in future technologies, the American government has subsidised corn ethanol, which has inhibited the development of alternatives and encouraged farmers to convert foods crops en masse. These actions have spread havoc on food supplies nationally and abroad. The law of unintended consequences has resulted in government research funding actually detracting from the quality of life worldwide, inducing food shortages and raising food prices, which consequently reduce disposable incomes, especially among the poorest families across the globe.

So where should our tax dollars be spent? The perennial needs of education and healthcare are obvious choices, as are transportation infrastructure, poverty alleviation and investments in rehabilitation for criminals and at-risk youth. All have direct benefits to a great number of people who often have significant needs. Caring for the sick, uneducated and those in need are very natural roles for government. Essential services like roads and public transportation are of great benefit to all citizens and difficult for private industry to replace.

It is tempting to extol the "spin-off benefits" of investments in science and technology. People may point to technologies like ballpoint pens, parachutes or scratch-resistant lenses as inventions that came as indirect effects of space research. I'm not going to rebut every single invention as trivial because many are certainly useful and valuable. The point is that there is no reason, if sufficient demand exists, that the same inventions could not have come about through private industry at a lower cost and with greater competition-driven innovation. The argument that investing money without direct benefits creates serendipitous discoveries is fallacious: there is no reason to believe that research that is of direct benefit to society is any less likely to go wrong and make accidental discoveries than research that does not.

So where are the real spin-off benefits? Investment in roads and public transportation allow people to get to work and elsewhere quicker, making their day more efficient, adding to their net accomplishments and giving them more time to spend with their families, qualitatively enhancing their quality of life. Investment in healthcare means our citizens can live healthier and more productive lives: spending less time in hospitals and more time both enjoying their lives and contributing to our world. Investment in at-risk youth or adult criminals not only gives them new opportunities, but helps protect society from harmful activities they may otherwise partake in. Helping the poor can help them break cycles of poverty and contribute meaningfully to society.

Most importantly, investing in individuals' education not only improves their lives, but raises the standard of living for all of us, as educated individuals can subsequently apply their knowledge for the betterment of others. These individuals can be employed by private industry satisfying the needs, wants and intellectual pursuits of consumers, or government investments in public goods such as health care, poverty alleviation and infrastructure. Rather than trying to guess where people can best serve society, government can ensure we have the best, most capable people, and allow them to serve society in the way public and private partners can best use their newfound skills.

Ultimately, what is the end goal of government programs and scientific progress in general? It should be the betterment of people's lives, at home and abroad. Clearly investing in science and technology programs without thought to the societal implications is irresponsible at best and damaging at worst. Not only are the benefits unclear or negligible, but this profligacy robs our future from the investments we need today.

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

Feminism at the University of Waterloo

BEN SELBY
2T SYSTEMS DESIGN

There can be little debate about it: the sexist posters and emails that have been flying around campus are repulsive, ignorant, and even a little frightening. Whether they are the work of a truly misguided person (or group) or a troll grasping for attention, these acts have exposed some of the flaws in our community here at UW. While some might say "this was just one guy" or "only a small minority feels this way", the fact that anyone, an individual or group, can act so callously that they leave their peers in fear diminishes our quality of student life. This is a university; a place where some of the smartest people in the world gather to learn and grow unhindered. I don't think I'm alone in thinking that such a place is worth preserving.

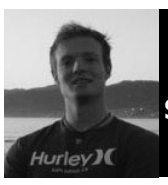
Here in the Faculty of Engineering at UW, I have met some of the most intelligent people in my life and have had the most engaging discussions, but there are some topics that seems left off the table. It is time we open a dialogue on gender issues because as we've seen, there is still dissonance in the public mind on such issues. We are left with a lot of tough questions such as why are there so few women in engineering? Why would a male-dominated field be problematic? What makes anyone put up flagrantly sexist posters all over our campus?

The purpose of this column is to start this dialogue, to challenge people's perceptions of gender issues (or the perceived lack thereof). This starts with what is sometimes referred to as the "F-word" – feminism. If you ask most people (and something tells me UW engineers in particular) what they think of feminism, you're likely to get one of the following responses: "feminism is dead because women have equal rights now", "feminism is about hating men and female superiority", or "it's just a bunch of bitchy lesbians". Well, you know what I'm going to say. If we consult Merriam-Webster, the definition of feminism is "the theory of the political, economic, and social equality of the sexes". That's it. Equality is a beautiful thing, but it is very elusive. It is easy to say that women nowadays find themselves equal to men and to a large extent it's true – the issues today are hardly the issues of 30, 50, or 100 years ago. That said, imagine a situation where men's campaign posters were attacked instead. It just wouldn't happen.

Because of these preconceptions, most people probably don't identify with the term "feminist". So many times though I hear the phrase "I'm not a feminist, but I think that joke was really offensive" or "I'm not a feminist, but I think there should be more women in engineering". Well I hate to break it to you, but those are pretty feminist ideas. Feminism is about improving life for everybody, men and women. It's about standing up when you hear those jokes, when you see imbalance and unfairness, and when you see posters marginalizing women. Gender issues may not be as severe or as visible here as they once were, but they exist and they still matter. It has been stated that the solution to worldwide poverty lies in the empowerment of women in the workforce. This is the power of equal rights, but it can never happen if we don't continue to think critically about our culture, our perceptions, and our future.

So let's start this dialogue. I would love to hear your thoughts and opinions because this is something worth discussing. Please email me at *bselby@uwaterloo.ca* and tell me what you would like to see discussed. Let's make our community a little more contemplative, more informed, and ultimately better.

Your Online Identity is a Valuable Commodity



SPENCER MCEWAN
4B ELECTRICAL

We are all evolving into digital beings. It is very common to have an online identity spanning dozens of websites that incorporate our name, mailing address, credit card information, and other personal details that make our online presence as unique as our interaction with the physical world. It is now easy to share our interests, thoughts, and opinions with our online community of friends and family throughout the world.

In parallel, technology is developing at an increasingly rapid pace. The search capabilities of Google are astounding, and the emergence of new data mining technologies will allow more accurate information to be found in much less time.

It is becoming easier and easier for companies and governments to construct market data based on demographic information readily available on the Internet. This information can be utilized for many purposes. One common example is to create marketing information to design ads that are specifically targeted to you. Companies can now catch your attention much easier, because they have a glimpse of your interests and hobbies from your online identity. A more sinister example is for police or companies to use your information to make inferences about your professional or personal life, or to allow criminals to construct a fraudulent identity.

For example, many websites use personal information questions as password resetting tools. However, if you have posted your grandmother's name or a similar answer used to secure an account somewhere else on the Internet, that information could be found in order to reset your passwords on affected accounts.

Apple is a prime example of a company who has access to a large repository of personal information. The company is essentially able to identify your tastes in music, which books and magazines you like to read, and what genres of podcasts you like to listen to. Imagine the type of digital identity they could construct from someone who utilizes the iTunes Store and the App Store on a very frequent basis.

Now, imagine if a computerized entity like IBM's Watson was let loose on the Internet to search and interpret private data instead of trivia answers. What would it find? The possibilities are scary.

The following are some logical tips on how to limit your online presence.

1. Don't use the same username/password for your accounts.

This precaution is a no-brainer. Utilizing the same username across a wide variety of sites makes it easy to determine what you have been up to online. If you want some examples, try to search for your username online. I was able to find posts that I made back in high school, just by searching for my past usernames. If you utilize one global username, a smart program can construct a diverse profile of your surfing habits.

On the same note, don't use the same password for multiple accounts. If your email account is compromised, a globally used password infers your Facebook account, your iTunes account, and potentially identity sensitive logins such as your online banking are now compromised. Take two minutes and choose strong password for each of your memberships, and change them on a regular basis.

2. Limit the information you post online.

The most proactive approach you can take to protect your online identity is to minimize the amount of information you put there in the first place. For example, Facebook gives you the ability to list your places of previous employment and the projects you have worked on. Is this information really necessary to post to the public? Your work history could be invaluable information from which to construct a fraudulent identity. Or, this information can construct a perfect timeline that can be used by marketers or researchers to make assumptions about your professional or personal life.

Before you post, think logically. You don't have to completely put a stop to posting personal information online, just try to eliminate the most obvious pieces of information that could be used to steal your identity or to track you, such as all of your phone numbers, your emails, subscriptions, etc. Granted, you can't stop every bit of personal information from entering the public domain, but you can remove a great amount of it yourself.

3. Be careful when you sign up for membership at new websites.

The majority of us don't read the terms of service for websites. They are extremely long and filled with legal jargon that is extremely complicated to decipher. However, there are a number of websites that sneakily hide agreements in these paragraphs that authorize the website to share your information with third parties. These can be anyone, such as spammers, market researchers, corporations, or the government.

When you sign up for a new website, quickly search for terms within the agreement to determine if your information can be disseminated to third parties. You'd be surprised what you may find in an agreement.

4. Don't keep all of your confidential information in one place.

Your identity is composed of a handful of key documents. For example, your passport, your driver's license, health card, and birth certificate are the primary documents used to verify your identity. Don't do something extremely foolish such as store copies of all of these documents in one place. For example, scanning all of your personal identity documents and storing them in an unsecured Word document is a terrible idea. If your security is compromised, this document will essentially give an individual the ability to apply for nearly anything they want: a credit card, a new driver's license, or even a new passport.

If the above warning isn't enough, do not store this information online! Storing it within your Gmail account or your Dropbox folder takes the location where your data is stored out of your control. Remember, you may be able to delete a file on your computer, but how sure are you that deleting information on the Internet actually removes it for good?

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Just remember. Be smart about how you manage your online presence. You don't have control over everything, but you can take a proactive stance and limit a great deal of what is available online.

Presidential Report Recapping February Activities

SCOTT RANKIN
PRESIDENT

Hello Everyone,

The month of February was relatively slow in terms of presidential responsibilities compared to most months.

Engsoc Elections (Jan 28th - Feb 7th)

February started off with the Engineering Society Elections. Congratulations to:

- Alessia Danelon (President)
- Owen Coutts (VP Education)
- Yasser Al-Khyder (VP External)
- Andrew Fisher (VP Internal)
- Alexandra Collins (VP Finance)

I have been working hard transitioning Alessia into my position: we are co-attending all the meetings under my portfolio and I am planning to slowly move the presidential responsibilities over to Alessia more and more as the term gets closer to the end.

Vision 2015 Forum (Feb 2nd)

The town hall had mixed reviews among faculty & students.

From my perspective, I thought it went very well. Many issues were raised that the faculty was aware of, and many issues were raised that the faculty was not aware of.

Since then, initiatives are being put in place to address concerns students had and these will likely be implemented in the Vision 2015 plan.

IRC/IRS (Feb 4th & 5th)

IRC/IRS went fantastically this term.

I would like to thank the Gradcomm Chairs: Kirsten Hoedlmoser, Noel McGregor, Jessica Friesen, Nadine Ferguson, and the rest of the Graduation Committee for working extremely hard at making sure not only that IRS was the most amazing IRS in many years, but also that the day before IRS was equally successful. From what I hear, the complaints were few and minor. Both the Chairs and Committee as a whole should be extremely proud as they have done an amazing job.

Comp/Elec 2014 Class Visit (Feb 8th)

I visited one of the ECE 2014 classes to inform the students on the importance of the Engineering Society, advertise some of our events and solicit feedback on how the Engineering Society is performing.

Not much was discussed regarding how the Society was performing. The impression I received from the ECE class is that the Engineering Society is performing adequately in what it is trying to accomplish.

Most of the feedback given was more along the lines of what the class would like to see the Engineering Society accomplish.

The main issue that the class brought up was that there is a 2014 Comp class vote and 2014 Elec class vote on the Engineering Society council. However, this does not adequately reflect the actual make-up of the two classes since the two classes are each 50% Electrical students and 50% Computer students. My solution to this is to have specific voting members for each Elec/Comp mix of a class instead of Comp and Elec individually.

Joint Exec Meeting (Feb 13th)

Both the A society executive and the B society executive got together for a joint executive meeting to make mutual decisions on some major pressing issues. The topics discussed are as follows.

• Policy Manual:

We are debating how the policy manual works, how it should work, and what explicitly should be in it. What is going to happen is that the two VP Internals are going to meet regularly to answer these questions and plan what the future of the policy manual should be.

• Undergraduate Planning Committee:

We currently have two seats on this committee and it was decided that each society will fill one seat and that person will be chosen by each society president. I have selected our incoming President Alessia Danelon.

• Society Agreement:

We have decided collectively to sign this agreement.

• Possible Fee Increase:

We have also discussed the possibility of holding a referendum for a fee increase. This extra fee would be put in a new account to be used only for Engineering Society development and capital purchasing, which would include foyer renovations, POETS renovations and other pricey capital purchases.

Would you support this?

Engineering Faculty Council Meeting #2 (Feb 15th)

WatPD-Engineering Update from Gordon Stubley

• Wat PD Engineering is currently focusing on developing the two core courses and making sure they are well-established before developing new courses

• The majority of feedback so far from students have been very positive or constructive

• Some potential engineering-focused elective possibilities in the future include:

o A PEO Licensing Exam Prep Course
o A process/industrial safety course
o Engineering Ethics
o Creativity & Design

Updates from the Dean Adel Sedra

1. Vision 2015 progress

• Have had discussion forums with staff, grad students and undergrad students

Scott's note: Thanks to all who came to the forum two weeks ago-our input is valued.

2. Buildings on Campus

• Progress is happening on E6

o We should hopefully be moving in this summer

• Chem Eng will be moving out of wing C of DWE and into E6

o After Chem Eng moves out major renovations are being made to wing C of DWE then Civil and Eviro Eng will be moving in to wing C

• E7 & E8 will be the main focus of the building development component for vision 2015

Transition Meeting with Alessia (Feb 19th)

I had a full 5 hour meeting with Alessia before reading week to jump start our transitioning process.

Diversity in Engineering Meeting (Feb 24th) <----- Yes during reading week.

A small number of the faculty and I have been meeting over the past 8 months to address some diversity issues some students are experiencing in engineering. These meetings have for the most part been very preliminary, we have just been discussing how the faculty of engineering should be addressing these issues and whether there should be a committee in charge of tackling these issues or perhaps I diversity officer, or maybe even a combination of both.

What the group is also working on is what the mandate of this group or individual should be, and what they should be trying to accomplish. We are also trying to develop some research and rational behind the necessity of this group, and the initial steps that should be taken to ensure the success of this group. Like I said this is very preliminary, but if you have any questions or suggestions feel free to email me.

Committee of Presidents (Feb 28th)

The main item I would like to report from the COPs meeting is the presentation we received from the new student success office initiative.

The goal of the student success office is to support students at the University of Waterloo. Their main goal is to support students academically, such as:

• Tutoring (Both the promotion and coordination of tutoring)
• Establishing recovery programs
• Academic advising, and
• English Language support

The Student Success office is also looking to support and enrich the student experience here at the University of Waterloo, which is mostly related to the co-op/professional experience here. Some of these initiatives would include:

• Providing personal and professional development, including but not limited to: leadership, wellness, diversity, service learning, and volunteer opportunities
• International support

The Office would also like to promote and facilitate student innovation. They are looking to clone the Velocity success across a broader range of subject matter beyond business and entrepreneurship.

Currently the Student Success Office is still in the preliminary stage and are looking to solidify many plans over the next six months.

And that's all folks,
Scott Rankin
Engineering Society President

NEM Underway and Bus Push to Come

KEVIN LING
VP EXTERNAL

Last week, the National Engineering Month (NEM) directors did a great job putting together a Rube Goldberg machine to chain together with machines from all over Ontario. The machines were all connected over the internet or with cellular phones and eventually set off a small Rube Goldberg machine at the CN Tower. That machine, in turn, hit a switch to light up the CN Tower with purplelights. The entire event was part of a series of NEM activities that took place between February 26 and March 6. NEM is a series of events that run each year to help promote the engineering profession to elementary school students and to the general public.

The series of Rube Goldberg Machines were set off and streamed live on Friday, March 4, at 6pm. Due to some technical difficulties, the run was not successful and our machine here in Waterloo was in the second half of the relay so it did not get set off. However, there will be a video posted online of the pre-recorded version of the full run. That should be up online in the near future, so I will be posting the link for that on the EngSoc website when it comes out.

A special thanks to Kal Sobel, Erin Matheson, Stephen Kraemer, and all of the great volunteers that came out to help build our Rube Goldberg machine!

Even though NEM is now over, we still have a few events coming up this month, namely Explorations and Bus Push. I wrote about Explorations in my last IW report so take a look at the online archives for more details. Explorations information can also be found on the EngSoc website, although you might have to look back a few pages (navigation at the bottom of the main page) to find the posts since they came out a while ago.

Bus Push will be taking place on March 26. For those of you who don't know, Bus Push is a charity event where we borrow a GRT bus for the day and get a team of engineering students to manually drag it to Kitchener. The funds raised will go to the Heart and Stroke Foundation. Keep checking the EngSoc mailing list and website for more information on that when it comes out.

Thank You EngSoc Directors and Event Goers

PETER KELLY
VP INTERNAL

Hello EngSoc!

If you're reading this now it means one of two things: it's either Wednesday or sometime after Wednesday. With the term going by in a whirlwind of laughs, tears and awesomeness, I thought I would take this time to thank all of the people who have donated their precious time to EngSoc. Of course I can't name everyone, but you know who you are. So, to you, thank you for all of your work this term and doing an awesome job. Also, I would like to thank all the people that have gone out to events this term, without you guys/gals there would be no point in organizing an event.

Hey! Speaking of events, this Friday (March 11) there is going to be an awesome event at FED Hall. It will be a Charity Ball for the charity Free the Children. This event is campus wide, so feel free to bring your roommates, brother/sister, cousins, or that person that you stare at awkwardly everyday on the bus and you wished you had something to talk to them about (now you do). Tickets are $15 and all proceeds will be going to the charity. It is masquerade themed so feel free to make something fancy or nothing, but then while there you stand up against a pole, look into the distance and hide behind the aura of mystery you just created. Tickets are available in the EngSoc Office or at the door the night of. [Please buy in advance to help with the planning process].

Until next time,
Peter Kelly
VP Internal

The Future of Jobmine

ALEX HOGEVEEN RUTTER
VP EDUCATION

Waterloo Works/Jobmine

Despite requests for more information, I have not yet received an explanation for Waterloo Works. That said, I have started a discussion with key players in CECS to discuss how to improve Jobmine. One step being seriously considered is promoting and encouraging student developers to improve Jobmine usability. I can't make any promises at the moment, but I will be pushing hard on this issue.

When I have greater clarification about the plan going forward, we will be sending out a survey to get feedback on what are top priorities for fixing in Jobmine and what are top priorities to see in any new system.

Co-op

Employment numbers are thus far up from last year, but still continue to be a challenge, especially for first-year students. Try and expand your outlook and try and talk to upper-year students or CECS about what you can do to improve your résumé and employability.

8-Month Work Terms

The faculty is considering adding the option for upper-year students to take 8-month work terms. It is up to individual departments to decide, but it seems like a reasonable possibility, especially for departments with both 4 and 8 streams. Expect a survey in the near future.

Professional Development

PD20 is running smoothly for the first-year 4-stream students. There was a 97% participation rate and 91% pass rate for the midterm, and there has been relatively positive feedback thus far. Staff are of course still sensitive to concerns and are always thinking about improving the experience.

A note about student-faculty relations

I should note that many issues place faculty and students in opposition. For example, I believe every faculty member should undergo some training prior to teaching classes. Obviously, this is a direct imposition on faculty, so I understand their hesitation. In the case of Waterloo Works, CECS and students are on the same side as we both suffer from Jobmine. Therefore, it is incredibly important to work closely with CECS and others, foster strong relationships and offer constructive criticism and support, not angry insults.

I only have two months left in my term, and I do not wish to give the impression I am jaded and hopeless. There are many members of the faculty and university who are interested in change and who genuinely believe in helping students. For example, I've received responses to emails late at night, from hard-working individuals like Gord Stubley in WatPD-Engineering and Rocco Fondacaro in CECS. I genuinely appreciate the support and concern of those two and too many others to name, in assisting students to achieve our objectives. Thanking those faculty members who wish to help us and fostering constructive communication is essential to improving our education.

Senate Updates on Waterloo Works and Tutition

JAY SHAH
SENATOR

The second Senate meeting (Feb 28th) of the year occurred later in the month compared to usual meetings because of reading week. There weren't too many decisions but there was some intriguing discussions that I'd like to share with you.

1) Waterloo Works, the system being designed for the past 4 years to replace our current JobMine system has been completely scrapped. Provost Geoff McBoyle cited major issues with usability and scalability while indicating that a lot had been learned from the letdown that Waterloo Works shutdown brought. He gave an insightful breakdown of costs associated with the program, $500 000 spent on IT infrastructure, $1 000 000 spent on co-op students, and another $1 200 000 spent on full time salaries associated with the project. None of the employed personnel were fired or laid-off, they were simply relocated into other IT groups. The situation appears to be extremely fluid, and few details have emerged thus far, however the Provost has stated he will follow up with more details and a subsequent course of action going forward. Student senators stressed that this let down was a considerable blow to the expectations of having Jobmine replaced with a system much more versatile in the near future. For the short term, Jobmine will be upgraded on the backend as it is now out of its service lifetime. My best optimistic guess for when an appropriate (read: better) replacement may be ready is 2 to 3 years – I challenge the administration to prove me wrong on the shorter side ;).

2) Student senators have met with the Registrar's office and members of the Communications and Public Affairs group to continue input and discussion on the evolution of UWaterloo's diploma. The guiding principles have been laid out, and it pleases me to inform you that the Registrar (Ken Lavigne) has been extremely supportive of maintaining a highly transparent and inclusive process. If students decide we like the current diploma and don't want a new one, he is not bent set on changing it. An email is planning on being sent out to all UW students, showing them the current diploma and asking some simple questions regarding what you would like to see in a potentially new diploma, and what you like/dislike about the current one.

3) Lastly, the President of UW, Feridun Hamdullahpur reported that national Canadian Student Loan delinquency rates in Canada have risen and now sit at 13%. This is concerning for two reasons, firstly it means students are not getting enough wealth creating value out of their education (or are spending too much). Secondly it means that loans to students could become harder to get and more expensive as banks and other agencies attempt to adjust for the increased risk. There is a total of $100+ million injection needed into the Student Loans program to shore up the 'extra' (above average) delinquencies. On the bright side, UWaterloo's delinquency rate is ~2%, so we're well ahead of the game!

4) I'd like to congratulate Ben Selby, Engineering Senator-Elect for putting up a great campaign and soliciting the greatest number of votes! His very capable hands will be taking over when my 2 year term ends on April 31st, 2011.

Feel free to email me at *senate@engmail*. Good luck on the final stretch of the term!

Donations, Capital Expenditures, and Dolla-Dolla-Bills: Oh MY!

JON WARREN
VP FINANCE

Hey everybody! I hope you all had a super-duper reading week! Here's the quick update: everything is good and we aren't bankrupt yet. Give it time. In other news, EngSoc donations were decided at the last meeting, and the amounts can be seen somewhere on this page, probably somewhere pretty close to right here. I owe a big thank you to Mina Labib for covering for me in the last two meetings while I've had midterms. He's the best.

Next meeting, I am planning to have a "capital expenditures roundup" which will basically go over all of the things EngSoc has invested in as well as some things we are considering investing in. This is your chance to see a bit of what we've been up to behind the scenes and to have a say in what we are considering purchasing. Capital expenditures are considered as assets that EngSoc purchases to improve student services and events beyond the scope of the current term. Previous examples include: a button maker, practically everything in POETS that wasn't a gift, and the LED marquee sign outside the EngSoc office. If you have any amazing ideas for capital expenditures, please let me know! My email is *eng.vpfin@gmail.com* and I need to know before Monday, March 14th if I'm going to include it in my presentation. That's all for now!

EngSoc B Winter 2011 Donations

Donations	Approved
GradComm	$500.00
Iron Warrior	$500.00
Orientation Week (FOC)	$500.00
EARTH490 Peru Trip	$100.00
UW Rocketry Team	$350.00
Baja Team	$800.00
2013 GNCTR	$450.00
UW Robotics Team	$300.00
UW Mars Rover Team	$325.00
UW Formula Motorsports Team	$600.00
UW Micro Aerial Vehicles Team	$0.00
UW Midnight Sun Solar Car	$300.00
Engineers Without Borders	$300.00
UW Nano Robotics Group	$475.00
Total Donations	**$5,500.00**

Upcoming Events Calendar

Wednesday March 9 Coffee House 7PM E5 Atrium	Thursday March 10 Running Club 5PM POETS Patio Genius Bowl 7PM AL 113	Friday March 11 Charity Ball 7:30PM Fed Hall	Saturday March 12 Engineering Ski Trip	Sunday March 13 EngSoc Hockey 6PM CIF	Monday March 14 Iron Warrior Meeting 5PM E2 2349 Explorations	Tuesday March 15 March Break Open House Running Club 5PM POETS Patio
Wednesday March 16 EngSoc Meeting 5:30PM CPH 3607 Band Wards 8PM Philthy McNastys	Thursday March 17 Running Club 5PM POETS Patio St. Patrick's Day IW Submission Deadline 6PM	Friday March 18 2013 Bowling Party 4PM Waterloo Lanes	Saturday March 19 Engineering Orientation Leader Retreat Grad Ball	Sunday March 20 Engineering Orientation Leader Retreat	Monday March 21 Iron Warrior Meeting 5PM E2 2349 Enginuity	Tuesday March 22 Running Club 5PM POETS Patio

Check out up-to-the-day event postings on the EngSoc website at engsoc.uwaterloo.ca

Waterloo 35 Years Later: Different, but the Same

A Letter from an Alumnus

DAVE GOOD
1976 MECHANICAL

It is funny how much a place can change, but still be the same. If I had to describe the University of Waterloo in one sentence I would use that tired cliché, different, but still the same. I graduated from the University of Waterloo in May of 1976, almost forty years ago. Back then the campus looked more like an elementary school than a University, and to my memory the most innovative-looking building around was the water tower my classmates spray-painted beer on. The brick of RCH and DWE was the favorite option back then; now it has been replaced by the shiny glass of E5 and the Quantum Nano Building.

However, the most profound difference I notice on campus is not the architecture, but the people. When I was in waterloo, the most exotic background in our class was a Quebecois or maybe even an American. Now the school is a cultural mish mash of people from Asia, Europe, the Middle East and all over the world. This new influx of brainpower from all four corners of the globe is a massive change for the better for the University I called home so very long ago.

Even more noticeable then the multiculturalism is the amount of people that now attend the University. With a student body the size of a small city, Waterloo is now one of the largest schools in the country. No longer is UW only a staple for Mathematics and Engineering, but also for Arts, Science and Business. It is now a school that leads in all areas of academia.

The city surrounding the University has also changed dramatically. Having grown up in the area, I remember when the University helped form a boundary between Mennonite farmland and the city of Waterloo. Looking around the University now, farmland is a distant memory. Waterloo has grown to be a large city in its own right, a mecca for people from all over the country and Canada not only because of its schools but because of its employment oppurtunities. With the presence of RIM and many other large scale tech companies, Waterloo can truly be called the brain of our nation. And it all started here at UW.

But as I stated previously, as much as things have changed, they've also stayed the same. Having a son at the University of Waterloo has made me realize that the fundamentals of engineering at this University are still very much the same. First year is still scary as hell, the almighty tool is still our mascot, beer is still worshipped amongst all UW Engineering students and four consecutive hours of class in the basement of RCH is still commonplace. And, how could I forget, June Lowe is still an idol. It is one of this faculty's greatest strengths that the fundamentals are still the same now as they were forty years ago, despite the changes it has seen. So Waterloo plummers, keep being the smartest engineers out there, drink lots of beers and worship the tool, because that's what this place has been and always will be all about.

WEEF Report on Funding Council Meetings

GRAHAM STONEBRIDGE
WEEF DIRECTOR

Hi Everyone, by the time you have read this the funding council will have met and decided where WEEF's $60,000 will be dispersed this term. In total there was over $250 000 requested from your peers, profs and lab instructors - obviously some tough decisions will have been made to choose which projects are funded. Look in the next IW issue to see how much each group was allocated.

I want to make a special announcement this issue. On Wednesday March 23rd WEEF will hold an Annual General Meeting. The meeting is open to all members of the foundation, which includes every undergraduate engineering student. There are three goals for this meeting. Firstly, we want to explain to you how WEEF works and where your $75 contribution goes each term. Secondly, we want to discuss WEEF's financial status and the progress of our million dollar donation to the student design centre. Finally, we want input from you about where you think WEEF should focus its efforts in the coming terms and what particular issues you think we need to address.

The meeting will take place in CPH 3607 at 4:00 and will run just over an hour. I look forward to seeing you there!

Graham

So You Failed Your Midterms...

ALEX HOGEVEEN RUTTER
3B ELECTRICAL

All of us came into Waterloo at or near the top of our classes. We are used to 80s and 90s and it can be quite a shock coming into university. If you went to a good high school, 1A probably wasn't too challenging and if you didn't do too well in 1A, you can always blame it on the adjustment to university. However, it is very common to fail your first midterms in 1B, and here are some steps you can take (regardless of your term).

Don't panic: Midterms are usually not worth too much and even a 0 can be recovered with a good enough final mark. You can also make up some of the marks on assignments and labs, especially in earlier terms. Don't forget that sometimes a few little mistakes can completely destroy a midterm mark but finals have much more questions and you therefore have a much lower chance of being sunk by a sudden mind-blank or miscalculation.

Set realistic goals: A good goal might be to use labs to bring your mark up to 50% going into the final. You might have to settle for a 70% average rather than the 80% you originally expected. The students who obsess about squeezing out every last mark usually burn out. Think about how the marks are allocated, where you can get easy marks and how to best spend your time. Recognize the importance of sleep, extra-curriculars and your social life and decide what you can realistically achieve with a normal amount of effort.

Figure out the fundamental reason you failed: For example, if you did not understand the concepts, memorizing more past exams is not going to help. If you understood the concepts but choked on the midterm, you may need to do more practice problems for the final. Don't keep doing the same thing if it's not working.

Figure out a study style that works for you: A lot of us didn't study at all in high school. It's very easy to just assume that studying will come as easily as all the other skills we've managed to master intuitively over the years. However, studying is an imprecise art and science with its own little tips and tricks, and there are study skills workshops available on campus to help you learn some techniques and skills.

Finding a good study to break ratio: Some people have shorter intervals whereas others have longer. Planning out in advance when and what you want to study and for how long can be very helpful. Reward yourself for meeting your goals, but don't be afraid to be a little flexible and accommodate your life. Try different methods and figure out what works for you.

Seek help from your classmates: Study groups are a useful tool, but you have to be careful to figure out how you can work effectively with one another. For example, having similar styles, working at a similar pace and being able to resist temptation to slack off are all important. A study group can be a waste of time if not planned carefully, but it can be very useful for quizzing each other, solving problems together and explaining principles to one another. Explaining something to another person is a great way to reinforce your own understanding. On the other side of the coin, having one of the smart kids explain the midterm questions or helping you with some of the key concepts is very valuable and usually they are pretty good about helping people out.

Talk to the prof: If you have not done so already, now is the time to start talking to the prof and TAs for additional help. One option is talking to the prof about getting weight moved to final, but note that profs are under no obligation whatsoever to do so, so do NOT count on this.

If nothing else, profs may give you advice about how to succeed in their course, what kind of questions they ask and what material is most useful to study. Think about what the profs emphasize and spend a lot of time on. A lot of profs are sympathetic to students, especially if you consistently demonstrate effort by doing assignments, extra homework problems, going to office hours and tutorials for help, etc.

If you think you deserved a higher mark, go to the prof and ask about re-marking. However, if you deserved the mark you got, forget about it. Don't beat yourself up to the point that you are miserable, but do take responsibility for your own successes and failures.

Thanks go to Kal Sobel and Alexandra Collins for their input for this article

FedS Plans for the Coming Year Take Shape

TREVOR JENKINS
FEDS COUNCILLOR

Hey everyone! Sorry for the lack of updates from your Councillors over the past two issues, however with the Election Fever hitting FedS for most of January and February, not too much was happening besides day-to-day operations. This update will cover things from the recent meeting on Sunday March 6.

First off, the March General Meeting (MGM) of the Federation of Students will be on Wednesday, March 23 at noon. At this meeting, every student in attendance will have a vote, and the most major issues facing the Federation will be dealt with. Some of these things will included electing Directors to the Board of Directors for the 2011-2012 year, any proposed changes to the By-Laws, approving lifetime members of the Federation, and improving specific fee increases that may be brought forward. The full agenda for the meeting will be released by the time this issue comes out. Check out the FedS bulletin boards or online at feds.ca.

A presentation was given by President Moggach highlighting a proposal to reintroduce a fifth executive to the Federation. The position would be titled VP Student Affairs and would be similar to the current VP Internal, however would see a large amount of cross-campus duties given to them. Their focus would be on event and programming, as well as see duties related to CECS transferred here. The rationale for this is that the current executive portfolios are unmanageable and typically require 50-60 hour work weeks. This is limiting their ability to interact with students which is never good. From my experience dealing with the current exec, I can attest to the fact that they work long, hard days. This would require a change to the bylaws to pass and may be brought up at the MGM. If passed, the position would first be elected for the 2012-2013 operating year.

As anyone on campus for fall 2009 will remember, the proposal for a new Student Building was defeated in a referendum. The building was meant to act similarly to the SLC, but would see a large number of student support services centralized to better support students, in addition to student study and lounge space. Despite being defeated, student feedback still shows there is significant demand for more student space, but in a more central location. As a result, the Federation has been working on a revised proposal that would see a new, smaller building built in the RCH, Physics, and Grad House Green wedge. The building would see more space for clubs, services, and students, as well as likely house the new Student Success Office, in order to be more central to where students are, as opposed to being stuck somewhere like Needles Hall. The major sticking-point for the proposed student fee not going to referendum already is that the Federation wants the University to fund at least $10 million of the project as they would be a significant tenant, and should not burden students to fund the building alone. The expected funding would ideally come from Alumni Fundraising which the university has been successful with in the past (name one part of E5 that isn't named after a company or person). I'll keep you updated with news on this one.

Finally, the annual Federation of Review. Every undergraduate student should receive an e-mail within the next two weeks with a link to the survey. The survey is meant to act as a tool to received student feedback on certain issues pressing to students, on issues pertaining to Clubs/Services, FedS Businesses, and Programming/Events. Make sure to fill it out as you'll be entered to win an iPad or one of three $100 gift cards to the Bookstore.

That's it for major updates. I'll have more information at the upcoming EngSoc meeting. If you have any feedback , questions or concerns for me, feel free to stop me in the halls or send an e-mail to *t.ek.jenkins@gmail.com*. Have a good March!

Engineering Society Executive Review Committee Update

THE EXECUTIVE REVIEW COMMITTEE
ENGINEERING SOCIETY

Around one year ago, a motion was put forward to Engineering Society B asking them to look over the current workload of the executive and see if their portfolios were still relevant due to the ever changing ecosystem of Engineering. Our size has grown immensely and new opportunities have been placed under the executive that seemed to fit best at the time and never seem to be re-evaluated.

A committee was formed to look into this, but came to the conclusion that this was a much bigger issue that needed input from both societies and a great deal of time to think of all of the possibilities. The committee was struck at a special joint council meeting which was called for this specific reason during frosh week. The committee was selected by the council and its members included Tim Bandura (A-Soc Prez), Scott Rankin (B-Soc Prez), Jessica Friesen and Michael Seliske from A-Soc and Spencer McEwan and Alessia Danelon from B-Soc. This committee met a few times throughout the term, but various location based difficulties caused the committee to continue into the winter term. They exhausted all options for dealing with the Executive's workload and also brainstormed what they thought the Executive should be doing and what they are doing currently.

It was the opinion of the committee that the Executive of the Engineering Society should be dealing with overall society matters such as future planning, ensuring student development and being the voice of students to various groups around the school, community and country. The current executives were asked to identify their daily routines and it was made clear that much of their time is spent on housekeeping matters which don't necessarily have to be undertaken by an executive.

It was one of the original proposals to have a sixth executive who would be able to take some of the work away from certain other executives which would in turn help the society accomplish more. This approach was carefully considered but whenever it was discussed, the same alternative solution continued to surface.

The idea of "Super Directors" or "Commissioners" was not a new idea and had been kicked around a lot and was something that has worked at other schools. At Queen's, it works well for them and since we are a growing society, we need to properly scale to meet the needs of the students. After a lot of discussion, the committee developed a basic outline of what they propose the EngSoc structure should look like. This structure would be put in place to ensure that the Exec had time to deal with overall society planning instead of helping with the day to day operations. The committee feels that this new Super Directorship structure will allow the day to day stuff to be run by awesome volunteers and the planning and representation to be done by the Exec.

Tune in next issue to hear about each proposed tier in more detail and a complete hierarchy!

Solution To Last Issue's Iron Crossword

T	E	E	S	■	T	A	M	A	L	E	■	C	O	P
I	D	E	A	■	R	A	I	S	I	N	■	A	N	E
C	O	N	G	O	A	R	T	I	S	T	■	R	E	P
■	■	■	A	R	I	O	T	■	T	R	I	G	■	■
A	R	T	■	A	N	N	■	S	E	E	T	O	I	T
N	C	A	A	■	■	■	T	I	N	■	E	D	N	A
D	A	N	C	E	■	B	E	D	■	C	R	E	E	D
■	■	G	E	T	■	L	E	E	■	B	A	A	■	■
S	P	O	T	S	■	E	T	A	■	A	T	L	A	S
S	A	R	A	■	M	E	H	■	■	■	E	E	L	Y
S	C	A	T	H	E	D	■	A	D	O	■	R	E	D
■	■	T	E	E	N	■	A	R	O	M	A	■	■	■
K	O	I	■	M	A	N	G	O	E	A	T	E	R	S
I	D	O	■	A	G	O	R	A	S	■	M	O	O	T
N	E	S	■	N	E	W	A	R	T	■	E	N	I	D

Rube Goldberg Success and Pie Week Events

ERIN MATHESON
3A CHEMICAL

Happy National Engineering Month Everyone! Your friendly neighborhood NEM Directors wanted to keep you up to date on local NEM celebrations! March 2nd marked the first ever NEM outreach / Rube Goldberg Machine build-a-thon that happened in the student team bay in E5. With the help of local highschool students as well as current UW students, we were able to complete our Rube Goldberg machine for ESSCO's province-wide project in only one night! Huge thanks to everyone who came out and helped!

On March 4th, the Rube Goldberg Machine started at Lakehead University and travelled across the province via wireless signals. Despite some technical difficulties encountered along the way, the machine finally travelled to Toronto, where the CN Tower was lit up with purple lights to celebrate Engineering spirit! Amazing volunteers from across the province were able to come together and work exceptionally hard to make this event a real success – even though it's only two years old!

Stay tuned in the weeks to come because NEM isn't over yet – we plan on bringing back Pi week to celebrate Pi day as well as raise money for charity! $5 will get you a pie to pie someone in the face with, and all money goes to the charity. Spirit and giving back, what could be better? Keep your eyes peeled for information, or ask one of the NEM or charities directors for more details.

Happy National Engineering Month – stay purple!

Innovation and FYDP

DAVID MIKOLAJEWSKI
3B MECHATRONICS

Looking through people's windows while walking down the street off campus, perusing the Student Design Center and the Engineering computer labs, it's become obvious: The Engineering design symposiums are approaching fast. In fact, the 2011 Mechatronics Engineering final year design symposium will be held on Monday, March 21 from 1:00-5:00 pm in the Main Hall of the Davis Centre (DC) Library.

However much ambient stress is floating about in the fourth year student realm, few recognize the tension building up in the 3B student. All too often, 3B students themselves don't recognize how soon fourth year project proposals are due, and find themselves scrambling at the beginning of 4A. Enter the "4th Year Design Project Ideas Page," a web page that allows students to list their fourth year ideas, and collaborate with students who have similar interests. It's like the JobMine for fourth year projects.

There's often a few really innovative students who have difficulty finding group members interested in their ideas. A lot of the time, people just stick to their previous lab groups. There's also not a whole lot of collaboration between the different engineering programs, which is a shame. Chances are, that upon graduation and entering the work force, we will have to be able to collaborate with a variety of different engineering types. Kicked off on February 4th by those in the 2012 Mechatronics class, the Project Ideas Page already has a bunch of entries to look through. Hopefully, students will take advantage of this synchronization technique.

Visit the "4th Year Design Project Ideas Page"at *www.eng.uwaterloo.ca/~dmikolaj/4thyear/*for further information.

i3 Challenge Update

21 teams submitted their proposals for Phase 1 of the i3 Design Challenge on February 1, with 10 teams advancing into Phase 2. There are two submissions required for Phase 2, the first of which is a poster showcasing the teams' design. The finished posters will be displayed in the SLC for the public for one week starting on March 9th, so head over and check them out. Check out the i3 website for more information on the challenge – *innovate.uwaterloo.ca.*

Review Based on a Trailer: Rango

JON RADICE
4B CHEMICAL

By the time you read this, you may have already seen Rango. I know, I know. I'm a little late on this one. If you've already seen this movie, then I owe you another review. Email *The Iron Warrior* and I'll have them send you one free review of your choosing (Editors' note: No we won't.). This movie has caused enough of a stir in me that I'll even put in a late review out for it.

Rango, by all means, should be a movie that was destined to be panned. It's a computer animation movie – but it's not done by either Pixar or DreamWorks. It's one of those 'stuff as many celebrities as you can' movies, but outside of Johnny Depp, the next billings go to *Little Miss Sunshine* and the crazy one from *Wedding Crashers*. It's not in 3-D, a seeming prerequisite for any animated movie nowadays. Hell, it's not even coming out in the summer, but rather late winter with the rest of the trash heap. That's all well and good, but why can't I stop watching the trailer?

The first thing you notice from the trailer is that the movie looks beautiful. The movie, or at least the little trailer bits, have spared no expense to making the visuals absolutely jaw dropping. The scenery around the small western animal town of Dirt is ridiculously detailed. The villagers are varied, and all have their own unique look and charm. We got our mixture of rats, moles, gophers, lizards and a group of mariachi owls (which would make a pretty good band name if you ask me). And then we have Johnny Depp, who happens to play the lead. Being decked out in one of those Tilley hats and a Hawaiian shirt, it's no doubt a call back to that family friendly movie Johnny did a while back where he took a bunch of drugs in the desert and tripped out in Las Vegas. Word on the street is that there's a Hunter S. Thompson "cameo" in the movie, which makes me wonder why on earth Nickelodeon would do these things. For the parents? You think you could skew more popular if you had him with a pirate hat, scissor hands, a vampire, or even a cokehead before you would go for the Hunter S. Thompson homage. Well, I heartily appreciate it, so maybe its Paramount thanking me for being such a good viewer and I shouldn't complain any about it. So I'll move on and just complain about other things in the movie.

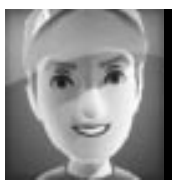
Rango's trailer has proven to be both addicting and beautiful.

There are a few shortcomings that the movie shows and it all stems from what looks like a weak script. The plot isn't exactly anything to write home about. Rango is a fish out of water, new in town and becomes a hero for defeating the big meanie. He then gets a big ego, and as a sheriff is tasked to clean up the town. Hijinks ensue as he has to use his brain to outsmart the wily bad guy and save the day. I've not looked at any synopses for the movie, but just pieced it together from trailers and assuming that it was going to have the same plot as EVERY DAMN KIDS WESTERN EVER. All they need is for Rango to find the washed up drunk crack shot that hasn't fired a gun in years to be his sidekick in order to provide sharpshooting at Rango's dire time of need. But again, since I haven't seen the movie, it might be in there. Actually, it probably is in there, sorry to ruin that surprise too. The dialogue is corny, but expectable, and the use of Depp's voice is an odd choice. Depp has always made his characters work, but he never really had the voice of a sort of wimpy small fry. We know him better when his words are drunkenly slurred or a nice cocaine staccato or even lunatic fast. But I know, it's a movie aimed at kids so you can expect the plot to take a hit, or for the jokes to be a little corny and the kids will be ensconced by it.

And you know what? I'm a little ensconced too. The movie looks like a joy to watch, a movie that doesn't need 3-D because the visuals actually provide the sense of atmosphere there. It looks like a fun, yet predictable ride, that will give you plenty of ooh and ah moments. It goes up there with *The Fountain* for movies that would actually seem worth buying if you have Blu-Ray. To put it short, I like it. If you need to go see it with your family, they'll like it. You can drag your loved one to it, and they'd like it. It won't be the most memorable, but damn is it purdy. *Rango* is out now so go watch it over that snooze-fest *Adjustment Bureau*.

The Future of Gaming

Game Developers Conference & User Development



JON MARTIN
OBI JON1138

This past week saw videogame developers, retailers, publishers, and innovators congregate to showcase ideas and technology at the Game Developers Conference (GDC). This yearly event is often more informative and in a way more important for the industry than the Electronic Entertainment Expo (E3). While E3 gets all the coverage and the big advertising it is really just a venue to showcase commercial products – not to innovate in any way. GDC on the other hand is often the site of non-commercial announcements, showing off new physics engines, new uses of motion control and tactile user input. Tech demos are one of the most common means of developers to showcase their designs – these are basic demos with extremely preliminary graphics and music. Tech demos allow developers to showcase the cutting edge technology that they are developing, without being badgered by people complaining that the trailer was pre-rendered or the game doesn't run at 60 frames per second. I think GDC should get the same amount of support as E3 does, as it is often the spot where you learn much about your most awaited games. There is only so much you can learn from a trailer, especially live action or pre-rendered trailers, but when the developers sits down with the media and hands them a controller – now that is a good source of information.

So, off of my GDC rant and on to some actual news. As GDC is more focused on the technical showcase of products that is what most of the news is about. On the PSP/NGP front, Sony has apparently decided to abandon the internal memory used in the PSP Go, in favour of external memory. Games will be released on either 2 or 4 GB memory cards, with 5-10% of the space open for saved games and patches. It is great to see that Sony is finally abandoning the UMD format entirely. For being a Universal Media format it wasn't really that universal; the PSP was the only product to ever use it. Whenever a company manufactures their own media format they need to consider the costs of manufacturing that product over the entire life cycle of the product. Early consoles used proprietary formats. Obviously, the cartridges from a lot of early consoles come to mind, but Microsoft and Sony abandoned that way of thinking with their consoles by adopting CDs, then DVDs, and now Blu-rays. Nintendo, of course, stuck with a somewhat proprietary format for the Gamecube by using mini DVDs, but have now jumped on the band wagon on replicating more common formats. Using a widely manufactured format for distributing your games can drastically cut down on the manufacturing costs of the game – you only need to imprint the data on the disc, not manufacture the disc itself. Another benefit to the NGP data storage plan will be the ability to expand the memory with larger memory cards. There was an unofficial attachment released for the PSP which mounted a miniature external hard drive (100GB) to the back of the PSP with a cord running to the standard MS slot – vastly increasing the storage space for movies, music, and pictures. Sony will also be implementing a single certification process for all games on the NGP, allowing publishers to release the game both on a physical memory card and digitally without having to go through separate certification for both versions.

Over to Nintendo, where there wasn't much announced at GDC. In Japan, however, Nintendo has been enjoying the launch of the 3DS portable, which sold out its initial production run. Interestingly, some companies in the West have encountered issues with the 3D system. The 3D effect works by displaying images based on the natural difference in viewing angle of your eyes, so in order to use the device you need to have the screen the perfect distance from your eyes – or else you just see a jumble of mush. Using the slider bar on the system allows you to change the optimum viewing depth, fine-tuning the system until the image meshes and the 3D effect becomes visible. Of course, losing that optimum depth means you lose the effect and need to retune the system again. Another issue has been headaches experienced by some people after prolonged usage, with Nintendo even stating a safe limit per day. Some reviewers are saying that while the 3D effect is great, it doesn't make the 3DS an industry changing system, if you already have a DS then the upgrade isn't really that necessary.

On to Microsoft, which also didn't have any huge reveals at GDC, but is showing how much they are embracing the homebrew community. The Kinect for Windows Software Development Kit (SDK) will be released as a free download for non-commercial use by academics and enthusiast communities (Microsoft's way of saying hackers), with a commercial version to follow later. Linux-based drivers already exist, based on early hacks of the system, but this Windows version will be fully integrated with a starter kit style approach to get people working with the motion tracking camera. Some amazing creations have already been created for the Kinect, showing the benefits of allowing community modification of established games. Valve is an excellent example of a company that has embraced the homebrew community, releasing their game code online for user modification. This has led to alternate maps and skins being created, all the way up to new games. Both Team Fortress and Portal were created by hackers, and the concepts were subsequently purchased by Valve and turned into full commercial games, while their designers were hired as full employees. Who could be better at designing a new gaming experience than the gamers themselves?

Sony has just announced recently that an SDK will be released for the Playstation Move system as well, allowing similar development to what Microsoft's peripheral has seen. I'm interested to see how this will be used, as the Move is an interesting system, but not exactly ground breaking. Most of the hacks that have been created for the Kinect so far have utilized either its gesture recognition capabilities, its full body motion tracking, and its 3D depth perception. The Move on the other hand has so far been utilized mainly as a more accurate Wii controller, with the Eye camera adding spatial tracking. The move doesn't have the ability to do either gesture or full body motion tracking, or the 3D depth tracking of the Kinect. To be honest, all I foresee for this SDK is more game development like what we have already seen, not the wide uses in technology, education, and innovation that the Kinect has been used for.

That is it for this issue, keep on the lookout for new announcements for the NGP and the North American launch of the 3DS. Once those SDKs are released we should also see some innovative new uses for Microsoft and Sony's newest peripherals. Until then, Keep On Gaming.

Xbox 360 Kinect: Much More Than Just a Toy

ANGELO ALAIMO & JON MARTIN
3B ELECTRICAL & 3A CIVIL

The Xbox 360 Kinect, released last November, has been a phenomenal success in the gaming world. In the first 2 months, the Kinect was only expected to ship 5 million units. Instead, 8 million of the 3D motion sensing devices were shipped. To the unsuspecting consumer, the Kinect is just another gaming toy which enables the person to physically interact with video games through their Xbox 360 consoles. However, to engineers and imaging experts, the Kinect is not just another toy, but a power image capturing tool.

The Kinect sensor uses an array of cameras and microphones to track multiple people through its sensor range. The sensor itself contains three visual cameras, the most basic of which is a standard RGB video camera for pictures and video capture. Two additional cameras are strictly grayscale, but utilize an infrared tracking system to interpret depth and movement. Viewable with infared goggles or cameras, the depth tracking system projects thousands of dots into the area in front of the sensor. The infrared cameras can pick up these dots, measuring the differential size of the dots and interpreting the difference in depth of objects – basically the smaller the dots appear, the farther away the surface is. Based on the information the depth sensors can record, as well as the different viewpoint each camera sees the sensor can combine the data into a 3D representation of the world, similar to how our eyes work. The Kinect microphone array is able to isolate multiple voice channels based on the different microphone pickups on the sensor, combined with the cameras it can use voice chat for multiple people in the room.

The Kinect software is able to use the 3D map of the sensor's surroundings to track the motion of people, overlaying a virtual skeleton for extracting information about the location, motion, and speed of an individual. Gesture recognition is an important part of the Kinect's system, allowing it to interpret body motion into actual commands for the system.

Shortly after the Kinect's release, developers set out to utilize the Kinect sensor for third party development purposes. Drivers were written to take advantage of the sensor's hardware and soon after, people began sharing their Kinect "hacks" all over the internet. Microsoft's initial response was quite against the use of the Kinect other than for its Xbox 360 console, but more recently the company has embraced the development community promising to release a Kinect Software Development Kit (SDK) this upcoming spring.

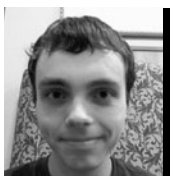
Although, no formal SDK exists thus far, the third party development usage has been quite impressive thus far. For example, two university groups have each used Kinect's gesture recognition capabilities as a user interface. One group has used the Kinect camera as a replacement for keyboard input in World of Warcraft, using basic arm movements to control the camera as well as player movement. More detailed hand motions are used to select weapons and spells as well as for on-screen selection.

Another group is developing a Kinect program to recognize basic sign language, with plans to increase its vocabulary and accuracy. The program is currently approximately 95% accurate, based off simple sentences based built from a select number of words. While the program is currently limited it shows the future potential. Imagine a hearing-impaired person signing to the Kinect, which interprets and reads out the conversation to a blind person on the other end of the chat.

Groups within Waterloo are also using the Kinect for engineering and scientific purposes as well. One of those groups is a Mechatronics fourth-year design project (FYDP) comprised of Aditya Sharma, Daryl Tiong, Kirk MacTavish, and Sean Anderson. The goal for their FYDP, according to correspondence with Sharma was, "to develop a low-cost module that provides both your position and surrounding map information for any custom user applications." Initially, the group wanted to use a stereo camera system in combination with Light Detection and Ranging (LIDAR) Technology to give small robots a solution to mapping and path planning, but according to Anderson the release of the Kinect required them to shift their strategy, "Since the release of the Kinect, we were forced to rethink our initial plan. The Microsoft Kinect is capable of providing a very high quality 3D image, similar to that of other Time-of-Flight Cameras which usually carry a price tag near $10,000. With the Kinect being sold at toy stores for a mere $150, it gave us the opportunity to use much richer data for a fraction of our initial price estimate." The Mechatronics FYDP symposium is set to take place on March 21 where their project will be on display. If you would like to track the group's progress, check our their website at *http://www.ic2020.ca*.

The value of the Kinect in the engineering world clearly surpasses its entertainment purpose. It has allowed cheap access to a cutting edge imaging technology allowing many users around the world to apply the Kinect in purposes for which it was not designed. The Kinect has opened up gesture-based control to the masses which will likely invade many forms of technology in the coming years. Imagine being able to control kitchen appliances or televisions with hand gestures from across the room, the technology is already available and its implementation is only a short few years away.

Cameras, Media Apps Among New Features in iPad 2



JACOB TERRY
1B NANOTECHNOLOGY

Apple announced the next generation of their iPad during a highly anticipated event on March 2, bringing features from the iPhone and the Mac, among others, to the company's tablet.

Front and rear-facing cameras have made it to the iPad 2, which is perhaps the most anticipated feature for the tablet yet, as many felt the cameras should have been included in the original iPad. The cameras have the same resolution as those on the iPhone 4: VGA on the front and 720p on the back. They are designed with Apple's video calling software FaceTime in mind, which also works on the newest iPod touches, the iPhone 4 and Macs. In future updates of third-party apps, we could see the iPad 2's cameras used for apps like Skype as it is on Apple's smaller devices.

As with the iPhone and iPod touch, the camera can also be used for the Camera app, which shoots HD video and images. A feature the iPad 2 brings to iOS, Apple's mobile operating system, is Photo Booth which is a popular application installed on recent Macs. For those not familiar with Photo Booth, it lets people take pictures with simple filters such as face distortion or discolouring and save them to their device.

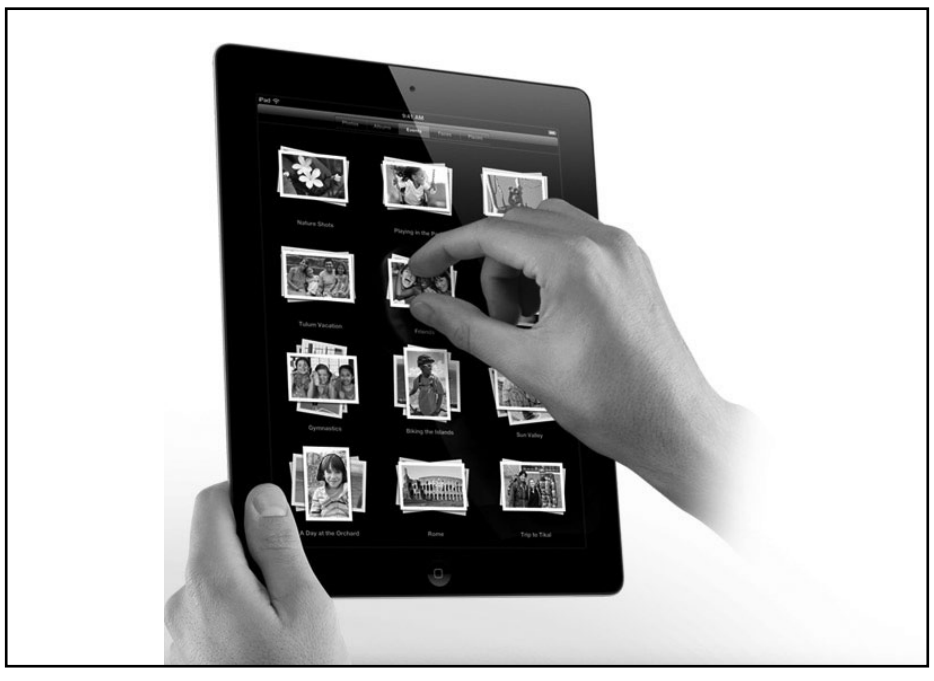
Other software announced was iMovie and GarageBand for iPad, both of which come from their Mac incarnations. iMovie has been on iPhone for a while now but has an updated interface for the iPad, particularly on the project selection screen which is designed to look like an old movie theatre. GarageBand is a bigger surprise, coming with many features from the Mac version. Touch Instruments are included so you can play drums or the keyboard with your fingers, a feature similar to what some other apps have brought to iPad in the past, but now included with the music editing software. Two other big features are Smart Instruments, which puts together chords you select to make bad musicians sound good, and the ability to record sound either through an electric instrument or the iPad microphone. Both should be released with the iPad for $4.99 on the App Store.

On the hardware front, Apple modified the hardware to be thinner and lighter, as they usually do. This should quell complaints about the weight of the iPad, although from my admittedly limited experience with the original, I never found it that heavy to begin with. The battery life has managed to be the same, but slightly dips if using the 3G on the cell-enabled iPad 2. The processor is a 1GHz dual-core Apple A5 for those interested in the power of the newer tablet, which runs twice as fast as the single-core Apple A4 in the previous iPad and has nine times the graphics power.

Apple didn't just redesign the case but also the first-party accessories that can be bought with it. Instead of a case covering the whole tablet as was sold with the original iPad, the iPad 2 now has Smart Covers, which are covers that shield the front of the tablet and can be magnetically attached to its left side. It's designed not only to function as a cover but as a compact stand of sorts. When the cover is folded back it forms a triangular prism, which can function as a stand for the iPad in landscape at a low angle for typing and interacting to a high angle for viewing. The Smart Covers are being released in pink, orange, green, blue and grey polyurethane as well as beige, tan, black, blue and red leather.

The other major Apple accessory for sale is their Digital AV Adapter, which connects to HDMI devices such as projectors and TVs. Since the output is up to 1080p (although it's rumored to be upscaled 720p), the picture will be a lot clearer than it would be if you connected most other devices to your big screens. It also comes with another 30-pin connector slot on the adapter so you can charge it while having it connected to a display. The adapters currently on the Apple Store will still work in case the device you connect to has no HDMI port.

It appears Apple has brought the most wanted features to the iPad 2, which may make it more appealing to those who found the original lacking. The rumours of a Retina Display for the iPad and a Thunderbolt connection like that on the new MacBook Pros may not have come true, but there's always a chance they will come in the next iterations. The Retina Display in particular is almost inevitable at some point. It would be nice to see it in either the next update or the one afterward, since it would have been expensive for the current iteration but seems expected. When comparing the screen to the iPhone 4, it looks pretty bad, so it would be nice to see some more comparable clarity. A 30-pin to Thunderbolt connection would be a nice feature since Intel and Apple are pushing Thunderbolt pretty heavily, and it would cut down on the awfully long transfer rates between computers and iOS devices.



The iPad 2 is an even thinner, sleeker model than its predecessor.

Despite the new features, I still feel iffy about buying one, and that's a bad sign. I can't quite place what other things would make it more desirable, but except for the screen, there's nothing really groundbreaking about it. Every time a major Apple product comes out there's something really cool that gets me and many others all excited about it, and keeps people excited for their products, but it feels like the iPad 2 was a simple hardware upgrade, with an iPad 3 coming soon.

If you're looking forward to getting the iPad 2, it should be released on March 25 in Canada for $549 (March 11 for $499 in the US if you want to import one that badly) for the base model and more for higher-end models, which are the same prices the original iPad released at. The Canadian prices may change by the time the tablet is released, as these are based on statistical estimates in comparison to the confirmed US pricing. If you want to grab an original iPad for some reason, they've dropped the prices across the board by $130, so you can grab a 16 GB WiFi original iPad for $419. Full pricing options are available on Apple's online store, with iPad 2 pricing and preorders going up in the weeks before. With the upgrades in the new model, perhaps 2011 will be, as Apple says, the "Year of the iPad 2".

The Brew Man Group - Hop Head Double IPA

DAN ARMSTRONG
4B MECHANICAL
NEIL PARTRIDGE
4B CHEMICAL

Dan: "An IPA? Again??" Yeah yeah, we hear you. This might be the third time we've written about IPAs, but the first time it was a British IPA, next we did an American IPA, and now, the double IPA. World of difference here, people. As I've mentioned before, our goal has been to cover a different style in each Brew Man Group issue, but finding LCBO-available beers in less common styles is rather (effing) impossible. Want a Flanders Oud Bruin (old brown ale), German Gose, French Bière de Garde? How about an Altbier, Maibock, or Saison? Good luck, fellow Ontario inhabitants. This is the very reason we chose to review Tree's Hop Head. Simple IPAs are hard enough to find in Ontario, so having access to one of 'double' proportions is indeed cause for celebration. I have plenty more LCBO trash talking to go through, but first let's hear more about Tree brewing from my favourite aspiring brewer (and household D-bag), Neil.

Neil: I hate you Dan... Tree Brewery was started by Tod Melnyk, in 1996 with a modest capacity of 6000 hectolitres, however this was soon upgraded to a 20000 hectolitre capacity within a year. Besides handle bar mustaches, washed out denim and tweeked grabs, those Kelowna (BC) hooligans must enjoy a respectable pint or two. The induction of German brew-master (AKA magician of fermentation) Stefan Buhl has been credited for improving the operations and quality of beer over the years. Their regular lineup of beer are nothing atypical; an amber, pilsner, blonde and pale ale. However the inception (I've wanted to use this word for a while) of Hop Head Double IPA (2009) has certainly raised their street credit among beer aficionados. In addition to public approval, the DIPA was also received well in competition, obtaining a gold medal in the 2009 Canadian Brewing Awards. Fortunately for us, this spring we can now begin to enjoy this west-coast style brew at leisure, providing of course that a bunch of no-name first years don't buy out the LCBO with their OSAP funding.

Dan: Most likely, you've heard the IPA story before. The general idea was that in the late 18th and early 19th centuries, British brewers came up with special pale ales that could endure the long voyage to the troops stationed in India, with both higher alcohol levels and extra hops acting as preservatives. The extent to which this is true is open for debate; it's been reported that beers such as these already existed and were simply the most refreshing for army dudes dealing with the hot South Asia weather.

Today, the India Pale Ale is one of the most common beer styles in the world. Beeradvocate.com lists almost 2000 American IPAs, let alone British and Double IPAs, which pushes the number over 3000. It's curious to note then, that the LCBO chooses to carry only two IPAs on their general list, neither of which is easy to find. As a comparison, over reading week I visited Kalamazoo, Michigan (population ~ 100,000), whose grocery stores carry at least four IPAs, and whose liquor stores carry dozens. Freaking Valhalla for me (and any beer lover). This would be the result of alcohol sale privatization in Ontario: a selection that caters to the taste of the people, not that of bureaucrats and lab tests. My apologies for this extended rant, but my hope is that some will develop the same dissatisfaction I have for our government-run monopoly. I have equal disdain for the corporate-owned Beer Store, but that may have to wait until the next issue.

Ilya Panchenko
Hop Head Double India Pale Ale

Neil's thoughts:

As I crack the bottle, this caramel orange pours and froths a wee bit in my standard "get silly" beer glass. At least, that's the end result when you fill (and drain) 650mL of a very quaffable 8.3% brew in half an hour... Alas, a brief whif revealed ripe grapefruit, pine, and caramel malts. It didn't take me long before I managed to take a quick lick, in which my first thoughts were, "Is this a DIPA or a barley wine?"... The thick and sweet malt is backed up with the complementary hop profile, but the bitterness is not astringent. In fact, I haven't had one this tasty is a long time, perhaps since the double IPA from Baird Beer (Japan). I will say though, this brew comes across as the brother of barley wine, but perhaps we might even call it a "Dan sized" little brother in relative proportion. But all-in-all, it's mature, complex and well-thought out. Give it a try for shiz! **[4/5]**

Dan's thoughts:

This beer has developed quite a buzz, so I'm hoping it can live up to the hype. It pours a attractive dark amber (darker than I'd expect for the style). The smell is full of juicy hops, showing off grapefruit, pineapple, and pine, as well as some fruity berry aromas (awesome!). But behind this lies some intense caramel aromas, making me a little less stoked for my first sip. The taste has some intense grainy flavour that I didn't pick up in the nose (perhaps a result of having chewed on a few too may grains of barley), and the caramel malt is still very much present. Along with just a touch of alcohol, the hops balance it out with a potent bitterness, though not as much flavour as I hoped. This is, with all due respect, a Canadian double IPA. There's a stellar hop profile, but overuse of crystal malts results in a caramel sweetness that takes away from the intensity. This beer is tasty and supremely drinkable, though after a week in Michigan drinking beers like Bell's HopSlam, it's not quite quenching my DIPA thirst. **[3.5/5]**

Recommended if you like: Flying Monkeys Smashbomb IPA, Great Lakes Devil's Pale Ale, Mill Street Tankhouse, Railway City Dead Elephant Ale

Props to hops // Dan and Neil

Dem Fashions is Crazy

ERIN MATHESON
3A CHEMICAL

Of all my vices I fall back on to procrastinate from studying for exams, following fashion still remains one of my favourites. During this time of year, when it's grey and cold and everyone is grumpy, it's always nice to flip through the assorted fashion blogs that are following the new fashion show season and see the tail end of the winter lines being unveiled as well as the beginning of what are always colourful and exciting spring/summer collections. Insanely constructed haute couture collections are always a source of inspiration, and ready-to-wear lines are a source of motivation to graduate so I can make enough money to buy these beautiful clothes and enough shoes to bust a hole through the floor. It's also a nice chance to escape to another world where the people are happy and well-dressed, but a big part of that came crashing down not that long ago.

John Galliano, a British designer who has been a creative force to be reckoned with in the fashion world since his first mainstream show during Paris fashion week in 1989, was let go from his position as head designer of the Dior fashion house, a position he held since 1996. The suspension was as a result of two videos of Galliano harassing individuals in a Paris bar while making anti-Semitic comments. In one of the videos, Galliano yells disturbing anti-Semetic comments including "I love Hitler… People like you would be dead," at a group of Italian women. Similar comments toward 'ugly' people were also made. The whole thing is rather disturbing, and also confusing since it's coming from a man with hair down to his chest and a questionable goatee.

Needless to say, some lids have been seriously flipped both within the fashion world as well as mainstream media. Natalie Portman, who recently won an Oscar for her performance in Black Swan and recently signed an endorsement contract for the Miss Dior Cherie fragrance is Jewish and her grandparents were murdered in Auschwitz. In a statement she released, she noted, "I am deeply shocked and disgusted by the video of John Galliano's comments that surfaced today...I hope at the very least, these terrible comments remind us to reflect and act upon combating these still-existing prejudices that are the opposite of all that is beautiful."

What probably has to be the most disturbing aspect of this whole event is the fact that there are members of the fashion community that are defending Galliano. Stylist and costume designer Patricia Field blasted out 500 emails to friends, colleagues, blogs and the media defending his actions as 'an act of theater'. In a phone interview with WWD, she referred to Galliano's behavior in the released tapes as "farce". She went on to explain, "It's a farce. But people in fashion don't recognize the farce in it. All of a sudden they don't know him. But it's OK when it's Mel Brooks' The Producers singing 'Springtime for Hitler'."

Dior has wiped its hands clean of Galliano as quickly as they possibly could – Dior's chief executive Sidney Toledano released that they had already begun the formal process of dismissing Galliano from Dior the first day following the release of the video tapes; she also added that both her and Dior 'very firmly condemn what was said by Galliano.' In a separate release it was announced that Galliano will face trial in Paris for his actions in the Paris bar, after which he could face up to 6 months in prison and a fine of up to 22,500 Euros.

Despite all of this, Dior's ready-to-wear show is still slated to go on next week during Paris Fashion Week, whereas Galliano's own line, John Galliano, has been reduced from a full fledged runway show to a private viewing that will take place on the 6th. There must be something in the water, because it seems like this kind of ridiculousness is breaking out everywhere, even in the perfect little dream-world of fashion.

Running Injuries and How to Avoid Them

KIRSTEN HOEDLMOSER
4B CHEMICAL

I'd like to start this one off by saying I am not a doctor or medical professional in any way. I'm just a runner who has dealt with a few of these things myself, and has runner friends who have also been through some of these issues.

Any sport or activity comes with the risk of injuries, aches, and pains. It's important to realize that these should always be dealt with in some way, whether with ice, rest, or a trip to the doctor should the pain not resolve with simple treatment attempts. Below are a few common running injuries, what usually causes them, and how to help deal with them. Every person is different, so some people will experience pain differently and in different locations. No matter what, if the pain persists, see a doctor. Don't try to run through it, because you could make the problem significantly worse.

Iliotibial Band Syndrome (IBS)

The Iliotibial band (IB) is a thick band of tissue that runs down the outside of your leg. It starts at your hip and ends on the outer side of your shin, just under your knee. IBS occurs when the IB gets irritated in some way, causing pain. Usually, this pain occurs at the outside of the knee joint which is where the IB crosses bone and muscle. There is a fluid filled sac, or bursa, at this point which is supposed to help the IB glide smoothly, but when the bursa is inflamed, leg movement causes pain. This pain usually gets worse with continued movement, and goes away with rest.

Runners sometimes develop IBS when they increase their mileage suddenly. IBS also occurs in people who overpronate (when your foot rolls inwards too much than is typical) and are wearing improper footwear, and in those whose legs are different lengths or are bow-legged.

To treat IBS, first try icing the affected area. Icing will help to decrease the inflammation in the area. Stretching the area is also known to help. If you suspect your shoes may be the problem, head over to your local running shop and have them analyze your gait. They can test to see if you're wearing the wrong shoes.

If the problem doesn't go away with rest, ice, and wearing proper shoes, go see a doctor and try to get a referral to a physical therapist. Their expertise will take care of a stubborn case of IBS, and will help keep it from coming back.

Shin Splints

Shin splints are an incredibly common running pain. It's not actually a specific injury – it's a general pain that occurs down the front of your lower leg that can occur for a number of different reasons. They can be considered a result of cumulative stress, caused by too much jarring force on the bones and muscles of your lower leg without any proper rest and recuperation in between exercise sessions. Muscle trauma is usually caused by running on hard surfaces – the repeated stress makes the muscles along the front of your leg swell, which puts pressure on the fascia covering the muscle resulting in pain. Bone trauma can lead to stress fractures: tiny cracks in the bone that can turn into a fracture if no rest is taken.

Shin splints can also be caused by worn out shoes, running on a slanted surface, or not stretching or warming up properly. Shin splint pain usually gets worse throughout the activity, and it may linger after the activity is over. In addition, your calf muscles down the back of your leg may be stiff and inflexible.

To get rid of shin splints, the first two things you should do is rest and ice your shins. Make sure you return to your activity gradually, otherwise you risk your shin splints returning.

Achilles Tendonitis

Your Achilles tendon is the tendon that runs between your heel and your calves. Tendonitis is the inflammation of a tendon, therefore Achilles tendonitis is inflammation of your Achilles tendon. It's an overuse injury, and the pain tends to build over time until it's constant and there's no way you can continue running. Achilles tendonitis can be caused by sudden increases in your training, speed training, and hill running.

At the first sign of pain in your Achilles tendon, take a break from running and apply ice to reduce the swelling. Avoid running up hills and doing speed work especially. It's also a good idea to do gentle calf stretching and calf strengthening exercises, like toe raises.

Runner's Knee

Runner's knee is the wearing away of cartilage under the kneecap. As the cartilage becomes rougher the kneecap doesn't glide smoothly over your knee, causing pain and swelling. You'd usually feel this pain beneath or on the sides of the kneecap, especially after hill running.

Runners knee can develop because of overpronation, weak quad (thigh) muscles, or from overtraining. To treat it, stop running for a few days and apply ice to the area. When you're pain free, you can start strengthening your quads. Squats are a great way to do this.

These are only a few common running injuries – there are plenty more you may experience in your hip, knee, ankle, or foot. The best thing you can do if you experience pain while running is to stop running, ice the area, and see a doctor if the pain persists.

prof *Quotes*

"If you've studied for the midterm, go have a coffee, take a walk, check to see if another government has been overthrown...."
- Nairn, ECE 444

Talking about window seals:
"this isn't a walrus it's a seal!"
- Straube, CIVE 507

"Did you know that Elvis died on the toilet? What a way to go!"
- Orend, PHIL 315

"Zero cannot equal one."
- Beltos, MATH215

"Lava: You can out run it but it will destroy your house. Or your castle."
- Evans, EARTH 438

"Engineering is the field of estimation. 2 + 2 is greater than 4 for all large values of 2."
- Renksizbulut, ME 557

"We don't have to do this function, just in principle"
- Shalit, MATH 211

Disclaimer:
prof*Quotes* have not been confirmed by *The Iron Warrior Staff* and are meant for entertainment only.

Send in your prof*Quotes* to:
iwarrior@engmail.uwaterloo.ca

The Five-Tool Player: Pitching for Value

BOBBY LEUNG
4B MECHANICAL

Fantasy baseball is all about owning players that will perform better than when they are drafted. Barring injury, the best players are generally the best players, but winning managers draft unheralded players who they feel will outperform their draft position. Getting those diamonds in the rough can complete your fantasy team and your quest to the gold. With pitching, these diamonds are a dime a dozen. The talent is as deep as the well Timmy fell in. FTP presents some deep pitching sleepers who are not even being drafted in standard leagues, and some pitchers you might want to reconsider before putting them on your queue.

Studs

Brian Matusz, SP, BAL(ADP 330.30)

In August, September, and October of last season, Matusz was 7-1, had a 2.18 ERA, and 1.03 WHIP. These sparkling numbers are enhanced when you realize he pitched against many of the American League's offensive juggernauts, like the White Sox, Rays, Rangers, Yankees, Red Sox, and Blue Jays. The 4th overall pick in the 2008 amateur draft, this slick southpaw is armed with a fastball, filthy slider, curve and change. Matusz is left on the waiver wire in about a third of the leagues, and if you do the same, you are leaving a high 3's ERA and 150 strikeouts out of your team. Matusz' low risk, high reward upside makes him a tantalizing last round pick.

Carlos Zambrano, SP, CHC (404.56)

Remember when the Cubs had Mark Prior and Kerry Wood throwing darting rockets, and they were going to rule the NL Central for years to come? Zam-bam settled as the temperamental third pitcher in their rotation. A few years later, after Prior's arm fell off and Wood had returned as a reliever, Zambrano has taken the mantle as the staff ace. In the offseason, the Cubs brought in Matt Garza from the Rays with hopes of fortifying their starting pitching, but its leader remains certain. Zambrano went through some injury issues last year around July, but came back explosively in September. With almost one strikeout per inning with ERA and WHIP around 1.00, we were reminded of better days. In deep leagues, there is no harm taking a flyer on the veteran starter. Owners in shallow leagues must keep Zambrano in mind for streaming purposes.

Edinson Volquez, SP, CIN (413.97)

Sometimes fantasy baseball can be easy. When you pitch on a winning team with a good offence, you generally pick up wins. When you throw a 94-mph fastball and a change-up that plummets off the face of the Earth, you generally pick up some strikeouts. Volquez is primed for a strong bounce-back season after Tommy John Surgery. He finished his last three starts of the 2010 season strong, posting a 19.5 ERA over 27.2 IP, and 1.15 K/IP. Again, you're getting a pitcher that is arguably the most talented on a star-studded and contending team for almost nothing. Who can resist a no-harm, all-gain scenario?

Chris Perez, RP, CLE (174.67)

Perez is one of so many reasons why you do not pay for saves early. Perez got 23 saves and was essentially unhittable last year, but he was setting up for Kerry Wood to start the season. Do not be scared of Perez pitching for a bad team. Even bad teams win games, and those games are going to be close. This is the perfect storm for picking a sleeper closer, and his strikeout-per-inning stuff is the sweet cherry on top.

Duds

Cole Hamels, SP, PHI (65.02)

So the Phillies picked up some guy named Cliff Lee. Their pitching staff, with Roy Halladay, Roy Oswalt, and Hamels, might be the best ever assembled. The nicknames are coming in too (R2C2 is my personal favourite). Understandably, there is a lot of hype surrounding the prowess of the Phillies' starters. Hamels, by many accounts, pitches very well. You cannot ask much more after 3.06 ERA, 1.18 WHIP, and over 200 strikeouts. It is the draft position that is bothersome. If you take Hamels around the end of the fifth round, you are saying goodbye to players like Yovani Gallardo, Justin Verlander, Francisco Liriano, and Tommy Hanson. Oswalt, Hamels' teammate and a part of baseball's new Mount Rushmore, can be had some 40 picks later. Hamels is right on the cusp between the great and good pitchers. He is not quite good enough to be considered in the top two starting pitching tiers. Perhaps with all the talent around him, he can be more relaxed while pitching and put up great numbers again, but I am betting there is a reason he has been a .500 pitcher these last two seasons.

Trevor Cahill, SP, OAK (95.43); Tim Hudson, SP, ATL (147.55)

Cahill and Hudson are groundball machines. They make use of a bevy of sinkers and breaking balls to coax harmless rollers to their infielders. The downward movement causes the bat to hit the top of the ball, directing it into the ground. In fact, somewhat counterintuitively, they want the hitters to swing. This is great strategy in real baseball that does not translate well into our fantasy game. By encouraging hitters to hack at the ball, their strikeout numbers plummet, which makes Cahill, Hudson, and other groundball pitchers generally poor contributors in the fantasy realm, especially in leagues with an innings cap. Their ERA and WHIP numbers are fantastic and will certainly contribute to any team, but make sure these players are complimentary pieces to your staff, and not its anchors. Furthermore, the batting average on balls in play for both guys are quite low, which suggests that after some normalizing, the ERA and WHIP numbers should go up. Cahill and Hudson are good pitchers, but make sure you have a strong vision of your pitching before hastily drafting these players.

Francisco Cordero, RP, CIN (175.06)

You can get Cordero relatively late, so he is not really so much of a dud, but I feel his reputation and situation precede his pitching abilities. His ERA ballooned to 3.84 last season, with a WHIP of 1.36. Except 2009, his key pitching stats have risen in the last four years. While these high stats are mitigated by a relief pitcher's low number of innings pitched, you can certainly do better at this draft slot. Guys like John Axford, Drew Storen, Joe Nathan, Matt Thornton, Craig Kimbrel and Jonny Venters are available later, so if you're looking for more quality innings, look to shore up other areas of your team at around the 170th pick instead of settling for a closer whose performance slips with every passing season.

Janet Hansen Lights Up Fashion

They're an engineer too

ERIN MATHESON
3A CHEMICAL

Engineers are often admired for their wide variety of skills and traits – creativity, intelligence, innovation, the list goes on and on. One thing that rarely turns up on this list however, is fashion. Aside from standard suit combinations, or sweatpants and free t-shirts most engineers don't really put much thought into their daily outfits aside from making sure that they have one on. This is mainly why I was so surprised to find out that Janet Hansen, the founder of the ridiculously cool Enlighted Designs Inc. is an engineering grad from UCSD.

Hansen, the self-proclaimed Chief Fashion Engineer of her own company since 1998, didn't start anywhere near the fashion world. She started her undergrad degree in the 80's and graduated with her bachelors in engineering in 1990. She continued on to complete a masters and PhD in applied mechanics and engineering science/bioengineering from UC San Diego. She also co-authored several academic papers focused on red blood cell membrane structure. Hansen was fully submerged in the engineering world, and quite frankly she was kicking some serious butt while she was at it.

After making the leap from bioengineering to aerospace engineering, Hansen eventually found herself working on a collaboration project with MIT – the wearable technology fashion show. She was the one behind the making the 'dudes in tubes' costumes (YouTube it, it's really impressive). Following the show she received a call from 'Flyer Man', an infamous figure from the Las Vegas strip who hands out advertising flyers was looking for a jacket with his infamous name on the back. It was after this that her business began to take off, since then she's worked with Daft Punk, MIA, Katy Perry, Pink, and many more mainstream artists.

Hansen's Enlighted Designs merge engineering and fashion in a creative combination receiving big recognition.

In the process of becoming more fashion designer than engineer, Hansen has yet to lose her technical charm. All of the technology required for her to make all of her impressive clothing is designed and constructed by Hansen. She's designed and constructed her own circuit boards on small chips that can be held within a single piece of clothing, allowing any given article to have multiple lights that often change colours or light up in an interesting pattern. Kanye West's light-up 'beating' heart accessory that he wore for a series of performances was a completely unique creation by Hansen from start to finish. Her innovation in her design has also earned her a few patents along the way, just to make sure she has official bragging rights.

While watching some of the short-documentary style videos of Hansen that have popped up online, I couldn't get over how soft-spoken and down to earth she is. When you look at her credentials and what she's accomplished on paper, it's straight-up impressive, and somewhat intimidating. In her interviews however, she sounds so humbled by this whole experience that she's had thus far – show business has yet to get to her, if it ever will. In my opinion, she's essentially the epitome of both class and success for an engineer, especially for a woman in engineering. Now if you'll excuse me, I'm going to shop her collection of light-up bras and pants.

It's Time For A Little Me-Time

Don't let exams get in the way of insanity

CHAD SEXINGTON
4.5X MANGINEERING

Hello Sexy Readers!

It's already past the middle of the term, and we're well on our way to finals, but don't worry, you're all going to do fantastically because that's just the way you are! Studying for exams can be an ordeal, and when books get you down, you just need to get away. Sometimes you just need to distract yourself from the task at hand, to hone your mind and sharpen your focus. The activity I'm talking about is sometimes referred to as 'procrastinating', but did you know that you don't need to limit yourself to the same-old ways of procrastinating? Yes, you can check the interwebs or watch a movie, but that won't help you get rid of all the energy you're saving up studying the whole day, and if you don't release that energy, you're going to keep getting distracted without end. So without further deliberation, here are Chad Sexington's Top Five Favourite Suggestions for Ways to Procrastinate.

1) Build something. Make a fort, a bridge, a table, or a birdhouse. Heck, even building yourself a sandwich can be a good way to release pent up energy and keep your mind from unravelling at the seams. Try keeping a box of lego next to your desk and construct voodoo dolls of your nemeses when you're about to go crazy.

2) Movies. Instead of watching a movie, make one. NOT THAT KIND OF MOVIE! Borrow a video camera, and make a 2 minute movie (this can take hours) about making sandwiches, about the squirrels outside, or even do a how-to video on snow angels. It will be a short distraction, and provide you with entertainment later when you're feeling nostalgic. If you can't find a camera, make one out of a coffee cup and a cardboard box.

3) Make yourself food. Lots of food. By making a large pot of chilli, or a huge casserole, you're providing yourself with a few hours distraction that is not only healthy cooking, but will save you time later when you can simply take something out of the fridge to re-heat. What you shouldn't do, is cook 10 pounds of bacon and sausage, because that only ever ends in disaster.

4) Invent a sport. Most sports involve taking an object and getting it past another player (or object) and into a scoring area. What if you had a sport that followed a different paradigm? Like looking up numbers on the internet and then hiking through the woods to find a little Tupperware container with a note in it? Wouldn't that be FUN? You decide, it's your sport!

5) Reconnect with old friends. Call your long lost buddies up and reminisce for 10 minutes about how good things were before you had to do all this studying. You're sure to have a laugh or two, and you can wander around while you're on the phone which also gets you exercise! Just watch out for your supercharged phone bill once you arrive back in the real world.

So if exams have got you down, take a personal hour. Do something fun. Just don't let your excitement for free time get in the way of your actual learning or you'll be stuck doing it forever.

One more quick note: My next article will be the last one I write for the IW for many years. It's been great to share my ramblings with you, and if you would like to contribute to the IW, I encourage you to write as much as you can (it's also a good way to procrastinate) as someone needs to fill this void (blank newspapers are so mainstream).

Until Next time,

Stay Sexy

BIG THINGS with Will Zochodne

Lun Class Ekranoplan (or gigantic Soviet hovering boat with jet engines)

WILL ZOCHODNE
3B MECHANICAL

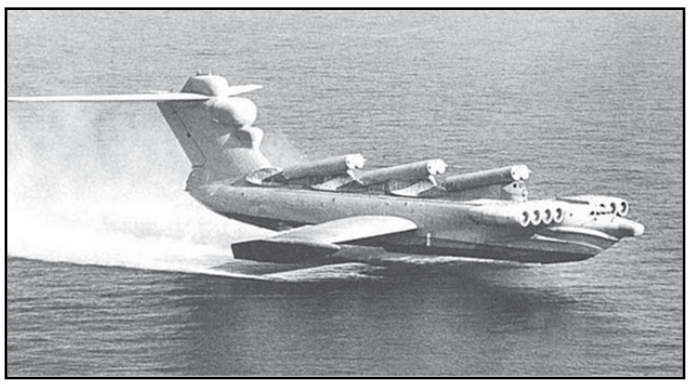
Total Weight: 837,000 lbs
Maximum Speed: 550 km/h
Maximum Altitude: 20 ft
Wing Span: 144 ft
Armament: 6 missile tubes, front and rear Gatling guns

Only the Soviets would slam eight jet engines and a pair of wings on a boat to see what happens. Not surprisingly, the final result can't fly. The Lun Class Ekranoplan skims 20 ft over water by taking advantage of an aerodynamic phenomenon known as ground effect. At extremely low heights, lift reducing vortices created by the air flow over a wing cannot form. Soviet engineers decided to use this principle in the most badass way possible.

Each of the eight Kuznetsov NK-87 turbofan engines produce 28,600 pounds of thrust. What can you do with 28,600 pounds of thrust you ask? Let's say you steal one of those bad boys and bolt it to the roof of your car. In 12.2 seconds various pieces of you and car would be passing through the sound barrier. Now imagine eight such engines and you can start to get an idea of how crazy the Lun Ekranoplan is.

The idea behind the Ekranoplan was that it flew so low that it would not be detected on radar. An added effect of this idea was scaring the shit out of the pilots. On the first flight, the crew was instructed to avoid waves. How do you avoid a wave when skimming over the water surface at 550 km/h? Did you think Tom Cruise was a sexy-living-on-the-edge-of-danger fighter pilot in Top Gun? Think again. The ballsy pilot of the century award goes to some nameless Russian pilot desperately trying to dodge waves in a plane with a billion jet engines strapped to it, that could not fly, and weighed as much as a fully loaded Boeing 747.

The large cargo capacity of the Lun allowed it to carry several hundred troops or ten battle tanks with fuel and ammunition. In my humble opinion, sending Ekranoplans full of tanks across the Atlantic would be the most epic invasion of all time. Big style points for the USSR. At the end of the day though, you have to admire the ingenuity of the Soviets. Pulling off such a crazy idea demonstrates the type of epic achievement that engineers are capable of. Big things rock!



Seriously, it can't go higher than this.

The BIG, hovering Lun Class Ekranoplan, up closer and personal.

Convincing Russia to start mass producing jet cars shouldn't be hard if we start now.

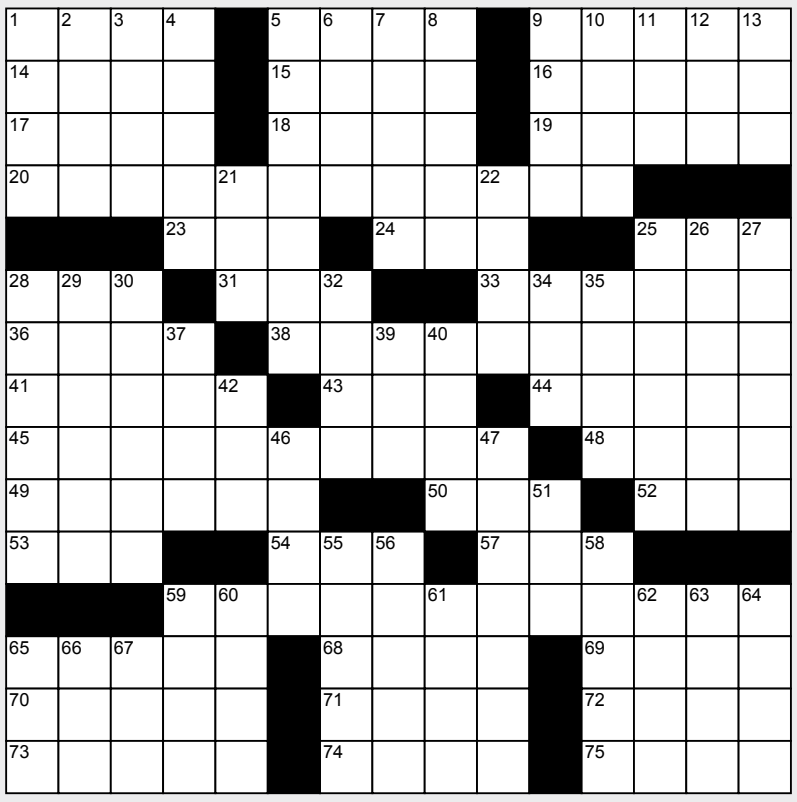
As always, send article suggestions to *w.zochodne@gmail.com*

Let's Be Creative!

Dear readers of *The Iron Warrior*. To spice up your day, we invite you to share your creativity!
Please use the space provided below to do anything you deem creative. Submit your creations to the Engineering Society Office in CPH 1327
before 6PM on Thursday, March 17th. The most interesting submission will be published in the next issue of *The Iron Warrior* and will receive a prize! Feel free to use colour!

FRAMED

STUART LINLEY
2N NANOTECHNOLOGY



ACROSS

1 By oneself
5 Roosevelt and Nugent
9 A tough one to find
14 Dutch cheese
15 Basic util.
16 Strange
17 Parisian dream
18 "I cannot tell _ ___"
19 Actress Witherspoon
20 An easily breakable garden ornament?
23 Be, in the second person
24 Fresh, as a coat of paint
25 Cee follower
28 Bad
31 Roadside assistance, in America
33 With no effort
36 Object of devotion
38 Like a series of similar identity thefts?
41 Logy or path prefix
43 HTML styler
44 Picture frame?
45 Prank planned by a brotherhood?
48 Spice Girl Halliwell
49 Instead (of)
50 French key
52 Acid
53 Chinese chairman Mao ___-Tung
54 Bonnet insect
57 Old Testament prophet
59 Specific amount of a chilled coffee?
65 Say O.K. to
68 Pop
69 Small intestine ends
70 Locales
71 "Don't worry, I'm __ __"
72 Saturated hydrocarbons
73 Assumed knighting position
74 Check or stale go with
75 A night out, perhaps

DOWN

1 Peon
2 Czech river
3 Igneous rock precursor
4 24th Greek letter
5 Steep object?
6 Fashion magazine
7 Deem appropriate for ones dignity
8 Act subdivision
9 Tepid
10 Sheltered
11 Fib
12 ___ Moines, Iowa
13 Lone
21 A Gershwin
22 Borrowed money
25 Bluetec gas
26 Glue brand
27 Blinker
28 Fish out of water
29 Decorates
30 Place
32 Chief: Prefix
34 Consumed
35 Rug
37 Prefix with gate
39 Enzyme suffix
40 American special naval force (Abbr.)
42 Sugar suffix
46 Country with a missile crisis
47 Intensify
51 70's rock "Orchestra" (Abbr.)
55 Bath salt
56 Roman horse goddess
58 Homer epic
59 Sense
60 Recuperate
61 Make changes to
62 Forearm bone
63 Track event
64 Facilitate
65 Query
66 Tonic go with
67 Hwy.

Easy

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

Medium

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

Hard

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

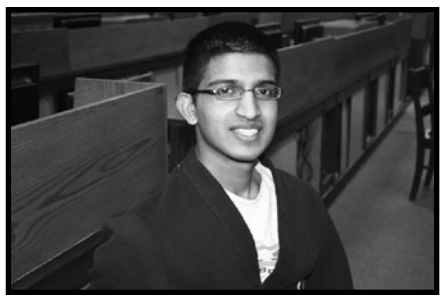
THE IRON INQUISITION
Bobby Leung, 4B Mechanical

"What are you going to do after you graduate?"

"Catch up on all the things I didn't have time for in 4th year"
Charles Falzon, 4B Mechanical

"Go to the FIFA World Cup in 2014 in Brazil"
Shameed Mohammed, 2A Geological

"Make money and live the Sheen Dream!"
Dipesh Modi, 4B Civil



"Sleep"
Anoop Pukulakatt, 1B Mechanical

"Go fishing"
David Hoover, 2A Environmental

"Not a clue"
Chris McGuire, 3A Chemical