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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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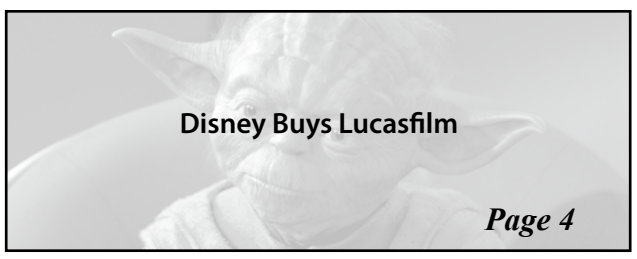

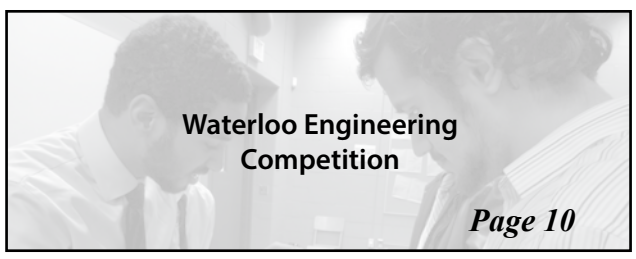

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MappedIn & SMARTTeacher Present to the Dragons

VELOCITY
UNIVERSITY OF WATERLOO

On Wednesday, October 31st, 2012, two University of Waterloo startup companies faced the Dragons on CBC's *Dragons Den* during the all-student episode. The student founders showcased their stuff and got great exposure and feedback from some of Canada's most intimidating TV personalities.

First up were Rohan Mahimker and Alexander Peters, cofounders of website *SMARTeacher.ca*. They started this business as their fourth year design project in the Mechatronics program at the University of Waterloo and wanted to see what the Dragons had to say about it. They auditioned and only heard back 72 hours before the show, leaving them with little time to prepare.

Despite the last minute preparation, the two University of Waterloo students were ready to pitch their business. SMARTeacher is an online interactive, educational game which has the ability to respond to a child's emotions to change the level of difficulty of the game and to improve their learning curve.

Rohan and Alexander used their own experiences learning as children, with education centres like Kumon, to shape the way the game works. They see teaching children as an area that can be greatly improved, so they created this game and its wireless biosensor which responds to a child's emotions. This sensor lets the game know if the child playing is engaged, bored, or irritated, which allows the game to adjust the academic level of questions.

Even though some of the Dragons showed interest, with Arlene Dickinson, marketing professional and CEO of Venture Communications, specifically being captivated by the student startup, SMARTeacher did not receive any offers from the Dragons. Although they left with no offers, going to the den helped Rohan and Alexander get the company to where it is today. In the last 5 months, SMARTeacher has hired 8 more employees and gained 1,000 users, and they're continuing to expand their company.

Velocity

MappedIn founders pitch their business idea to the Dragons

After SMARTeacher, the Dragons called upon Hongwei Liu and Desmond Cho of MappedIn.

In Summer 2010, Hongwei was an electrical engineering student at the University of Waterloo who had just came off a work term at RIM. Soon after, he applied to live in the university's VeloCity Residence, a dorm where 70 entrepreneurially-inclined students live each term. In the residence during Brainstorming Week, Hongwei decided he wanted to work on "Google Maps for indoor places." He came up with the idea for MappedIn and worked with co-founders and fellow University of Waterloo students, Leander Lee and Mitchell Butler, while in the residence. The startup pitched their idea at the VeloCity Venture Fund, a contest that gives $25,000 to four student tech startups every term. MappedIn won and received $25,000 to kickstart their business. Since, they've been working in the VeloCity Garage, a workspace in the Communitech Hub in downtown Kitchener.

Hongwei and Desmond were excited and ready to pitch their startup business to the Dragons. They pitched MappedIn as Google Maps for indoor places. They create indoor navigation systems and apps for inside public locations like malls, airports, and schools and went in asking the Dragons for $150,000 for 10% equity.

MappedIn has gained traction already - they have an app and multiple navigational kiosks in Conestoga Mall in Waterloo. Their goal is to expand to all malls in North America, and from there, to expand to other indoor locations.

Hongwei and Desmond impressed the Dragons. After they told them that Desmond sold his first web company when he was 9 years old for $50,000, all of the Dragons wanted to get in with this great team. Both UW students were ecstatic and went behind closed doors to decide what they wanted to do with the many offers they received.

They ended up going with three of the Dragons: Bruce Croxon, an early stage digital investor, Kevin O'Leary, a Canadian entrepreneur, venture capitalist, and investor, as well as Jim Treliving, the chairman and founder of Boston Pizza restaurants, for $375,000 for 25% equity in the business.

MappedIn gained some great exposure from the show, but in due diligence, the deal did not go through. Instead of going with the Dragons, MappedIn chose a company called Esri Canada to work with. Esri Canada, an established leader in mapping software, is now a partner and investor of MappedIn. Hongwei and Desmond continue to work in the VeloCity Garage, working hard to expand their business every day.

Both SMARTeacher and MappedIn represented the University of Waterloo well on the show. They showcased their interesting ideas with confidence and there are big things in both companies' futures.

A Day of Remembrance: Lest We Forget

LUCAS HUDSON
2B MECHATRONICS

It was after the second battle of Ypres that John McCrae, born in the neighbouring city of Guelph, Ontario, wrote his famous poem, In Flanders Fields. "In Flanders fields the poppies blow" – the first line was scribed by McCrae in the back of an ambulance the day after laying to rest his close friend, Alexis Helmer. In Flanders Field inspired the tradition of the Remembrance Poppy, a symbol we wear to commemorate the Canadian troops that have fallen since the First World War. While many of us don the red flower on November 11th, how often do we stop to think about what the Poppy signifies? The Poppy is a symbol recognizing each fallen soldier, the people who sacrificed their lives to protect our country, allowing each and every one of us to call ourselves Canadians. I ask you not only to wear a poppy close to your heart each Remembrance Day, but also to keep the memories of our soldiers close to your heart. Lest we forget the suffering and hardships each service men and women endured and continue to endure to protect this country.

We wear the poppy to memorialize fallen Canadian service men and women, but, what does it mean to be "Canadian"? Some may describe being Canadian as enjoying a Tim Horton's coffee in the morning and watching Hockey Night in Canada each night; going to ski hills in the winter and beaches in the summer; shoveling our driveways with an ergonomic Canadian Tire shovel; practising the religion of our choice without fear of prosecution; protesting on the lawn of our Parliament in the morning and lying peacefully on it in the afternoon. Being "Canadian" has much less to do with which coffee we drink or which car we drive. It has much more to do with the fact that we have the ability to choose which coffee we drink and which cars we drive. We, as Canadians, have fundamental rights and basic freedoms that we should be proud of and never take for granted. We are the lucky ones in the world with the ability to choose. That is why I choose to keep Remembrance Day close to my heart.

Benoit Aubry

Poppies are a symbol of our remembrance

This day is special to me for many reasons, but one of the most important reasons is my brother. He has been a member of the Canadian Forces for many years and has served a tour of duty in Afghanistan as a Combat Engineer. It is unnerving to realize the closeness to death our soldiers face each day. That unnerving feeling is amplified knowing that each and every one of them puts their lives on the line voluntarily and without question. When we send our soldiers to war, we not only affect their lives, but the lives of their family and friends. Families constantly fear for the safety of our soldiers, hoping their next satellite call will be soon. However, a terrifying reality looms in our mind; the reality that the next phone call may never come and that our last goodbye might be our final goodbye. I know too much about the feeling of anxiousness and anxiety that accompanies having a family member go to war. We must not only remember the soldiers that continue to fight but also the families that support them. For every soldier fighting on the front lines, there are Mothers and Fathers, Brothers and Sisters, and Aunts and Uncles worrying about them, hoping for their safe return. I'd like to thank institutions like the Military Family Resource Centres (MFRC) for supporting our soldiers and their families.

Remembrance Day ceremonies vary across the country. While small town ceremonies typically don't include things like

Continued on VETERANS on page 10

Letter From the Editor

Chicken Soup for the Engineer's Soul

FARZI YUSUFALI
EDITOR-IN-CHIEF

Hello IW readers, and welcome to another long-winded editorial! I'm sure you have endured the suffering of getting midterms marks by now, but not to worry, we all go through the same heart-wrenching pain each term. Speaking of heart-wrenching pain, the Engineering dating scene is no heart-shaped piece of cake either (see what I did there?).

From what I've seen in the real world while being on co-op and coming back to Engineer-dom during my school terms, I have discerned that dating à la Engineer is a completely different experience with its own set of rules. For instance, the rules of "playing hard to get" or "being yourself" when introducing yourself to a person of the opposite sex (which is another issue for engineers) are not applicable to this demographic.

For one, any non-verbal signal that may be sent to the person interest will never be received due to the inherent nature of the engineer's receiver-stuck-in-RCH basement brain. Make your intentions verbally known; not only will you take out the uncertainty factor (see what I did there, again?), you'll also win some major points for being "ball-sy" enough to put yourself out there. With that said, one major issue for engineers who dabble in dating is that they rarely commit to it. It may sound vague right now, but in a couple of sentences, you'll see what I mean. For instance, if you're interested in a girl and would like to date her, own it! Yes, it's against the nature of an engineer to take the path with higher risk (notice the engineer-speak I'm trying to use), but, in the instance of dating, that does not work and is not appreciated by the target of your affections. Let me play this out for you: you've finally gotten the courage to talk to the person you've been crushing on for two years and have proceeded to hang out with him or her. You spend plenty of time alone together and are semi-flirtatious during those times. You've been doing this for two months now and, suddenly, your crush seems to have dropped off the face of the Earth. Here's what happened: your crush has sh*t to do; this person can't wait around for you to hint at going steady with each other. Your object of affection would rather spend his/her time re-arranging his/her confused-face for classes than for your mixed signals.

As a half-rule, though I feel that this is slightly nonsensical to note (but needs to be said after hearing about this numerous times), watching YouTube videos or having intimate study parties with your significant other/crush/whatever does not constitute a date; in fact, it shouldn't constitute anything. If you want to spend time with this person, use the time to talk to them, do an activity with them, or, if you really don't want to do the former, look at their face for long periods of time (and, maybe, plant said face with kisses). By now, you should see why this is a half-rule. If not, consult the paragraph above again as it seems that you've haven't been paying attention.

Now that you've mustered up the courage to make your intentions known by going on an actual date with this person, here are a couple of things to note when doing so. One, while you may be just going for coffee at Williams, don't do so while wearing your final-exam-sweatpants or (as the girl-equivalent) a button-up man-shirt. I'm not saying that you need to wear a dress shirt, slacks and evening gown (especially all together) – just make it look like you put some effort into looking nice for the person you're seeing. Looking nice for someone else reads as "This person that I'm meeting for coffee who has recently poured his/her soul out to me is making an effort such that I take a romantic interest in him/her." Yes, your thought processes should probably sound like this out loud. As a disclaimer, you should probably be doing this anyway when you come into contact with any human form. As an extra note, shower the day before you have to go on this date; trust me, the other person will appreciate the flowery/Old Spice smell instead of the stench you usually exude.

If you've gone out to dinner for your date, don't spend half an hour quibbling over who should pay for the bill. I'm going to settle this matter right now; the person who did the date-asking should be paying for the first date. After that, take turns paying for each excursion but don't, under any circumstances, split the bill like you would when you're going out with friends. This will immediately put you in the friend-zone (which I'm sure the vast majority of you are familiar with).

It's now time for the addition for another half-rule: courtesy goes a long way. For one, holding the door open for someone, extending "please" and "thank you" when appropriate, and not texting while the other person is talking is a good way to woo your prospect. You'd be surprised as to how many people I see place their phone on the table and text others while the person accross the table is talking. It's as rude as staying at the table and talking to someone else on the phone while your date watches in disgust.

Finally, be prepared to actually have conversations with each other because, chances are, you're going to be doing the long-distance thing every four months thanks to co-op. Thankfully, the advent of Skype has allowed this time to be more enjoyable due to the added perk of the webcam. Please take what you will from that statement.

As an engineer in a relationship, although your lives are busy and unconventional in the sense that you'd prefer a Lego rose compared to the actual thing, gifts are still appreciated. I know, I know, you're a student and have no monies. From experience, taking a little bit of time out to make something for the person is a much better gesture than something generic at a store. I know, I know, you're a student and have no time. Here's an idea, make a mix of his/her favourite songs and put them on a decorated USB stick or, even better, prepare a care package for him/her.

Now that I've talked about engineers who, in general, fail at dating, I'm going to provide some recommendations for dating within our Faculty. First, don't date someone in your class. You don't want to deal with the drama and the awkwardness of seeing this person everyday if things head south. Here's another one, leave the Frosh alone! Let your Frosh figure out if they still want to be here first. Also, be weary of the fact that most will be off-stream to you if you meet them in 1A and you will probably never see them again. If that's not enough, hitting on Frosh in their 1A term will cause the rest of us to pass judgment on you (for sure). Keep that in mind as an engineer's respect rivals that of any boy 'in da hood.' Another thing I feel stupid in mentioning but needs to be said because, again, I've seen a lot of this happen), stay away from your friend's exes. If you're a guy, I know there aren't many women in Engineering, but, in the very least, give it at least two academic terms and two co-op terms before you make a move. Engineers are not willing to take one for team in this regard and are well-trained in using various pieces of dangerous equipment; take home message: don't anger an engineer.

Finally, I should note that I'm losing my mind and have made this up on the spot. Therefore, whatever rules I've prescribed should be broken at your own discretion. I say this because engineers are weird and don't follow the normal conventions of social interaction. For example, just today, this was proven when a fellow engineer discussed the use of horse condoms for sintering purposes rather than the infinitely more social function that you all know of; funny enough, he is currently spoken for relationship-wise. This is where the phrase "You're the exception, not the rule", from a less-than-enjoyable chick flick is completely applicable.

With that, I sign off because I need some sleep and am no longer interested in this topic; I'm an engineer for God's sake!

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Economical Woes, New States, and New Policies

THE SIT-IW-ATION ROOM
2B MECHANICAL
3B NANOTECHNOLOGY

France economy stumbling. IMF warns it may fall behind Italy and Spain.

Within a day, France was hit with two separate reports criticizing its economy and labour market. The IMF and Gallois report both stressed that France was losing economic competitiveness due to high employment costs. France has traditionally been the second largest economy in the Eurozone behind Germany. In the recent years France's economy has fallen further and further behind Germany's and is in danger to fall behind the economies of Spain and Italy as well as they embrace economic reforms. Frances faltering economy has been attributed to high wages(France's average wage is over 10% higher than Germany's), high government spending (highest spending in terms of % of GDP in Europe), and early retirement. The Gallois report contained 22 recommendations. The biggest was cutting 30 billion dollars of social contributions from employers and employees. The IMF report recommended that France should change employment laws to make it easier to hire and fire employees, lower minimum wages, and reduce payroll taxes. The IMF warned that France needs to act soon or they will fall behind Spain and Italy.

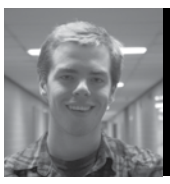
Puerto Rico may become the 51st State

Puerto Rico voters casted their ballots last week on a referendum where they decided that they want to become the United State's 51st state. The ballot contained two questions. The first was whether Puerto Rico should change it's status; 54% voted in favour of the change. The second question asked if it should be changed to statehood, sovereign free association, or independence. In the second question 61% favoured statehood, 33% sovereign free association, and 6% independence. There were also about 500,000 voters who voted on the first question but did not vote on the second one which could mean that a large portion of people want to change Puerto Rico's status but are undecided as to what that status should be. Puerto Rico was obtained by the US in the Spanish-American war in 1898. Puerto Ricans are US citizens and have US passports and pay most federal taxes and contribute $3.5 billion to the federal reserve annually. However, they get less benefits than the States, they cannot vote in elections, and don't have Senate delegates. Puerto Rico also has a higher unemployment rate and a higher murder rate than any other state. Barack Obama pledged to move forward with whatever outcome the referendum had. If Obama keeps his word, then Congress should be working on adding a 51st State to America soon.

GOP Ready to Make Concessions on Taxes, Immigration

After Mitt Romney's disappointing election loss to incumbent Democrat President Barack Obama, the aftermath leaves the Republican party facing difficult choices for its future. As voices nationwide call for reform and progress, there is no doubt that influential Tea Party backers and traditional Evangelical support will try to impede change at every turn. However, recent statements from powerful Conservative pundits, including Ben Stein, Sean Hannity and Charles Krauthammer have shown promise. Each of these voices have admitted shifting attitudes towards illegal immigrants who have taken roots in America, stating they were willing to consider amnesty if based upon a stringent set of standards. These 'shifting attitudes' can likely be attributed to dismal Hispanic support for Republicans in last week's election. Whether these voices will push for change in Washington remains to be seen, however, some heavy-hitting Republicans in the Congress and the Senate have finally conceded on one of America's most sensitive topics: taxes. Leading this concession is House Speaker and Republican John Boehner, who states that Republicans are open to higher taxes based on the right circumstances to avoid the upcoming 'fiscal cliff' in January, when $800 billion in spending cuts will take place and the Bush-era tax cuts will expire.

Congratulations America, and Good Riddance to the "Grand Old Party"



SPENSER GOOD
2B MECHANICAL

In the minds of most Canadians, there really was only one choice. Despite a shaky economic record, the forced introduction of a massive and incredibly complex health care package, the crisis in Libya, and many a broken promise (most notably the clear absence of bipartisanship), Canadians felt that the only choice for Americans in the presidential election lay in the seemingly forward-thinking, more globally-minded, Barack Obama. Mitt Romney represented to us exactly what makes us weary of Americans: dinosaur-like social values; overemphasis on economic principles from the 1770s; a hatred of taxes; and, in general, a refusal that the times are changing. In our minds, Americans re-established themselves as rational, forward-thinking people eager for change, albeit by a thin margin.

One of the saddest notes of the election is that Barack Obama did not win through promoting his own accomplishments, but instead through destroying the reputation of his opponent. This is largely because Obama's largest achievement, the aptly named "Obamacare", is a largely unpopular and expensive healthcare package that few Americans understand and even fewer feel they need. His largest foreign policy accomplishment, the assassination of Osama bin Laden, was quickly overshadowed by the killing of American diplomat Christopher Stevens in Libya. Neither crediting Obama with the killing of bin Laden nor blaming him for the death of Stevens is rational, but American politics are certainly not rational. The political benefits of killing bin Laden were immediately extinguished by the Romney camp after the death of Stevens. Beyond this, slow economic trends and stubborn unemployment gave little substance for the Obama campaign in terms of other domestic policy achievements. One can argue how effective Obama was in executing damage control after the 2007 global economic meltdown, but there were certainly few to no concrete economic achievements that Obama could lay claim to. Knowing this, the campaign instead turned to destroying the reputation of the surprisingly vulnerable former Massachusetts Governor Mitt Romney.

Former organizer of the Salt Lake City Olympic, Governor of Massachusetts, and son of a former Governor of Michigan, Mitt Romney possesses a wealth of political experience. On top of this, his business acumen and experience as co-founder of Bain Capital, a highly successful assets management firm, gave Romney the credentials of a highly formidable opponent for Obama, especially in such weak economic times. However, some questionable business ventures, a loose tongue, and his often mocked political flip-flopping provided the opposing Democrats with some significant sources for criticism. The most notable of his flops was his inflammatory remarks accusing 47% of the nation as being government dependents who pay no income tax, believe that they are entitled to health care, food, and housing, and that he need not worry about this 47% because they would never vote for him. He also accused Barack Obama of delaying the labeling of Christopher Stevens as a terrorist attack, when he had in fact done so a couple days before Romney made the statement. Despite Romney's numerous flops, his strong performance in his first debate gave him a late surge that almost removed President Obama from power. However, it is not only Romney who must take responsibility for the failure of the Republicans, but also the yahoos and goofballs of his party that make a mockery of American conservatism.

When speaking of yahoos and goofballs, the names Todd Akin, Joe Walsh, and Richard Mourdock are some of the most blatantly bone-headed Republican politicians that I refer to. After asked about his opinion regarding post-rape abortions, Todd Akin deemed the procedure unnecessary, citing a woman's natural defenses against pregnancy after 'legitimate' rape. These comments were made in August. Prior to this, Akin was seen as a favourite to win his Senate seat in Missouri, but instead lost to Democratic incumbent Claire McCaskill. Joe Walsh, a single term Congressman from Illinois and yet another Tea Party favourite, stated "the women's life is no exception" when asked if abortion is justified when the mother's life is in danger. He subsequently lost to Democrat Tammy Duckworth in a highly publicized race that included heavy involvement from both Mitt Romney and Barack Obama. The third candidate I speak of is Richard Mourdock, who defeated 36-year Senate veteran and Republican Dick Lugar in a May primary. Dick Lugar was seen as too "moderate" by Tea Party backers, who provided the backbone of Mourdock's campaign. However, it is unfortunate for Republicans that Lugar did not run in the campaign. Despite a large lead over Democrat opponent Joe Donnelly, Mourdock's late October comments that pregnancy caused by rape occurs only because "God meant for it to happen" led to a collapse in popular support and a subsequent loss in the election. These lost slam dunk victories for Republicans in the Senate and Congress decreased representation, but also reinforced an image to moderate Americans of the Republicans being a party representing radical pro-lifers and anti-immigration lobbyists.

In a recent poll, it was determined that 30% of Republican voters believe Barack Obama is a Muslim. No doubt, the percentage of Tea Party members who believe this is much, much higher. As the Democrats continue to present themselves as a forward thinking, socially progressive party, the Republicans continue, whether purposefully or not, to portray themselves as clueless dinosaurs without the faintest idea of how much the world has changed since 1776. It is scary that so many Americans continue to support these ideals. However, it is even more important for the Republicans that they realize that success lies in progress, not in jamming ancient ideals down the throats of the ever-important moderate voter who is tired of the same old crusades. The Republicans have truly lived up their label as the "Grand Old Party", achieving overwhelming support from the white male demographics in America who support the worst ideals of American conservatism. The stooges of America will always vote Republican, but the forward-thinkers need more convincing. If the Republicans ever want to win another election, they need to select a dynamic candidate who understands the new millennium, not some outlandish Tea Party favorite such as Tim Pawlenty or Rick Santorum. Despite what many Americans think, Barack Obama is not a Muslim, post-rape pregnancy is a tragedy, and it's certainly not 1776 anymore.

In conclusion, congratulations to both Barack Obama and the Americans who chose the right candidate while hopefully providing a wake-up call to the Republicans, who have truly become the 'Grand Old Party'.

Baltimore Sun

Obama celebrating his victory in securring the second term of his Presidency

Disney Corp. Purchases Lucasfilm Ltd. – New Star Wars Movie to Released in 2017

A Long Time Ago, In a …. Whole New World.

JON MARTIN
4N CIVIL

SciFi fandom was shocked on October 30th, 2012 to hear the official announcement of the purchase of Lucasfilm Ltd. by the Disney Corporation. Initial opinions were of disbelief, fear for the future of a beloved franchise, and rapidly checking calendars to check that it wasn't April Fools. Add in the announcement of a new *Star Wars* movie being released in 2015, and you have enough *Star Wars* news for an entire year, let alone a single day.

So here are the facts. George Lucas has officially entered into a purchase agreement with the Walt Disney Corporation to purchase Lucasfilm, and all subsidiary companies. This includes the complete marketing wing, LucasFilm Animation, Skywalker Sound, and LucasArts among others. The final purchase price was $4.05 billion, with half as Disney stock. All this money and stock goes to George Lucas as he was the sole owner of all the companies, and has historically been one of the principal financers of major projects. For instance, Lucas personally financed *Star Wars Episode 6: Return of the Jedi*, which almost bankrupted him after his wife left him with their children and sued for half his assets.

Many people have expressed fear for the future of the *Star Wars* franchise in the hands of Disney, but I think it is important to look at how Disney has handled other companies it has purchased and their previous relationship with Lucas. The same fear was expressed when Disney purchased Marvel, and what have we seen in terms of changes since then? Well, the comics have not changed at all, and we have seen some of the best superhero movies in history, all leading into a great ensemble movie in *The Avengers*. Disney has almost acted as a background financer for Marvel, giving them almost complete creative freedom, while providing the financial backing to produce these huge projects. Pixar is another huge company owned by Disney, though it actually has some Lucasfilm history of its own. Pixar was originally founded as part of Lucasfilm Animation, before being split off and sold to Apple, who in turn sold it to Disney for a nice profit a few years later. Pixar has also enjoyed a certain autonomy from Disney, enjoying their financial backing and character licensing, but with creative freedom.

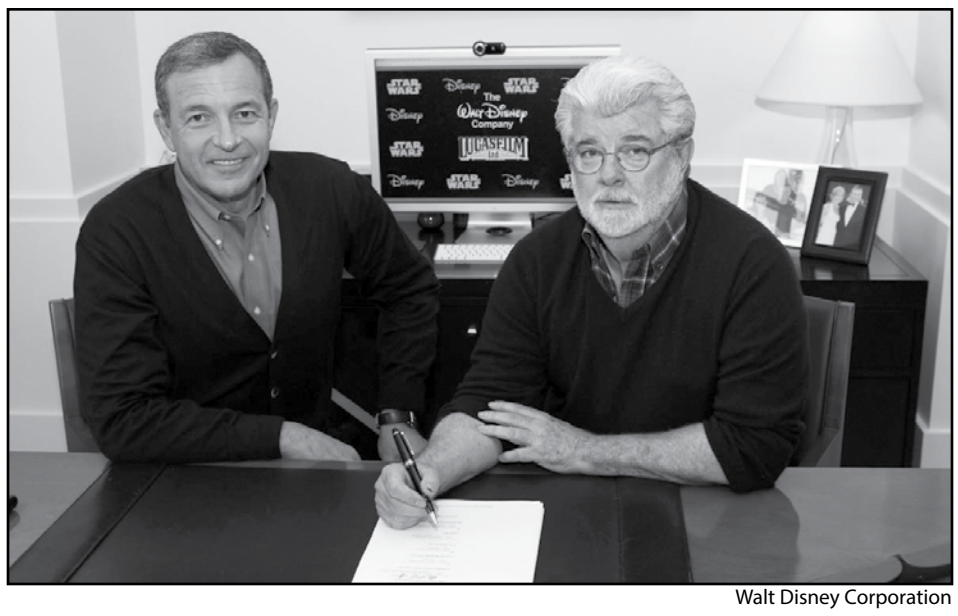
Then there is the fear of *Star Wars* being "Disney-ified" with Mickey Mouse running around as a Jedi. Umm, sorry to break it to you, but Jedi Mickey has been around since the late 80's when Disney partnered with Lucasfilm to produce the Star Tours ride at Walt Disney World. Star Tours is a popular attraction as well at Disneyland, Tokyo Disneyland, and France Disneyland as well. In addition, Disney World has been home to the Disney *Star Wars* Weekends since 1997, where fans can meet stars from the movies and participate activities for kids. The Indiana Jones Experience is another popular attraction at Walt Disney World, again based on a Lucasfilm license (it is currently uncertain what the fate of the Indiana Jones franchise is with this purchase).

So, on to the movie. Episode 7 will be the first movie to be released in the main *Star Wars* story arc since Episode 3 in 2005, followed by new movies every two or three years. At least one new trilogy is planned, apparently set a few decades after the end of *Return of the Jedi*, though there could be more. George Lucas will now act as a creative consultant for the movies, as current co-chair of Lucasfilm, Kathleen Kennedy, will act as President of the Lucasfilm division under Disney chairman Alan Horn. Some people are worried about the potential changes to the movies under Disney, and if they will become too childish. It should be pointed out that the gungans and ewoks were both created by George Lucas, so it can't get much worse. Now before people start complaining that releasing a new movie every two or three years is too fast and the quality will drop, or it is just a cash grab, look at the release dates of the previous movies; *A New Hope* – 1977, *The Empire Strikes Back* – 1980, *Return of the Jedi* – 1983, *The Phantom Menace* – 1999, *Attack of the Clones* – 2002, *Revenge of the Sith* – 2005. Wow, almost exactly 3 years between each of the movies in the Original and Prequel trilogies, so this really isn't speeding anything up.

An interesting point some people have raised is the opportunity for other directors and writers to create new stories, and movies within the *Star Wars* universe. Imagine a gritty origin story for Jango Fett (which already exists in the comics by the way) by Quentin Tarantino or something. How about letting Joss Whedon pilot a new movie? With Disney producing a new TV show based on the SHIELD characters from *The Avengers*, there is the possibility of the *Star Wars* live action TV show finally coming to fruition. There is a vast amount of expanded universe content within the *Star Wars* universe that could be developed into video games, movies, TV, and other forms.

Recently, Harrison Ford said he would be open to reprising his role as Han Solo in a new *Star Wars* movie, but wouldn't agree to anything until a director and script were finalized. Mark Hamill and Carrie Fisher have been rumoured to be open to the idea of returning as Luke Skywalker and Princess Leia Organa again as well. But then there is also the opportunity to see a partnership between Pixar and *Star Wars*, think of the possibilities that open up when you can have the original actors provide the voices for new *Star Wars* stories.

With only about two years till the expected release of Episode 7, there should be more information coming soon like the director, returning and new actors, previews and trailers. Until then, the possibilities from this new partnership are definitely worth watching.



Walt Disney Corporation

Alan Horn and George Lucas sign $4B purchase agreement for LucasFilm

The NHL Lockout Saga Continues

ANDREW MCMAHON
2B ENVIRONMENTAL

The league met on November 3rd, followed by a seven hour negotiation on November 6th, a six hour meeting on November 7th and other sessions on November 8th and 9th. Prior to last Saturday, the two sides had not met since October 18th.

As things stand, the season is cancelled until November 30th (the equivalent of 326 games) and the Winter Classic has also been cancelled. The 2014 Winter Classic will be also be held at Michigan Stadium between the Detroit Red Wings and the Toronto Maple Leafs; ticket holders for this sought after event have the option of receiving a refund for the ticket price or retaining the tickets for next year's game.

No comments were made by either side on the content or subject matter of the meetings, only that key issues were discussed. Persistent reporters were unable to get any answers from both the League's and Players Association's representatives after the meetings which took place at an undisclosed location in New York. Gary Bettman made it clear in one interview that he did not want the media involved when he asked a reporter "How did you find us anyways?" It appears that the two sides have finally learned their lessons after painting each other the villain in previous weeks. The former methods of releasing their offers to the media and portraying the opposing side as the unreasonable one that should just accept the offer ending the lockout, was obviously not productive.

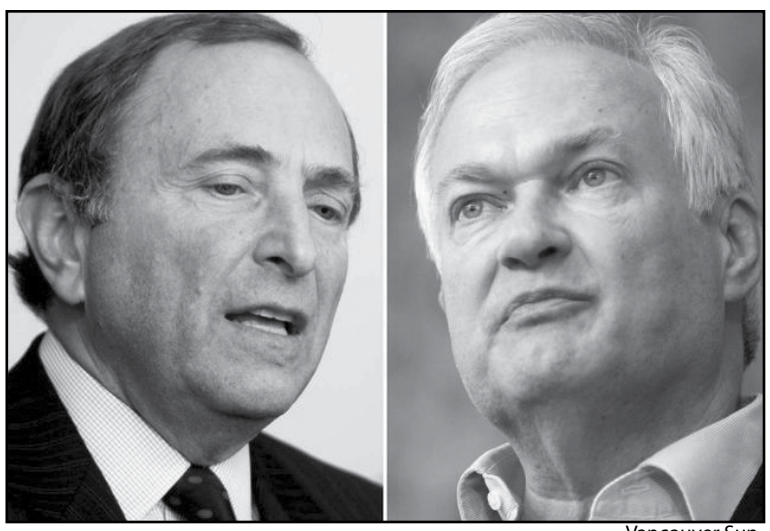
The two sides are meeting and talking, which is more than what could be said of the weeks passed. However, with no release of meeting contents, it is hard to judge whether any progress is being made. Will the players and owners come to a compromise that satisfies both sides or will they wait it out and play a game of chicken until one side caves.?

Let's not forget that aside from a few prosperous markets, a number of teams in the league lost money last season and have been for a while. According to an analysis conducted by Forbes Magazine during the 2010-2011 season, the Toronto Maple Leafs, Vancouver Canucks, New York Rangers, Montreal Canadiens, and Edmonton Oilers collectively produced a $212M profit with the remaining 25 teams losing a combined $86M. In the present (now out of date) bargaining agreement, the league shares $150M dollars with teams around the league, with propositions being made to increase that number to $190M and $250M by the owners and players respectively. Such an increase in revenue sharing must understandably have owners of the Leafs, Rangers, and Canadiens a little uneasy. Speculation could almost be made for a slight division in the owners' camp on this issue, with the unprofitable markets identifying with the players' wishes for more revenue sharing. But before I make it seem as though the league is in a state of disarray, with teams not being financially capable of putting a competitive squad on the ice each night, we should all remember that the NHL is one of the more balanced professional sports leagues around considering that the Phoenix Coyotes made it to the Conference Finals last season.

There may not be a 2012-2013 season, but that does not mean that the hockey world completely shuts down. For example, the celebration for the 2012 Hockey Hall of Fame inductees was this past Monday with this year's inductees includeing Pavel Bure, Adam Oates, Joe Sakic, and Mats Sundin.

In other news, the Western Hockey League plays the Russian All-Stars in Vancouver tonight before the Subway Super Series draws to a close tomorrow in Victoria, BC. The series posts an all-star team of Russian junior players traveling across the country facing off against all-star teams From the QMJHL, OHL, and WHL for six games (two versus each Canadian junior league).

Life doesn't end with the absence of an NHL season, but any hockey fan would agree that there is definitely something missing.



Vancouver Sun

Gary Bettman and Donal Fehr, the faces of the lockout

UWFlow: Making CSE Course Choices Easier

VINCENT ZHU
1A CHEMICAL

Course selection is an arduous process, and with literally hundreds of choices - that is, if you aren't in engineering and restricted to taking prescribed Complimentary Studies Electives, it can take forever to select a course that you want to take the next term. Although course selections began nearly a month ago, it may still be worthwhile checking out Flow, a new website that is designed to help with course planning and to check out what your friends have taken.

Students are limited in the amount of resources that are available in order to make an informed choice. You would have to skim over hundreds of course listings to find out what each course is about, which do well in providing descriptions but lack in providing student opinions of the course. In addition, most of the opinions on these courses were passed around through word of mouth, which can be incomplete and inconvenient. Since each course costs lots of dollars, students should probably make the most out of it by selecting the course that best suits their interests.

This is what motivated a group of University of Waterloo students to build a website that collects what everyone thought about a course and put it in one place. The team consists of David Hu, Mack Duan, and Sandy Wu (all of which are in third year Software Engineering), who handle the website development, as well as Terrence Kwok and Shubham Datta (who are fourth year AFM students), who handle the business side of Flow. According to the team, their aim is to change the way students find out about, track, and plan their courses online by trying to create a social platform where students can share and obtain course information.

Apart from being just another simple rating website, Flow tries its best to incorporate social networking into it as well. After all, two of the three developers have worked for Facebook in the past. Once a profile is created, and course history is imported, you will be able to see the courses that your Facebook friends have taken and plan on taking in the future. Furthermore, the website's user interface will seem very familiar since it is very similar to Facebook, for example, instead of 'mutual friends' underneath each person's name is 'mutual courses'. However, one important thing to note is that, although it incorporates some social networking, it is not actual social networking. No one other than your friends will be able to view your profile and see the courses that you have taken - which applies to you as well.

Flow was launched this September and as a result some of the current ratings and reviews are taken from anonymous posts on websites such as ratemyprofessor.com. That being said, this may change as the number of users increases. In addition, the website is still undergoing improvements and the development team encourages more feedback from users. In particular, one can expect to see new features soon, such as schedule sharing.

In brief, Flow looks to have lots of potential as a new innovative method for making course selection decisions. Not to mention, all those cute cat photos that replace all pictures of the professors on the site are cute.

UAE Campus to Close: What now?

KATE HEYMANS
3B CHEMICAL

The news that Waterloo was closing down its Dubai campus came as a surprise to most students. Although students knew that low enrolment in the programs offered there was a problem, no one expected to hear that the university's Board of Governors was going recommend the re-consolidation of the UAE campus to the main campus.

From a student perspective, the development of the Dubai initiative had been great. Enrolment had appeared to be on the rise: from the 20 or so students who started in 2009 to the 140 students who enrolled this past year, there had been a lot of growth (but it certainly didn't match the expected 500 students in the university's business plan). The quality of teaching offered at the Dubai campus had been on par with the quality on campus as local engineering profs travelled back and forth to the campus to teach. Despite concerns about class sizes getting too big when the UAE students joined their peers on the main campus, the transition to Waterloo had also been smooth with students joining their cohorts in Chemical and Civil Engineering in January 2012. Gordon Lewis, of the 2014 Chemical Engineering class commented, "Opening this satellite campus meant providing opportunities to more students in terms of education and co-op experience in the Middle East". Even main campus students were using the opportunity to travel to Dubai both for co-op terms and for school to broaden their horizons.

The UAE students here on campus were disappointed to hear of the closure of the Dubai program. Lewis stated "It is regretful to hear that the journey ended in its premature period. Realizing the fact that starting a new project is never smooth sailing, I am sure the decision to close the campus has impacted, not just the current students but also the graduated students from there." The closure also means that a double cohort of students will be coming to the main campus. This will certainly have an impact on the UAE students who will have to adapt to Canada earlier than expected.

Now that the dream of opening a campus internationally has failed, what has Waterloo learned? Many American, and even some Canadian, universities have successfully opened and operated campuses internationally; for instance, Queen's University has its Herstmonceux Castle in Southern England. Despite Waterloo's entrepreneurial spirit, our international campus failed. For students, it means that we will no longer have the opportunities to live, study, and work in Dubai. It will also decreases the presence of international students on our campus and make it more difficult to attract international students from the UAE region to our campus.

Dreaming Big at PEO Student Conference

ANDREW FISHER
4N CIVIL

Over the weekend of November 2nd to 4th, 10 engineering students on both A and B Engineering Societies participated in the annual Professional Engineers Ontario Student Conference (PEOSC). The PEOSC's theme, Bridging the Gap: From Theory to Practice, provided sessions about professionalism, design thinking, contract law and ethics, and much more in an educational, yet entertaining environment. Key memorable quotes from the conference include "Dream Big" (Howard Brown) and "Engineers are not trained, they are educated" (Jeanette Chan). For most of us, it was our first student conference to attend and it was a memorable and valuable experience!

Ottawa is a beautiful city and we wish we got to see more of it, but we only had a weekend and many amazing scheduled sessions to learn from. Sessions were facilitated by speakers who were very knowledgeable and informative in their areas of expertise. There were a variety of talks relating to engineering politics, including: law in engineering, ethics, pursuing business degrees, and policy. Learning about engineering in politics brought on the realization that our voices can and should be heard regarding engineering licensing. Some of the more favourite sessions deviated from the politics of the engineering profession and focused on design thinking, biomechanics, and tsunami disaster relief - topics normally not discussed at Waterloo. As a major sponsor of the conference, Professional Engineers Ontario (PEO) encouraged all engineering students to sign up as members on the PEO website. After hearing the benefits, we encourage everyone to do so as well!

Delegates at the conference were pursuing their undergraduate degrees and convening to get a jump-start on their future prospects as a licensed PEO Engineer. We were able to meet these fellow engineers who came from different universities in Ontario. We were able to share ideas and be inspired by what other students were accomplishing at their universities. By sharing rooms with these students, we were forced to get close, literally. We learned that engineers can't dance, but can still engineer, and semi-formal attire means a full suit. On the side, we were able to connect with engineering professionals, developing our professional network in the process.

Some of the more humorous components of the conference included unique sassy music for the drive, one car going eastbound into Quebec on the drive back - if only that were the destination - and the encounter with two police officers who were concerned about a fully functioning light being "burnt out." We were disappointed at first that Beaver Tails are not made from beavers until we devoured them.

All of us would encourage you to go to an engineering conference during your time in university at least once. It's definitely something you have to try before you graduate; after all you are only an undergrad once!

Fabrication of Carbon Nanotubes to Replace Silicon

BRIAN SO
1A NANOTECHNOLOGY

Recently, 10,000 working transistors, made purely of carbon nanotubes, have been placed and tested on a single chip through existing semiconducting fabrication processes. In this new approach to carbon nanotube technology, scientists from IBM have opened the path to commercial fabrication of computer chips that are faster, smaller and more powerful. Such a device has high hopes of replacing current silicon technology. There has been a continuing trend over the years of miniaturization of computing parts, leading the way for future microelectronics.

Silicon transistors are not new to us. They are tiny switches that carry information on a chip and they have been part of the basis of computing technology for many years now. Year after year, they have been made smaller and smaller, to the point where the ability to shrink chips will be physically limited. When silicon starts to measure only a few nanometers across, it starts to lose it's effectiveness as a semiconductor. After a few more generations, classical methods of shrinking semiconductors will no longer be viable in creating low cost and faster processors.

The solution to this lies in carbon nanotube technology. They are more attractive than silicon for a couple of reasons, especially at the nano scale where measurements are atomically sized. Electrons tend to travel easier in carbon transistors and because of this, data can be transported much faster. Moreover, Nanotubes form the ideal physical shape for atomic sized transistors.

IBM is paving the way for circuit fabrication with a high density of carbon nanotubes, at discrete positions on a substrate. The ability to isolate semiconducting nanotubes and placing so many on a single chip is crucial, as over one billion transistors will need to be integrated for future chips. Right now, we are hovering at around 100. They have also shown that carbon nanotubes operate as excellent switches at molecular dimensions of less than 10 nanometers (this is less than half of the current silicon transistors).

Carbon nanotubes come naturally as a mix of metallic and semiconducting species. For operation, only the semiconducting parts are useful and not the metallic parts. Thus, there is a need to differentiate the two. To make working electronic circuits, these tubes need to be aligned and placed perfectly on a wafer through large scale integration.

IBM researchers have turned to a novel method based on ion-exchange chemistry allowing the precise and controlled placement of carbon nanotubes in high densities, at one billion nanotubes per square centimeter. First, they mixed the carbon nanotubes with a surfactant, a soap that makes it soluble in water. Then, they made a substrate comprised of two oxides with trenches made of modified hafnium oxides and silicon dioxide everywhere else. Afterwards, the substrate was submersed in the carbon nanotube solution where the tubes would chemically bond to the regions of hafnium oxide while the rest of the surface would remain clean. By doing this, they have managed to fit more than 1,0000 transistors onto a single chip. In addition, it is possible to do rapid testing of thousands of devices by using high volume characterization tools because of its compatibility with standard commercial processes. This process can be readily implemented as it involves the use of common chemicals and existing semiconductor fabrication techniques. It will allow the industry to work with carbon nanotubes at a larger scale and of course, to further the development of carbon electronic technology.

Scientific Breakthrough on Biofuel Production

NACHIKET SHERLEKAR
2A NANOTECHNOLOGY

The concept of using microalgae as an alternative source of energy by converting it into biofuel through the application of pressure and heat has been the subject of research for several decades now. Conventionally, both mechanical and chemical methods have been used to extract the oil from the algae and convert it from its crude form into something more viable. Mechanical methods usually include presses, which squeeze the oil out of the algae through the application of pressure. Another mechanical method involves the use of ultrasonic waves to break the cell walls of the microalgae and in turn release the oil. Chemical methods include using specific organic chemical solvents that dissolve the oil in the algae and extract it in this manner. Once the crude form of the oil is extracted, it is made to undergo a process called transesterification, which results in the formation of biodiesel, ready to be used.

The methods described above have been tested extensively using different strains of algae and different physical and chemical conditions. The results are quite promising. The head of the Algal Biomass Organization has stated that algae biofuel could become commercially viable by 2018. However, until recently there have been no obvious signs of this happening. Last week, researchers at Savage Labs, University of Michigan, announced that they have come up with a quick and efficient method to convert microalgae into biofuel that they claim takes as little as a minute to complete. This method results in an impressive 65 percent conversion of algae into crude oil. Savage Labs' choice of microalga is the strain of genus Nannochloropsis. Their method is said to mimic the natural process of conversion of marine organisms into biofuel. It involved filling a steel pipe connector with 1.5 millilitres of algae solution, covering the ends and inserting it into sand at a temperature of almost 600 degrees Celsius. Since only a small volume was used, this ensured that the algal solution was completely heated through. However, since the solution was heated for just a minute, it reached a temperature of about 290 degrees before it was pulled out. Previous results conducted by the team showed that optimum results were obtained after treating the algae for 10 to 40 minutes at a temperature of 300 degrees.

While the discovery of this one-minute cooking process for the formation of biofuel is a reason to rejoice, the team is still unaware as to why this method works better than other, longer procedures. However, they do have some guesses. They believe that the reactions involved in the formation of biocrude take place at a much faster rate than previously thought. The fast heating, it is suggested, might prevent unwanted reactions such as decomposition of the biocrude from taking place. The advantage of shorter reaction times is that smaller reactor sizes are possible, thus reducing the cost of building a fully functioning power plant. Unlike other algae oil extraction methods, this one harvests not only the energy contained in the oil, but also breaks down and collects energy from proteins and carbohydrates present in the solution. This results in a whopping 90 percent energy retention.

Savage Labs is also working on better methods of refining the biocrude to make it commercially viable. Earlier this year, they came up with a purification method that resulted in a biocrude consisting of 97 percent carbon and hydrogen, a number not achieved by anyone else. When microalgae biofuel becomes economical, an area about the size of New Mexico would be sufficient to harvest algae and provide enough biofuel to meet current consumption rates in the United States. Unlike other biofuel sources (such as corn), algae would not take up prime farmland and could thrive on any water body.

It is hoped that we wean ourselves off our current dependence on fossil fuels and are able to switch to a greener (literally!), more sustainable fuel source within the next decade, and thereby ensure we leave our planet in still habitable conditions for our children.

A City Without Cars

CHRISTY ROUAULT
2B GEOLOGICAL

Imagine it: Eighty thousand citizens in a city designed so that everything is less than a 15 minute walk away. An underground train radiating from the central hub travels to Chengdu and the surrounding area. This new sustainable city was designed by architects Gordon Gill and Adrian Smith from Chicago, Illinois. It is projected to be constructed in China by 2021 and will be the home of approximately 30, 000 families.

Much criticism of the proposal has been vocalized as well. How will emergency vehicles serve the area and how will disasters such as fires be controlled in such a dense city? How will they deal with people who cannot walk or cannot so easily function on a day to day basis including the elderly? You might also be wondering how a city this large would sustain itself with no distribution vehicles of essential items such as food and shelter. Common maintenance alone would be an obstacle.

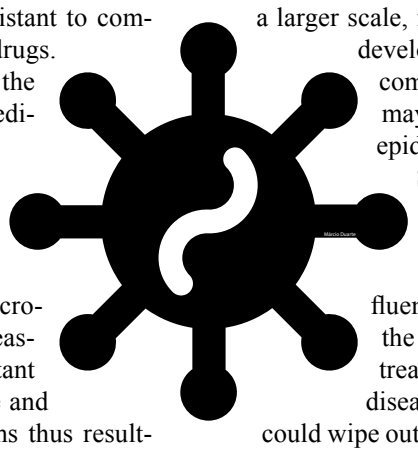
But this is not a new idea. The design is revolutionary for where we are in the technological world; however, it is far from ingenious. Car-less cities have been around for a long time. Before the invention of cars, cities were designed for horses and carriages, and of course, there was a time before the horse and carriage when transportation was a much more simple idea. Even in the 21st century we have cities like this too. Venice, Italy is almost completely car free, with boats as its primary mode of transportation, and several communities around the world have tried to turn completely car free. The Medina of Fes-al-Bali, Morocco is a city of 156,000 people which is so dense that riding bikes is limited due to lack of space.

Named "Great City," it aspires to be just that. With every green innovation you can think of, this proposed city of 1.3 square kilometres is a hyper-dense urban masterpiece. A seasonal energy storage system which stores summer heat and converts it to power to heat homes in the winter will be employed. The all pedestrian city has been designed to use 48% less energy, 58% less water, produce 89% less landfill waste, and 60% less carbon dioxide. These lofty goals are all a part of Adrian Smith and Gordon Gill's plan to slash the cliché of the urban wasteland with smog and a stench that most people associate with hyper-dense spaces. The architects want to create a fresh space that serves its people. Their goal is to, "enhance the quality of life of its residents." Great City holds promise that although we are reliant on cars, we are self-sufficient without them.

Emergence of Superbugs

SARAH YOUNG
1A SYSTEMS DESIGN

The so-called "superbugs" are microbial organisms which have, through genetic mutation, become resistant to common antibiotics and other drugs. Superbugs emerge due to the widespread use of these medicines.



It is important to use antibiotics and drugs cautiously. As their use becomes more widespread, the selective pressure on microorganism populations increases. This allows the resistant bacteria or viruses to thrive and eliminates weaker organisms thus resulting in more resistant populations. Often, medicines are prescribed to people who do not actually need them either because they are being overly worried or because their doctor is being cautious. When antibiotics, for example, are used for things other than bacterial infections they will become less effective for future bacterial infections, and bacteria could possibly acquire resistance genes.

As superbugs become more common, our drugs become less efficient. Although this may not be important to the average healthy person, this can be a disaster for people with immuno deficiencies who do not have the proper antibodies. Less common medicines which may be more expensive, cause side effects, or be less efficient, may also have to be prescribed. On a larger scale, if a bacteria or virus develops a resistance to common treatments, it may cause widespread epidemics such as the SARS outbreak in 2003, which caused over 800 deaths, and the H1N1 influenza virus. If we lose the ability to effectively treat people with similar diseases, new outbreaks could wipe out much of the population just like the Spanish Influenza did a hundred years ago.

So next time your doctor prescribes you an antibiotic as a preventive measure for your cold, think twice before actually taking a useless prescription. On the other hand, if you do need antibiotics, make sure you consume them in their full dose to wipe out the bacteria completely instead of letting the toughest survive and pass on their nastiness to someone else.

Mobile Overload Means New Everything for November

JACOB TERRY
2B NANOTECHNOLOGY
T CUBED

If there's one thing that the big three consumer technology companies are good at, it's competing for public attention. October turned out to be a big month for those looking for mobile devices, just in time for the holiday season, with companies announcing products on the same dates that others had devices released. So many devices have been announced and released in the last few weeks, that it appears fitting to devote this issue's column to all the new goodies you can get your hands on. I promise not to write much about Windows 8, since I'm sure keen readers noticed my review graced both the second and third issues of this term.

Apple's big announcement last month was the iPad mini, which is an 8-inch version of the iPad with design cues borrowed from the iPhone 5. The resolution is the same as the first iPad generations at 1024 x 768, giving it a pixel density of 163 ppi (pixels per inch), which is the same as the first three iPhones. This is the most puzzling aspect of the mini, since every other line of devices in Apple's portfolio is moving towards incredibly high densities. The new 13-inch MacBook Pro, iMacs and fourth-generation iPad that were announced with the iPad all had Retina displays, as Apple refers to them, suggesting that pixels should be indiscernible. Likely, the iPad mini will have double the resolution in next year's update, but this point will make those of us who demand the highest display quality in their devices think a little longer before considering it over a 10-inch iPad or competing tablet. Many reviewers have noted that they prefer the iPad mini over the 10-inch iPad despite this sticking point, and playing with one in the Apple Store makes it a little clearer. The iPad mini shows the very same information you get on a 10-inch iPad, but in a smaller, sleeker and arguably more appealing form factor. If you're looking for an iPad, as with any device, the one you pick will be based on which benefits and detriments align with your needs. Both are still top-form tablets, but for those who really want an iPad mini with the pixel density of an iPhone, you'll likely have to wait another year. There's not much to say about the fourth-generation iPad, since it's visually the same as the well-received third-generation one except for the Lightning connector on the bottom and some improved internals.

Google had a bit more to talk about this month, with an updated version of Jelly Bean and new devices in both the phone and tablet sizes to join their Nexus 7 tablet from earlier this year. The heavily-leaked Nexus 4, manufactured from LG, is Google's flagship phone for the season and has some interesting features. While some Android fans mocked Apple's choice for neglecting LTE and putting glass on the front and back of the iPhone 4 and 4S, Google oddly enough chose to follow both of those paths in creating the Nexus 4, while Apple chose to implement LTE and remove the glass back on the iPhone 5. Echoing some comments made my Android users in the past, no LTE in 2012 is nearly a deal-breaker at this point. Sure, many places don't have LTE support at the moment, but it's expanding at a rapid pace and is on virtually every other major phone at this point. The glass back, if it's anything like the iPhone was, will hardly be a big deal, although replacement backs may be harder than heading to the Apple Store and getting a $39 or free glass cover in a matter of minutes. The Nexus 4 still looks like one of the best deals if you're looking for an Android phone though, as with all Nexus devices, since it's unlocked and running stock Android, which would be the way to go for me if I were to switch.

Google also announced the Nexus 10, their flagship tablet with a display of the same resolution as the 10-inch iPad. There's not too much to say about it, except that if you're shopping for an Android tablet bigger than 7-inches, this is the one you're looking for. Unfortunately, Android developers have been a little slower at making apps that scale nicely onto large screens, so many of the apps suffer from the same awkward spacing and overblown proportions that plague other Android tablets. One upside to the software is that Android 4.2 further refines the excellent user interface introduced in the Jelly Bean update, making Google's OS a little more polished with each update.

HTC

Apple

Google

HTC's Windows Phone 8X (left), Apple's iPad mini (centre) and Google's Nexus 4 (right) are only a few of the deluge of devices announced in the past couple weeks

Microsoft's biggest news was in the form of the Surface, which is their first foray into the tablet hardware side of things. Software aside, since it's quite similar to Windows 8, the hardware design appears to be rather nice, with the Touch Cover and Type Cover proving to be rather novel accessories. The Type Cover in particular, while bulkier than your average tablet cover, was described by The Verge as feeling similar to typing with a MacBook Air, which is excellent for any sort of mobile keyboard, especially one that also functions as a cover. Unfortunately, finding a Surface to test this on myself has proven challenging, so I've had to rely on others for their impressions. One very quick note on the software is that the gestures that feel awkward on a computer are amazingly intuitive on a tablet, having tried using Windows on a Samsung tablet at one of the Microsoft kiosks, and I'd recommend giving it a spin if you come across one, just to see what it's like. Many have complained that Windows RT, which comes on current Surfaces, has very little software outside of your staple Office and other large applications, and suggest waiting for the Surface with Windows 8 on it before seeing if you're interested in the tablet.

There were also two big phones that launched with Windows Phone 8, their new operating system. Nokia's Lumia 920 follows the same design ethos as the previous flagship Lumia phones (and the N9 before it), with an excellent display, vividly coloured casing and, by implementing some camera shake reduction magic, is able to produce some insane photos for low-light conditions and moving targets. HTC's Windows Phone 8X is an equally vivid, equally well-designed phone in its own right. It embodies the flat, minimal, yet beautiful lines of the Windows Phone operating system beautifully, and visually deserves its place as one of the flagship Windows Phones. Both run Windows Phone 8, which has added a few tweaks to the homescreen, deeper Skype integration and wallet support. In all, no matter which platform you prefer, there appears to be something new for you. The Nexus 7 and iPhone 5, while not extremely new, were released within the last couple months, and are as worthy as any other devices I've mentioned. What binds these aforementioned tablets and phones is that they are all the prime of their ecosystems. If you're looking for a new device, any of the ones here are top of their class and would be great entries into iOS, Android or Windows Phone, despite any flaws they may have. All this competition showcases how much innovation there is in the mobile industry right now, and you get to reap the benefits.

As a little tech aside, I happened to come across a Wii U in an EB Games this past week, and it's a lot more impressive in person than you'd gather from the Internet. It has the silence and sleek size of a Wii with guts more impressive than that which you'd find in a 360 or PS3. The Gamepad is a little bigger than you gather from looking at them online, but it's quite comfortable to hold. You may be able to find them at other stores as well, if they have demos set up. The only playable game was Rayman Legends, which in my few minutes with it proved to be an enjoyable and entertaining little platformer. I caught myself smiling a few times at how neat the Gamepad-oriented puzzles were, and I think the potential for games on this device may outclass what similar offerings like Xbox Smartglass, which doesn't have the same level of instant connectivity and flawless cohesion with the console. It's definitely worth a look though if there's a GameStop or EB Games in your area. With all these neat devices being released, I'm not quite sure what will be left for the final issue of the term, but I promise to think of something good.

ENGINEERING SOCIETY 'A' ELECTION FALL 2012

Yet Another Election Courtesy of Your CRO!

ELIZABETH FORAN
CHIEF RETURNING OFFICER

Hello again to all you engineers! By now you must be wondering, who is this annoying person, why are they sending me so many e-mails, and when will it stop?!

It's just me, Elizabeth Foran, the Engineering Society CRO, just trying to run some elections. In case you've been under a rock for the past little while, we've had a presidential election, during which David Birnbaum was elected as the next Engineering Society 'A' President. The EngSoc Executive Elections finished up last week with the following results: Leila Meema-Coleman for VP External, Annamaria Reda and Brendon O'Hanlon together for VP Internal, Drew Dutton for VP Education, and of course, Kevin McNamara for VP Finance. Congrats to all of the new execs, and the best of luck during your future terms. Also, congrats to the current exec on your closing terms. You've all done so much for the society, and your time and contributions are greatly appreciated.

Now on to the real reason why I'm bothering you yet again. The position of WEEF Director has yet to be filled for the upcoming terms. For those who don't know, WEEF is the Waterloo Engineering Endowment Foundation. It gets you money for things in your faculties, student teams, and engineering clubs. The WEEF Director is the person who chairs the Funding Council Meetings, the Board of Directors Meetings and the Annual General Meeting. The director also manages and oversees all work not directly under the Board or the Funding Council.

No one applied to be WEEF director when the nomination forms went out with the EngSoc executive nomination forms, so it is now necessary to have a by-election to fill the position. This means that we are now undergoing a third election.

As this is the third time we are having an election, I'm sure you know the drill. A link sent to your Waterloo email, use link to vote, yay elections. Something that I would very much like to stress is the need to make an educated vote. These people are going to be representing the student body to the faculty, alumni, and others outside of engineering for the next 16 months, and this is your chance to make your voice heard!!! I understand that the constant bombardment of emails is getting annoying, but those emails are for your benefit. All you need to do is click, read, and click again, and then click one last time to get out of the survey (I make no promises it will take exactly that amount of clicks). So for the small amount of your time it takes, there is no harm in making an educated vote for the well-being of your future here at Waterloo.

So, for this third (and ideally, last) time, I ask you to take the time to read the platforms, and make a vote for what you'd like to see in your faculty. WEEF is a huge help to engineering (look for the bright yellow stickers), and your votes will help WEEF to continue improving the lives of Waterloo Engineering students. Voting for the WEEF Director will open on November 17th, and close on the 20th. There will also not be a polling station, so please cast your vote, and make your mark on the Faculty of Engineering.

WEEF Director Candidates

Anthony Clark

2A Computer Engineering

Hey everyone, my name is Anthony Clark, I'm currently in my 2A term in Comp and I am running to be the next WEEF Director on stream with A-Soc. The Waterloo Engineering Endowment Foundation (WEEF) is an exceptional opportunity for undergraduate engineering students to have a direct say in determining which projects and improvements deserve our support through funding. I absolutely love that this is possible, as all too often it feels as if students are limited in their influence.

My goals for WEEF are focused around increasing the sense of importance students have for the foundation, as well as the level of involvement they have.

First, I want to make information on WEEF funding and requests markedly more accessible to everyone. I have plenty of first-hand experience managing and presenting data in pleasant and useful formats from co-op and web design experience which would help me to achieve this. I believe that having instant access to understandable information would show YOU where YOUR ever important WEEF contributions are going and where they have gone in the past.

Second, I want to encourage WEEF funding council members and any other students who want to get involved to help with aspects other than funding allocations. The best way to convince a person that something is important is having somebody that they trust tell them so. With this in mind, I envision encouraging students with experience in WEEF to interact with other students in their classes, pointing out areas in their education where the foundation has had its influence.

Additionally, I would like to create a relationship between WEEF and the groups who receive funding from the foundation, whereby they vocally endorse WEEF rather than passively sticking the lovely stickers everywhere. Some lab instructors do this well already, but I would like to make them feel bad if they don't!

As much as I am thankful to you for reading this, I would much rather speak to you in person - if you have any questions or suggestions please feel more than welcome talking to me when you see me around campus!

Ben Pratt

2B Geological Engineering

I did not understand what the Waterloo Engineering Endowment Fund meant to the undergraduate students, faculties, and clubs until my 2A term (Winter 2012). My first council meeting showed me a gathering of strong minds from student representatives with one common goal. We are all looking to improve the environments that we experience on a daily basis; with the caveat that other environments require attention as well.

During the two council sessions that I have sat in (2A and 2B), I have watched professors, lab instructors and technical staff approach council in search of funding for lab and demonstration equipment that will be used to demonstrate visual, real-life, and real-time representations of simple and convoluted course concepts. These individuals show a deep passion for the learning experiences of their students, both current and future.

The success of the small teams and clubs is dependent on funding from any source available. WEEF has presented funding options for long-standing and emerging clubs. Many of these teams provide invaluable practical applications of their strength, whether in business, marketing, engineering design, implementation, testing and in some cases, re-design. The extra-curricular opportunities provided by student teams give UW students the opportunity to get involved, apply and refine their strengths.

I have heard several students ask "why should I pay for something if I don't see the benefit?" The financial tradition established in 1990 has been the key funding source for various faculty and student team initiatives across campus, with minimal recognition. Students should be aware of the benefits that they have directly or indirectly experienced as a contributor to WEEF. One of the most powerful aspects of WEEF is the involvement of students to decide on where and how their contributions are spent on campus. Simply, WEEF is a student funded initiative, for the students.

The continued success of WEEF is dependent on a strong council, a devoted Director, continued support from donor and student contributions, committed and passionate faculty members and the creative and innovate student teams. Ultimately, the University of Waterloo is driven by the success of the students, both academically and in their extra-curricular activities.

The importance of a quality undergraduate experience cannot be discounted; the experience derived from faculty and student teams is of utmost importance to ensuring the success of students well after they leave campus. With these experiences and ideals of a successful undergraduate experience, I am excited to have the opportunity to run for a successful Directorship of WEEF.

I graduated from Mount Royal College in 2007 with a Bachelor's of Applied Industrial Ecology and have worked within the oil and gas industry as an environmental consultant. I incorporated in 2008, contracting to smaller environmental consultancies in the roles of Project Manager and Lead Field Technician. My experience in dealing with clients, landowners and contractors in a cost sensitive field has provided me with extensive opportunities in developing communication, budgeting and people management skills.

I sincerely look forward to continuing working with WEEF in a leadership role, and ensuring the undergraduate student experience is memorable for all students at the University of Waterloo.

End of Elections, FedS, and a Couple of Meetings Left

LEAH ALLEN
PRESIDENT

Hey Everyone,

The past few weeks have been busy with the elections to elect the new executive of the Engineering Society for the next 16 months. In my last article, I congratulated David Birnbaum on becoming the new President. After this past week, we have our remaining executive elected and they are:

VP Education - Drew Dutton

VP External - Leila Meema-Coleman

VP Finance - Kevin McNamara

VP Internal - Brendan O-Hanlon and Annamaria Reda

I wish all the new executive the best of luck in their upcoming term and I hope they help move the Society forward to better serve our student population. I would also like to thank the CRO, Elizabeth Foran, for putting so much work into running two great elections.

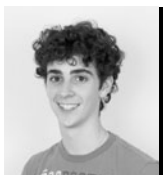
The next Engineering Society meeting is TONIGHT at 5:30 PM in CPH 3607. Please feel free to come out hear from the FedS President, Andrew Noble, speak about the new student building FedS is proposing. There are a few other items on the agenda including executive updates, executive accountability, and general announcements about upcoming events.

In terms of President things, I am gearing up for the Examinations and Promotions meeting which will be taking place this week. The President of the Engineering Society is the only student representative on the committee and it is one of the most important duties of the President. This week, I will also be attending the Engineering Faculty Council meeting and will probably have things to report on at the EngSoc meeting. Coming up next week, I have a WEEF Board of Directors meeting and a Stanford Fleming Foundation Board meeting to look forward to. Other than that, President things seem to winding down as the term comes to an end.

If you have any questions or comments please email me at *president.a@engsoc.uwaterloo.ca.*

Leah

Already in Transition?



DAVID BIRNBAUM
VP FINANCE

Oh, hello there!

So this part of the term has been pretty quiet for me in regards to my role as VP Finance, there are just a few things going on.

First, again, is sponsorship. The proposed allocations of sponsorship were approved at the last EngSoc meeting, and teams can now pick up their allocated funds. The breakdown can be found on the EngSoc website.

Coveralls are finally in, as are the new directorship and EngPlay patches. EngPlay patches will be in Novelties soon and all of the directors will be getting their patches at the sixth EngSoc meeting so be sure to come out to that!

The degree frames are also in, and will be in Novelties soon! They are extremely nice and provide an affordable alternative to those offered by the University.

MOVEMBER! It is upon us. Head over to Novelties or the EngSoc Office and purchase an awesome Movember patch. 100% of the proceeds go to support the Movember cause!

The ECIF Committee will be meeting soon, and needs to make its presentation at Council Meeting 6. If you have any ideas about how you can improve the Engineering Society or any other space on campus, just send me an email with your idea and I will bring it forward! I will be starting the process of re-doing the ECIF form and other items on the website but, for now, the best way to have your voice heard is to send me an email.

At Council Meeting 4, we finally passed the new Constitution and Bylaws for the Engineering Society. The other executives and I are extremely happy to have these new official documents and are available for review on the Engineering Society website as well.

You should all be super pumped for your next VP Finance, Kevin McNamera(pronounce Mic-NAM-err-ah). I have already started to transition him, and am super excited for what he will bring to the role and the Engineering Society.

Thanks for reading, and as always, if you have any questions just email me at *vpfinance.a@engsoc.uwaterloo.ca.*

David

Artsy Waterloo Engineers

ANGELA STEWART
VP OPERATIONS

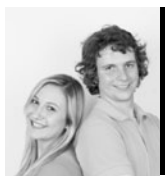
Well, the lovely crisp autumn days of October have frozen over into the bleak, colourless days of November. The bright, fall colours might be gone but the Engineering Society still has a number of great events and workshops to attend while you count down the days until end of lectures.

Prepare yourself for the cultural event of the term: the Engplay! The comedic and dramatic talents of your fellow students will keep you entertained with the return of the termly Engineering play. The cast and crew have worked tirelessly the entire term to put this show together, so be sure to come out to one of the three showings: Wednesday, November 14th at 8PM(after the EngSoc meeting), Friday November 16th at 7PM, and Saturday November 17th at 7PM.

Want to see more artistic endeavours? Come out to Band Wars to see the musical stylings of your peers on Wednesday November 21st, from 8PM-12PM. Listen to some awesome music, support your friends, and meet new ones at this all-ages event. Band Wars will be hosted at Maxwell's Music House at King and University, across the street from Laurier University, only a short bus ride or walk from Waterloo campus.

Missed out on the first sushi workshop earlier in the term? Well, never fear! Another amazing Sushi Workshop is coming your way on Tuesday November 27th, from 5-7 PM. Sign up on the Orifice door closer to the date. Spots fill up quickly, so watch your inboxes for updates in the weekly EngSoc digest email!

Santa's Moustache Fills Out ESSCO LIAC Survey



MICHAEL SELISKE
LISA BELBECK
VP EXTERNALS

Movember is the time of cold weather, new executives (CONGRATS EXEC and the new VP External LEILA!) and moustaches all over the place! This is week two of Movember and it is going amazingly! The UW EngSoc 2012 team now has 56 members and has already raised $380.00! Keep them growing, and ladies, support your Mobros! On the topic of Movember, I had a meeting with all faculties about mingling and supporting Movember as a team! The Arts faculty has already raised $550.00 for Movember! They will also be hosting a Dunk Tank/ BBQ to raise some more money in the Arts Quad, and we should all journey over to the other side of campus for a great time! More information about this to come!

Along with Movember, EngSoc will be doing another smaller Charity Stache shave this mounth, and Cam Winterink has said "I will shave off my eyebrows again". More information on this to come close to the end of the month!

Christmas is around the corner, meaning "SANTA! OH MY GOD! SANTA'S COMING! I KNOW HIM! I KNOW HIM!"- Buddy. The Kitchener/Waterloo Santa Claus parade is this weekend, Saturday November 17th! The Engineering Society will be represented, because the lovely directors have been hard at work to make an awesome float. Our parade float will include some student teams and the Tool with the Tool Bearers! We are also looking for anyone who would like to just walk beside the float and hand out candy canes! If you are interested, email me and I will also be sending out a reminder later this week

If you haven't been spammed enough already, you should all fill out the ESSCO LIAC survey! It can be found on the EngSoc website at *http://engsoc.uwaterloo.ca/LIAC2012*. This Survey is going to be used to solicit feedback from current undergraduate engineering students about whether high school prepared them for University! We are looking for as many responses as possible and there will be a draw for a prize if you fill this survey out! So do it!

Anyway, I will miss these articles, and it is sad that my time is coming to an end soon! But the new exec are awesome, and EngSoc is going to do great things!

Cheers,

Lisa

Waterloo Engineering Competition: Agriculture, Mars Rovers, and Stranded Mountaineers

RYAN ORR
2A COMPUTER

The Waterloo Engineering Competition was held over November 2nd and 3rd, involving undergraduate students from all engineering departments in a competition centered on problems designed to test the genius of the competitors. The competition saw groups of up to 4 competitors competing in 3 categories: Consulting Engineering, Senior Team Design, and Junior Team Design.

All competitions were split up into two major components: a design phase on Friday night, followed by a presentation on Saturday morning. In Consulting Engineering, teams were given 5 hours to prepare a technical report, up to 15 pages in length, detailing their solution and analysis , as well as a 15 to 20 minute PowerPoint presentation for Saturday's Presentation. Senior Design allowed teams 6 hours to design, build, and test their devices, as well as preparing a 15 to 20 minute PowerPoint presentation. Junior Design allotted 4 hours for the design, building, and testing of prototypes, as well as preparing a poster for the presentation.

In the Consulting Engineering competition, teams were asked to consider Canada's agricultural industry and its impact on worldwide hunger. Each team was 'hired' by the Government of Canada and given the task of designing a solution to improve the agriculture industry. This solution needed to contribute to food security and Canada's global presence in the agriculture industry while reducing worldwide famine and maintaining enough resources to sustain the consumption within Canada.

Senior Design saw teams attempting to design a Mars Rescue Rover capable of surviving re-entry, retrieving a stranded astronaut, Dr. Astronaut, M.D., and moving him to safety. The team's device needed to be able to survive and properly recover from a 1.5m fall from a scaffold, and then be able to move by a remote control panel connected to the rover by a cable. The rover was to retrieve Dr. Astronaut, M.D. and transport him safely to the Mars base. Teams were given a budget of $10 000 to design a 30cm x 40cm x 40cm device, using supplies which included a wide variety of items including metal wire, balloons, various wheels, construction materials, and electrical motors, among others.

The Junior Design competition problem focused on the issue of transporting supplies to trapped mountaineers on the top of a mountain. Teams were asked to develop a prototype for moving the supplies, in the form of a letter block, up a 35cm vertical slope to the mountaintop, where it would then be deployed to the waiting climbers. Teams could attach their device to the mountaintop via two small eyelets; however, the device was not allowed to hang off the sides of the mountain, only hanging down the cliff face, and could not exceed 30cm x 30cm x 45cm in dimensions. The prototypes were constructed using various small materials such as string, Popsicle sticks, mousetraps, rocks, and hot glue purchased from the store under a budget of $7000.

The design phase lasted until 1:00am in various rooms throughout RCH and DWE. After grabbing a few brief moments of sleep, the competitors were in E5 by 7:30am the next day to check in for presentations. The presentations ran until around noon, where competitors presented to their fellow competitors and a panel of judges, consisting of both professors and industry professionals. The evaluation of each team's deliverable and presentation was based primarily on the performance and design of the team's solutions, with slightly lesser weightings on their presentation and teamwork. Following the period of presentations, the judges announced the victors.

Taking first place in the Consulting Engineering competition were Trevor Jenkins and Cameron Winterink, with second place going to the team of Nikrouz Ghotbi, Kamal Aman, Nasif Addnan, and Joel Kancir. In the Senior Team Design competition, Dian Gadjov, Soo-Jin Moon, Yidi Lin, and Bilol Zhao took first, and Ahmed Mezil, Sebastian China, Andres Cardenas, and Farhan Nomani placed second. First place in the Junior Team Design competition went to Nidhi Juthani, Sarah-Rose Lancaster, Dan Connolly, and Daryn Huang, with Neil Raina, Peter Argany, Ryan Orr, and Karo Oki taking second.

The winning teams will move on to the Ontario Engineering Competition, held at McMaster University, in February 2013. Teams who are victorious at the Ontario Engineering Competition will then move on to the Canadian Engineering Competition, held at Carleton University. Additionally, first place teams receive a prize of $500 from the Sandford Fleming Foundation, and the runner-up teams receive $250.

The Waterloo Engineering Competition is made possible by contributions from the Sandford Fleming Foundation, UW Engineering Society, and WEEF. The competition is organized by volunteer undergraduate engineers, and is run in the Spring and Fall terms.

From a competitor's perspective, the competition provides an incredible opportunity to apply engineering design while working in a great team environment. Although the competition can at times be stressful and difficult, in the end a competitor will only gain valuable experience that they will be able to apply to future competitions, academic projects, and work terms. And besides, the worst-case scenario is a free pizza dinner!

The Green Jersey: Pride of Zambia

ZAC YOUNG
2012 JUNIOR FELLOW

ZAC IN ZAMBIA

My name is Zac, and I am one of the 2012 Junior Fellows from the University of Waterloo Engineers Without Borders Chapter. For the next few months I will be working in an organization called Kulamela, who facilitate growth of innovation and entrepreneurship through education, in Lusaka, Zambia. Below are my most recent thoughts and observations from my life overseas. To read my blogs, visit zacinzambia.wordpress.com.

On October 24th, 2012, Zambia celebrated its 48th year of independence. Lusaka was decked sidewalk to rooftop in the green, red, copper and black colours of the national flag. Zambia has become my home because I have been so welcome here.

On this day, I wanted to celebrate their independence and nationalism just the same, in appreciation of their welcome. Zambia is a wonderful country, no matter the economic or political criteria that may relegate them to the tail end of some global lists. So on this morning I donned my Chipolopolo jersey to show my support (for those who missed the Zamfact, this is the nickname of the Zambian national football team). Little did I know the amount attention I would attract when I had really just set out to be one with the celebrating crowd.

I set out to meet up with some fellow EWBers in Lusaka: Chelsea, Katie, Kaveesh and Courtney. Not ten steps out the door I was met with the first appreciation of the green jersey: "Good morning, my friend! You are a true Zambian now."

I blushed a little and said: "Thank you, sir – good morning to you too and happy Independence Day!"

I thought to myself after this first encounter that it might be quite the day ahead if even a few true-since-birth Zambians congratulated me on my jersey. Oh did I have a whole different level of attention coming…

First was the walk to the EWB flat in Kabwata after hopping off the bus. Kabwata is a dynamic neighbourhood closer to town than where I stay with a great atmosphere in the market and main road. I got some cheers from some groups of guys hanging at the roadside shops on my way in. I continued my somewhat embarrassed waving and well wishes for their day. After arriving at the flat, we decided that, since it was a day for Zambia and we didn't know when or where the main festivities were taking place, we'd hop on a bus to town and wander through City Market. Why not head to the heart of the activity in town on such a day?

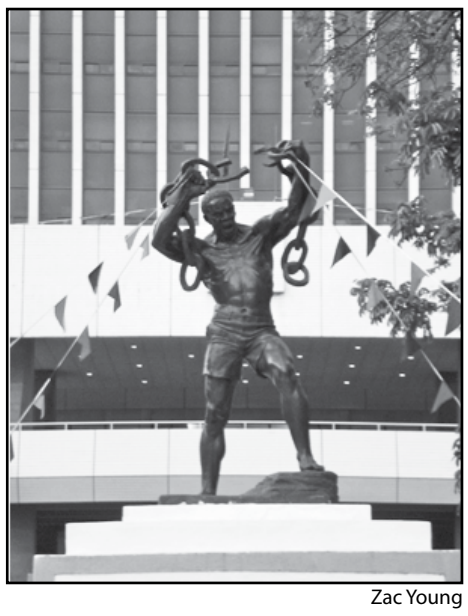
I felt like a celebrity cast into my role without suspect. Every sixty seconds of walking further in the market was met with the refrain: "ZAAAMMMMMBIAAAAAAAA!!!!"

At one point, Katie decided to walk a few strides behind me just to catch the spectacle I was leaving in my wake. Many people, young and old, men and women, those hiding in the shade of shops, or out selling water and food, were excited to see a young white guy walking through the market in a Zambia jersey on their special day. I just embraced the attention after being embarrassed at first. What could be a better excuse to pass on my well wishes for another year of independence and thank them for welcoming me to their country? So I passed on those words, a thumbs up, and some waves as I wandered along asking for not one ounce of the attention that I received.

What a day. It left me thinking how I ought to feel about causing such a ruckus. What was it about me wearing that jersey that, at the root of things, got my fellow Zambians so energized? The day, in a tandem with the reading How to Win Friends and Influence People (guffaw if you want, but it is really a revealing read), made me conclude that people are just excited when someone takes a genuine interest in them. Whether this is in their identity, in their interests, or in their well being. By wearing that jersey, I was showing that I wanted to join in their celebration and that I had a desire to be more than just a spectator in the day. Besides the simple spectacle of me in a Chipolopolo jersey (which has caused a stir in times before) there was something more in this day that amplified the reaction.

Zambia was in celebration of their identity and I was wearing it along with everyone else.

In spite of my blushing and feeling like I was being over-congratulated for such a simple gesture, there was a good lesson to be learned. Take an interest in those that you interact with and you can find a connection in their natural human desire to feel appreciated. We could all use some friends and supporters each day.



Zac Young

The Freedom statue decorated in Zambian colours

Remember Our Veterans

Continued from REMEBRANCE on page 1

the 21-gun salute or a flypast by the Royal Canadian Air force, there are numerous traditions which are always followed. I want to emphasize two of these: the playing of our national anthem, *O Canada*, and the two minutes of silence that follows the bugling of *Last Post*. These two moments are of stark contrast. The first is a song everyone proudly sings together, "With glowing hearts we see thee rise, / The True North strong and free!", while the second is a moment of solemn remembrance. *O Canada* is a song to remind us of why we fought and why we continue to fight. The French translation of our nation anthem may express it even better "Car ton bras sait porter l'épée, / Il sait porter la croix!" -- "As is thy arm ready to wield the sword, / So also is it ready to carry the cross." So many of our citizens eagerly protecting our land, so many of them ready to sacrifice their lives for our country. The two minutes of silence are to remember those who lost their lives for our country. It is a time to recognize their pain and suffering and realize how the lives of the fallen have affected you. It is a time to thank our veterans, not just those of the First World War and Second World War but the veterans of every Canadian conflict and Peacekeeping mission.

Even though Remembrance Day has past, it is never too late to thank our service men and women for all their hard work and recognize those who sacrificed their lives so you have the privilege to call yourself Canadian. I know I am proud to be Canadian and thank everyone who has fought to keep this country the True North strong and free.

Tablets - The Great Gaming Shift

JON MARTIN
OBI JON1138

FUTURE OF GAMING

Hey everyone, I hope your (school or work)term is going well – though gaming is much easier on a work term, of course. With the holiday season fast approaching, the big game manufacturers, developers, and distributors are all looking forward to the biggest money making season of the entire year, and this year, we actually have a new console to watch for. But there is also a fundamental shift in the gaming industry that is becoming more apparent each month, and that is the rise of tablet gaming as a distinct entity apart from the traditional mobile gaming market.

Over the last few years, mobile gaming has exploded on iOS and Android phones and tablets, with quick simple games becoming the dominant entry in the developing market. These games are commonly offered for a very low introductory price (or free) then supported by microtransactions over the lifetime of the game. So far, tablets have just been used as a larger screen for the same games, or with the occasional tablet-only game that is actually developed to take advantage of the improved specs of a tablet. Recently, Nintendo Executive Vice-President Sales and Marketing Scott Moffit acknowledged "the growth of tablets and their ability to play games" and they are approaching this change in their own way with the introduction of the Wii U and its new gamepad. The Wii U tablet style gamepad is unique among tablets in that it has actual gamepad controls (analog stick, buttons, and triggers) as opposed to using standard onscreen digital joysticks. There is no denying that tablets have a way to go before they become truly viable as a gaming system, especially in terms of controls. After playing a couple of tower defense and FPS games on my tablet (Acer Iconia Tab A500), the fundamental problem of your fingers blocking the onscreen image is definitely an issue, but there are a number of companies that are trying to change that.

First, an upcoming tablet called the "WikiPad" is a full-featured Android-based tablet with a special controller style docking station. The tablet features an NVIDIA Tegra quad-core processor and a twelve core GPU for amazing specs, and is optimized to run games using its controller docking station instead of the standard touch screen controls. The great thing about the WikiPad is that when you aren't gaming, it is a fully functional Android tablet with access to all the same apps as any other tablet – it isn't a specialty system with a single purpose like standard mobile gaming systems. While the WikiPad has currently been delayed to optimize its specs, it will be released soon, and will hopefully spur development of more tablet optimized games.

Another approach to tablet gaming control involves an external controller while the tablet itself functions as the screen only. Nyko is releasing their new PlayPad and PlayPad Pro controllers, having already shipped the product to retailers. The controllers connect to Android tablets and smartphones, and an accompanying app, Playground, enables controller support on games that were not specifically designed for the controllers, with user-defined control schemes. Nyko is offering two sizes of controller, the PlayPad, which is a miniature controller with phone stand included, and the PlayPad Pro, which is a full-sized console-style controller. Both packages are supposed to retail for $40, and should be available soon.

Both the WikiPad and Nyko PlayPad represent a shift towards viable controls for tablet gaming, and as a result, the potential for a new section of mobile gaming. Eventually, we may see more tablet-only games taking advantage of the better processors and graphics capabilities over a smartphone. As Microsoft has now released the iOS version of its Xbox SmartGlass app in addition to the Android version, some people may have noticed that tablets have mysteriously been left out. While support is expected eventually, the only tablets currently supported on SmartGlass are on a Windows 8 based system. Hopefully, this will change soon and game developers will start to develop for this great new app. With improved controls, console connectivity, and rapidly advancing specs, tablet gaming is definitely a newly emerging section of the gaming market.

In other news, the ease of access to gaming news on the internet has claimed another victim. *The Official PlayStation Magazine* will cease publication after this year's holiday issue, ending a print run of five years since taking over as the "Official" magazine for PlayStation in 2007 (the magazine itself has been in print since 1997). *PlayStation Magazine* is the latest casualty after the same publisher, Future US, announced this summer that *Nintendo Power Magazine* will also cease publication in December, 2012. *Nintendo Power Magazine* has been in publication for 24 years. This now leaves *Official Xbox Magazine* (OXM) as the only official console specific magazine in print, though how long that will last is questionable. With many print publications focusing on digital distribution, it is only a matter of time before hardcopy distribution becomes too expensive. When you can find out the latest gaming news on your favourite gaming sites as soon as it is available (one of my new sources is *Polygon.com*), who wants to wait a month for a magazine filled with old news? I have ended up throwing out most of my back issues of *OXM* because the previews are for games I stopped playing years ago, and the reviews are often biased - I even cancelled my subscription earlier this year.

We are currently in a period of change within the gaming industry, both in terms of technology and platforms, and the way we get our news. In the meantime, take a look at some of the emerging markets and technology, and Keep on Gaming.

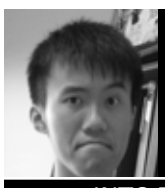
Wikipad.com

nykoplayground.com

nykoplayground.com

New products introduce full console gaming controls to Android tablets: Wikipad, PlayPad, and PlayPadPro

Highly Valuable Materials for Highly Valuable Lasers



BRIAN SO
1A NANOTECHNOLOGY

INTO THE NEW WORLD

Diamonds are one of the most valuable substances known to mankind, but it is well-known that this material is made of the same stuff (carbon) as low-priced graphite. There is only one thing differentiating the two – it's the configuration of their atoms, giving each their unique properties. There is no way that any kind of matter can exist as diamond and graphite at the same time, right?

Such a limitation does not hold for quantum matter. A team from the quantum Many-Body Physics Division of Professor Immanuel Block (Max-Planck-Institute of Quantum optics and Ludwig-Maximilians-Universität München) has demonstrated this event in experiments with ultra-cold quantum gases. Through the influence of laser beams, single atoms would rearrange into clear, distinct, geometrical structures. But like Schrödinger's cat, all structures would exist at once. Such an observation was made after putting the particles in an extremely excited state called the Rydberg-state. "Our experiment demonstrates the potential of Rydberg gases to realize exotic states of matter, thereby laying the basis for quantum simulations of, for example, quantum magnets," as Professor Immanuel Bloch mentioned.

It begins by cooling a set of a couple hundred rubidium atoms to near absolute zero and then immediately catching them in a light trap. This atomic cloud is then superimposed with a light-field otherwise known as an optical lattice. This provides an almost uniform filling in the central area of the trap. Afterwards, a laser then shifts the atoms to the Rydberg-state in which the outer most electrons are now at a fairly large distance from the nucleus, massively expanding the sphere of influence of the atom – a factor of 10 000 times larger (a few micrometers). As such, the atoms now interact strongly due to van der Waals attraction, which acts at a distance. Even though it is called attraction, the atoms actually repel each other, because they are in the Rydberg state. A "mutual blockade" allows the atoms to have certain spatial correlations such that, depending on the number of them, specific geometrical configurations take form. "However we have to be aware that in our excited quantum system all geometrical orders are present at the same time. To be precise, all the excitation states form a coherent superposition," says Dr. Marc Cheneau, a scientist working on the experiment. "This new state of matter is a very fragile, crystal-like formation; it exists as long as the excitation is sustained, and fades away once the beam is switched off."

As with Schrödinger's cat, once the system is observed, the superposition will change and ultimately decay into a specific excitation state with a certain number of Rydberg-atoms in a certain configuration. By taking multiple snapshots, scientists are able to obtain different patterns of excitation states. The Rydberg atom can be directly imaged using its own fluorescent ligh which gives high spatial resolution pictures. The different structures are grouped by the number of Rydberg-atoms they contain in order to recognize the fundamental structures. Each pattern of the individual excitation states observed may also be described classically. "In order to reveal the quantum physical behavior of our system we investigate the time-dependent probabilities for the different excitation states, each characterized by a certain number of Rydberg-atoms," Peter Schauß says "thereby we were able to discover that the dynamic of the excitation process is ten times as fast as in classical systems without blockade effects. This is a first indication that our system is indeed a coherent quantum state, composed of different spatially ordered configurations."

In the future, scientists are challenged with the controlled preparation of Rydberg crystals with a well-defined number of excitations. Several of these Rydberg-atoms could be connected to a scalable quantum system for quantum information processing.

CSA Group Releases Nano Workplace Standards

ALISON LEE
3B NANOTECHNOLOGY

On October 31st, 2012, the Canadian Standards Association released a guide for the safe use of nanomaterials in the workplace. This guide is titled *CSA Z12885, Nanotechnologies – Exposure control program for engineered nanomaterials in occupational settings* and is available online. The recommendations are based on ISO/TR 12885 standards that have been adapted specifically for Canadian workplaces. The CSA Group is a not-for-profit association focusing on safety, social good and sustainability, particularly in the workplace. You probably recognize the name,CSA, from the many safety standards it oversees.

This new nanotechnologies guide includes internationally-recognized risk-management practices and terminology as well as providing information about specific nanomaterials of interest. This means that for a material such as nano-size TiO2 or carbon nanotubes, there is a specific hazard identification, risk assessment, and worker protocol.

What exactly defines "nanotechnology"? It's anything involving a material with a nano-scale dimension. That is, one to one hundred nanometers, or 10-9 to 10-7meters. Nanomaterials are present in many commercial domains including computers, health care, packaging, textiles, and energy.

What puts nanomaterials in a safety class of their own is the fact that they exhibit unique properties like strength and chemical reactivity. The International Organization for Standardization (ISO) has been working with many nations for years to decide on a common language and gather toxicology data, but the work is still ongoing.

CSA has been very active in the international efforts in terminology, but this is the first time it has released guidelines specific to Canada. "The development of standards is crucial for effective and responsible commercialization of nanotechnologies," said Brian Haydon, Senior Project Manager, Standards, CSA Group. These nanotechnology guidelines are not mandatory in any way, but they are meant to assist workers who encounter these new materials while more rigid safety standards are developed.

Point Vs. Counterpoint

Should the Cohort System be Applied to all Engineering Programs?

POINT

SPENSER GOOD
2B MECHANICAL

Recently, there have been discussions within the engineering faculty at the university to dissolve the cohort class system that is currently in place for all students. The current system, with some exceptions for technical electives, has students of the same discipline attend the same classes as their classmates throughout the tenure of their four year academic degree. The proposal to abandon this system, one that is very rare throughout engineering faculties nationwide, is likely motivated by a desire to increase freedom of choice for students. This would enable students to choose when they take certain core courses, and likely eliminate some of the mandatory courses for certain programs in favour of creating a broader range of specialization. Although a greater freedom of choice in terms of selecting our classes is something that all of us have desired at some point throughout our education, I argue that the advantages of our current cohort system are far greater than the new-found freedom that would be introduced by scrapping it.

From my personal experience and those of my fellow students, I believe there are basically two places where first-year students meet future friends: residence and class. Of course, dissolving the cohort system would have little to no effect on the residence experience, but it would certainly greatly reduce the chances of making lasting friendships in your classes. Instead of spending close to 40 hours a week with the same group of people, all the while developing camaraderie and sharing the trying experience of first-year engineering, one would simply see one group of people for an hour, then move to another class room with a fresh round of students. This, of course, is the experience of most universities in Canada. The decreased likelihood of making close friends is considerable. In the non-cohort system you can easily slip into your class for an hour without speaking a word to anybody else. In the cohort system, however, you not only spend close to four hours straight with the same group of people, you also have ten minute breaks between each lecture. Also, students share the same lunch hour. This system not only encourages conversation between classmates, but almost forces it.

One of the greatest advantages that I have found in engineering at Waterloo has been the lack of cutthroat students, willing to put the success of others on the line for their personal academic success. The widely held belief amongst university students is that this attitude is much more prevalent in other large universities in Canada. I believe the cohort system plays a large role in preventing this from occurring at Waterloo. Those that are unkind or overly competitive are generally dismissed by the rest of the class, and are either forced to change their attitude, or face social isolation for the remainder of their academic career while in class. In other schools where the cohort system is not in place, there is less accountability as cutthroat students can merely sabotage one classmate, then after the semester never have to see them again. In my opinion, the cohort system weeds out the jerks much more quickly.

To build on this, the cohort system exemplifies a workplace much more then a non-cohort system. You attend class with the same people everyday, select classmates from the same pool of students every semester for projects, and ultimately you learn to share knowledge, work together and learn from each other's mistakes, all the while working towards the goal of graduating. Unlike other non-cohort systems, you share your goal with a large group of like-minded classmates.

Furthermore, failing holds much more consequence in the cohort system. Some of my greatest motivation has come from the fear of having to repeat a term without my closest friends and the familiarity of my class. Some may point out that I should be motivated enough by the simple goal of losing $10,000 or spending an extra year of your life redoing classes you've already taken, but for many it is the risk of losing their social group that is the motivation to put in that crucial extra hour of studying.

Moreover, the logistics of organizing extra help sessions and dealing with class-wide academic issues become a lot simpler in the cohort system. All of your classmates share the same schedule, so getting help for the entire class at a proper time is quite easy. Also, any issues you have with professors or exams is likely shared by classmates, making your voice more powerful and more likely to be heard by faculty staff. Professors are also held accountable for mistakes and poor teaching because it is much easier for a class that spends entire days together to come to a consensus on problems than a room full of students who see each other only three times a week for short periods of time.

Above all, however, the biggest disadvantage of removing the cohort system would be the removal of shared experiences for engineering students at this school. Whether it is griping about an exam, getting class t-shirts, sharing a drink at POETS with your class or working together to understand a difficult concept, the cohort system provides us with experiences that we often take for granted. Most of us come to Waterloo engineering full of excitement. However, we also come scared and unsure of ourselves. The familiarity and friendship of our class helps us overcome obstacles and make life-long memories. Some of my closest friends and greatest memories have come from the time I have spent with my classmates. I came to Waterloo hoping for a good education and some great work experience, when I leave (hopefully some day) I will have achieved this. Many universities can provide this. However, what other universities cannot promise is a strong group of friends that have shared your failures and your successes. I have the cohort system to thank for this.

COUNTERPOINT

JOSHUA KALPIN
2A SOFTWARE

The cohort system, one of the main aspects of all of the engineering programs at Waterloo, is one of the many expected things to change in the faculty. This has been a result of the desire to add 8-month co-op terms, the reduced course-load program and to make students' schedules more flexible. With these and other changes coming to engineering, it is time for some programs to give up on the cohort system.

Before getting into which programs this would work for and the factors involved in those decisions, it is important to explain what programs would be like without the cohort system, or at least what we think they would be like. Without the cohort system, Engineering would resemble how other faculties operate in terms of course selection and scheduling. Students would be given a list of courses that they need to take for their specific program and then have to schedule themselves into those courses. Each program would still have to take their concepts or seminar course each term (similar to how Physics students take PHYS 10 every term). However, a Mechanical Engineer would not have to take Calculus in a pre-chosen section and would be able to take it with any engineer at any time (non-conflicting of course) that it was offered. This would also function similarly for materials, circuits or any other course with a variety of anti-requisites offered in other departments.

So why is this better? Well, for starters, this would allow students to make a schedule that is more personal and works better for each student. Second, this reduces the number of course conflicts when choosing electives. Students are often forced to take 3-hour night classes for their linkage electives because nothing else fits in their schedule. Without the cohort system, moving a mandatory course around to fit an elective in becomes a reality.

However, one large caveat is that this does not work for all programs. Programs like Nanotechnology and Software have specific courses that, if an anti-requisite is taken, would significantly impact a student's ability to succeed in later courses. This is the nature of these programs and is the primary reason that the cohort system should not be abolished for all programs. Nevertheless, there are still many other benefits for other programs.

One of these benefits is that courses can now be offered year-round instead of on a specific term. This solves many issues with students who fail a course, want to take 8-month co-ops, or who need to take a term off for personal reasons. Currently, certain courses are only offered in certain terms. For example, ECE 250 is only offered in the Fall and Winter because it is only taken by 2A ECE students. If the cohort system was removed, the previous term requirements could be fulfilled in any term as long as a student fulfilled all of their course requirements by the time that he or she graduated. This would be similar for a student who fails a course. The student could easily make up that requirement in the next school term instead of waiting, sometimes over a year, to take the course again.

Another benefit to the removal of the cohort system is the ability to support 8-month co-op terms. Currently, for this to work properly, a student needs to start in 8-stream and then switch to 4-stream after their 8-month co-op term. With year-round course offerings and the ability to take anti-requisites, 8-month co-ops become a reality for any student in a program that supports both 4 and 8 streams. For other programs, this is more difficult but is still an option depending on which term it is taken after.

Opponents to the removal of the cohort system have stated that "it will destroy class spirit". This could possibly happen. However, if we take a look at the smaller, more tight-knit programs outside of engineering, this is not the case. For example, physics students are a fairly tight-knit group because there are very few of them - less than 100 on average per year – and they all take the same classes with each other. This is very similar to how engineering programs currently operate, except that they have the flexibility to the sections in which they take their non-physics (and sometimes physics) classes. If engineering programs moved towards this model, where classes are still technically together, class and program spirit would still exist.

To conclude, the cohort system is not good for all of engineering disciplines. Certain programs, like Nanotechnology and Software, should keep the cohort system because their programs are very specific with course selection; however, most other programs would greatly benefit. Students would have more flexible class schedules, co-op schedules and it would make it easier for students to make up failed courses. This change isn't going to affect most of us, as we already have our course plans locked in by the university. However, when this does come, it will change engineering as we know it.

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.

The Many Magnificent Museums of Waterloo

JOSHUA KALPIN
2A SOFTWARE

DISCOVERING KW

Greetings readers and welcome to Discovering KW. In this column, we will be travelling around Kitchener-Waterloo to discover some of the lesser known activities, locations, events and see some cool stuff. This week we will be exploring a few of the KW area's museums; specifically, THEMUSEUM, the Waterloo Region Hall of Fame, and the Waterloo Region Museum.

We'll start by travelling down to THEMUSEUM (Yes, that is how it is spelled) in Kitchener. THEMUSEUM is located on 10 King St. West. It opened in September 2003 as the Waterloo Regional Children's Museum and was renamed to its current name in 2010. Despite its previous name, THEMUSEUM has a variety of exhibits for people of all ages, is quite reasonable for students to visit and is open from 10AM to 4PM on weekdays and to 5PM on weekends. General admission is $17.50; however, if you want to see a special exhibit (Currently, AVATAR: The Exhibition and Treasures of China), you'll have to pay anywhere from $15-$25 depending on which ones you want to see. Overall, THEMUSEUM is a great way to spend an afternoon off-campus and I would definitely recommend you take a visit.

The next place we will travel to is the Waterloo Region Museum, home to the Waterloo Region Hall of Fame and a gateway to the Doon Heritage Village. The museum itself is located on 10 Huron Rd. in Kitchener, opened in May of 2010 and formally had exhibits starting in November 2011. The Waterloo Region Museum showcases themes throughout the region of Waterloo's history and even features an exhibit on the University of Waterloo!

As mentioned previously, the Waterloo Region Museum serves as a gateway to the Doon Heritage Village. The village is a historical village that shows "what life was like in the Waterloo Region in 1914" with period buildings and villagers. For those from Toronto, it is very similar to Black Creek Pioneer Village, except all about Waterloo. The village is a great way to see how the KW region was founded and is included in the admission to the Waterloo Region Museum. The best thing is that admission to both the museum and the village is only $8 for students, making it an inexpensive way to spend a day.

Also inside the Waterloo Region Museum is the Region Hall of Fame. The hall of fame opened in 1972 and honours people and groups that have made significant contributions to the KW region. Each year, the hall of fame holds nominations for new entrants and anyone can participate in these nominations. Admission to the hall is included in any regular admission to the Waterloo Region Museum making it an easy and affordable way to spend time off campus.

That's all of this week's exploration of the Kitchener Waterloo area. Hopefully, you learned some about some new fun things to do and places to explore off-campus. Next week, we will be exploring some of the wonderful wintry activities around the KW region. Stay tuned!

A Highly Variable Pancake Recipe

CAITLIN MCLAREN
1A CHEMICAL

A HIGHLY VARIABLE X RECIPE

Your midterm results are coming back. Some are good. Some are okay. Some, you don't even want to talk about. With those last few weighing down your mind, you stumble about in a haze of depression, unable to come to terms with your new world. Or maybe that's just me.

Perhaps all of your midterms were excellent, but your goldfish just died. Perhaps you left a bag full of important things on a bus. Perhaps you just feel the crushing existential pressure of your life.

Whatever the cause, you need comfort foods. And there is no food more comforting than pancakes! Here is a highly variable pancake recipe to help you through your pitiful existence.

You need: All-purpose flour. A basis of one and a half cups is a good start, but feel free to multiply this by any scalar you like. Just try to keep the ratio of flour to other ingredients the same-ish. Particularly the baking soda. Keep an eye on that baking soda. The proper ratio is: one half-teaspoon of baking soda to every half-cup of flour.

Don't forget the salt, or the pancakes will be absolutely rubbish. Use about 2/3 as much salt as baking soda. Sugar is, of course, equally necessary- for every teaspoon of salt, use a tablespoon of white sugar. DO NOT CONFUSE THE TWO. I know they look alike, but just- don't. Ugh.

Add a little less milk than flour (by volume). This is highly variable- use as much as seems good to you. Knowing the right amount comes with practice, I am afraid. If it's your first time, just use common sense. Don't make bricks or soup. If your batter does not spread enough, add more milk. You cannot add negative milk, so if your batter is too runny you have no choice but to add a bit more flour. It is far better flavour-wise not to have to add more flour, so err on the side of less milk at first.

Now: the reason I suggested a basis of 1.5 cups of flour was because this amount requires exactly one egg. If you did take a scalar multiple of 1.5, then simply add more eggs accordingly.

One tablespoon of melted butter should be added for every half-cup of flour.

These make up your batter. Yes, of course you can put stuff in it! What good are pancakes without stuff in them? Blueberries, chocolate chips, raisins, escargot.… You're the boss. Just please, for the love of all that is good and holy, do not put gummies in your batter. That is just sick and wrong.

Mix the dry ingredients together first; then, when they are all sifted, add the wet ingredients (milk, eggs, butter). Stir.

Heat up your frying pan and oil it. Beware of heating it too hot. Fry scoops of batter on the pan; when both sides are brown, the pancake is done. You will have to flip them over in the middle.

Eat your pancakes hot. They will improve your life, I guarantee it.

Masquerade: A Success

ANDREW MCMAHON
2B ENVIRONMENTAL

The termly Semi-Formal, organized by the Engineering Society took place this past Saturday, November 10th, in the Festival Room at South Campus Hall where the organizers invite students from all faculties and schools join in the festivities. The theme this term was Masquerade. Each guest received a complimentary mask at the door, adding another elegant element to an evening where everyone was dressed to impress. More than 300 tickets were sold this year filling the dance floor - which was hoppin' all night thanks to a great selection of music from the DJ. As always, complementary snacks and an overpriced bar were provided. On that note, the bartenders at times seemed a little too intent on forcing people to drink some water before getting another overpriced drink. This was overshadowed by the impressive drinks selections sporting all of the classics and my personal favourite, the Bubbly Butt Pirate. For some, the highlight of the night might have been the sweet sound of Gangnam Style, but for many others it was The Tool's much-anticipated appearance. Forever guarded by the Toolbearers and always proceeded by AC/DC, the Tool was showcased for pictures throughout the night (those pictures will be posted online by EngSoc for anyone interested in getting their hands on a copy).

Thank you to Dan, Christy, Kristen, and all of the employees and volunteers who made this past Saturday the best Semi-Formal yet!

Talented Waterloo Engineers Strut Their Stuff At TalEng

LEAH KRISTUFEK
2A CHEMICAL

Life is not all about school, and school is not all there is to life. So, it is important, every once in a while, to take a time out from school and get to know your fellow students better. After all, who better to compare workload horror stories with and laugh at funny things professors have said than other engineering students? This is why on November 9th, a Thursday (doesn't this make you feel just a little bit like arts students?), engineers gathered for TalEng. The location for the occasion was the Bomber and the mood was anything but somber.

TalEng was the perfect platform for students to showcase some of their hidden talents and for everyone who came out to enjoy some relaxing and fun conversation. Like many engineering events, the highly awaited Tool was in attendance after arriving fashionably late. The Tool Bearers spent their time providing commentaries on the acts and the actions of the audience. The audience was constantly engaged because the acts were diverse. Talent acts included various genres of music, juggling, stand up comedy, and general hilarity. There was never a dull moment during the evening. Among the many awesome acts there were several first year performances, including a musical act from three first year Nanos' entertainingly called 'Breaking Resonance'. There were also many recognizable faces on the stage. For those of you familiar with the sexy sax man, he left his sax behind in favour of a keyboard, providing a fairly informative, highly amusing performance about the opera. The evening finished with an excellent performance by the band, "Clean Up on Aisle Blue" which got people out of their seats and moving to the music.

TalEng also included an announcement about the winners of the elections for the new exec. The new VP External, VP Internal, VP Education and VP Finance were welcomed with open arms by the old VP's. It was a good thing people were wearing their covies because it all got a little messy!

TalEng was a fantastic event with lots of fun had by everyone, it is a good event even if you are not a very involved student. So keep an eye out for more awesome events in the future such as our famous EngPlay!

Lucas Hudson

Peter Robertson performing at TalEng

Steppin' Back To The Rural Country Roots

ZACHARY GINGRAS
1A NANOTECHNOLOGY

MUSIC THROUGH THE (P)AGES

Welcome to another (hopefully) exciting edition of *Music Through the (p)Ages*. This week we'll be going back into rural areas and exploring a bit of country music as we progress through this very diverse musical world.

Country music has a distinct sound because of its acoustic background. Acoustic guitars are not only a must for this music, but the only required instrumentation. This stemmed back from its origins, where, depending on the culture, guitars, fiddles, and banjos were the most common instrument. However, country music had just started growing as jazz hit the spotlight, so naturally you can hear many influences between the musical styles in some songs.

In order to give you a real sense of the beginning of country music, you should listen to "Southern Flavor" by The Bluegrass Boys. They were around to help country music gain its popularity, and nothing can give you a better sense of where it started.

As country music developed, it became known for its ability to tell a story. Country singers could take any story and bring it alive through the simple vocals, guitars, rhythms, and sometimes even wind instruments! The perfect example of this is "Ring of Fire" by Johnny Cash.

Naturally, as the music developed through the ages, there were many branches that crossed over into multiple other genres. A particular one to note is the Country Rock genre, because both country and rock were stealing the stage around the same time. Songs like "Hotel California" by The Eagles can be clearly heard as a combination of the two styles, growing on the momentum of both styles and reaching great popularity.

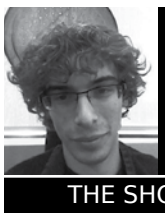
It was about this time when country music split into two main paths. Some country artists decided that rather than mixing more with popular music, they would take it more back to traditional country music. Songs like "Friends in Low Places" by Garth Brooks brought back the more traditional country sound, keeping touches of pop music, and created the country music of today.

While this was happening, country pop music burst onto the scene. It still held to its roots with the acoustic guitar being forefront, and the story being key, but with taking many of the elements of modern pop music to create a very popular genre. Taylor Swifts's "Our Song" is the perfect example, showing the face of modern country music.

And that, my friends, is the wide world of country music. Every turn of the musical development was met with new and exciting styles of music, all coming together under the common instrument of the Acoustic Guitar. Songs can range from love affairs, to a red solo beer cup, and still manage to capture the audience with its music. This is truly an amazing style of music.

Stick around for next week, when we wrap everything up with a wild step into the unknown world of contemporary music. Until then, keep your passion alive!

La Dama y la Muerte (The Lady and the Reaper)



JOSHUA KALPIN
2A SOFTWARE

THE SHORT SHORT REVIEW

Greetings readers and welcome back to another issue of the Short Short review. Just as a reminder, in this column, I attempt to review a short film or story in a really short number of words. This week I'll be reviewing the short film, *La Dama y la Muerte* (The Lady and the Reaper) in 410.5 words because I've always wanted to write half a word in an article (could also be that it is 8 minutes and 21 seconds long and I divided by two…).

The Spanish 3D film, created by Javier Recio Garcia, was released in 2009 and was nominated for the Academy Award for Best Animated Short Film in the same year. The film tells the story of an old lady who is awaiting her death so she can join her dead husband. Eventually, the Grim Reaper arrives and tries to take her to the afterlife but is foiled by a suave doctor. The rest of the film shows the battle between the reaper and the doctor to rescue the old lady.

The film is clever, funny, and is well-deserving of its Oscar nomination. It looks stunning with smooth but playful animation that reminds me of Team Fortress 2 in terms of art direction. The characters show personality and evoke incredible levels of emotion. Especially of note is how the reaper's various bones are individually animated and react to the various situations endures.

Moving away from animation, the soundtrack of the film is of definite note. The beginning of the film opens up with a 50s era tune that evokes a feeling of age that makes you sympathize with the old lady's longing for her husband. The soundtrack then moves to a jazzy orchestral mix that is reminiscent of The Incredibles and evokes just the right mood for the chaotic middle of the film. The end of the film has a similarly emotionally effective soundtrack that I don't want to talk about too much to avoid spoilers.

Overall, *La Dama y la Muerte* is a fantastic short film that deserves more press than it has received. It's funny, emotional, incredibly well done, and stands beside some of the industry's best short films. I'm going to give the film a well-deserved 4 ½ skulls out of 5 (SEE, I did include a half and don't you dare argue with me). Next week is the last edition of the term and I've got a surprise in store, so stay tuned!

Top Ways to Judge Potential Mates

WADE WILSON &
EDWARD BLAKE
3Z HANDSOMENESS

TOPZ (WITH A Z)

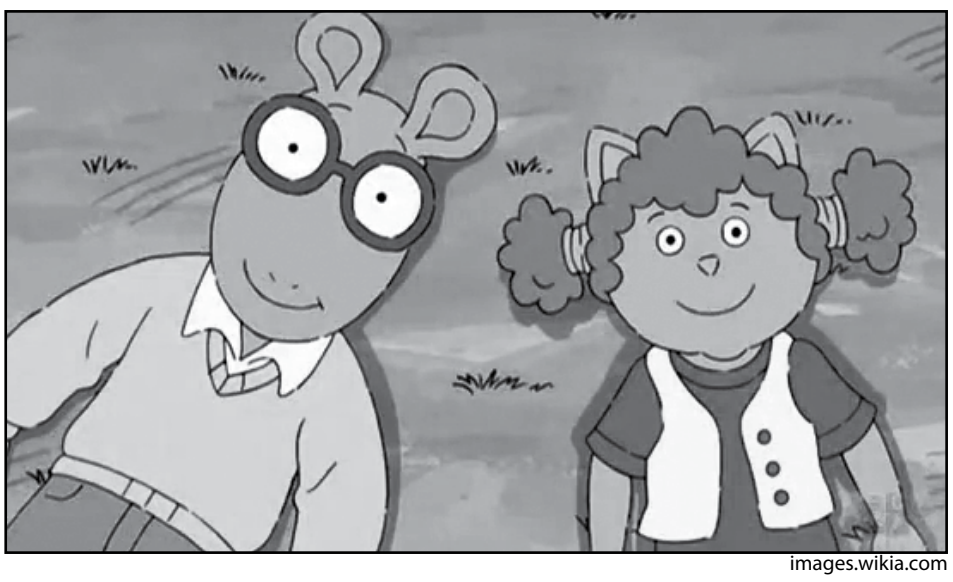
So when you're a handsome malchick like us, you have a lot of options on the table. So many in fact that you can't decide how to adequately allocate your appetite. Well, you've got to play The Game so The Game don't play you, nyukka. When you're talking to your homeboys or girls the next morning do you want to say, "they were okay" or do you want to say, "the ass was fat"? So gather 'round children, it's high time ye learn, Topz has the answers to choose whom to spurn.

Never Judge a Book by its Cover: Malcolm Gladwell, in his book *Blink*¸ describes the power and hold of snap-judgements. They are unavoidable, but we have to learn to curb the power of our at-times deceptive first impressions. With people, like choosing a book, it's as the old adage goes, "read the summary on the back cover of the book to know what it's about to be able to determine if you would be interested in the plot and themes." Like the cover of a book, superficial qualities like clothing can make us misinterpret a person. Underneath their clothes, there's an endless story: legs, thighs, breasts/pectorals, clavicles, waistline, an ass that may or may not be fat, and genitalia For example, yoga pants can make an apple-bottom out of apple sauce, large fuzzy sweaters can hide large fuzzy backsides, and Victoria's secret? Padding. The most obvious technique to get the scoop on their truth is Facebook stalking. Nothing will sell you out like cellulite in beach pictures. A more advanced trick is to try and catch them in geometrically patterned clothing: plaid matrices accentuate curvature to help your brain model a more accurate 3D mesh to help deliberate if you would, in fact, tap dat. And of course, there's the classic method of watching them undress from the big Oak tree in the backyard between the fence and tool shed, perching yourself by the blue jay nest … for example.

TNA: As important as it is to look past clothes, once you establish that the ass is fat, it's important to make sure they dress fetch so ensure they drape themselves in respectable clothing brands such as TNA.

Judge a Person by the Company they Keep: When someone is trying to seduce you, they are constantly trying to deceive you. This is why it is good to get to know the people with whom they actively chose to surround themselves. The reason, of course, is that you can peer at their attractive peers. If you decide that they are not the alpha of their pack you betta believe that you can always upgrade. People always want what others have and hence there is nothing more attractive than someone's friend's partner. So don't think of it as trying to date someone individually; think of it as shopping around for a potential harem. We've seen enough short films to know that best friendship means sharing everything. And take solace in knowing that the closer the friends, the more competitive and desperate to one-up each other they are.

Judge by Brains before Beauty: At a school like Waterloo you're bound to find a plethora of potential partners that are tomorrow's leaders, innovators and even Nobel laureates. Do not worry, though, there are still plenty of dumb people for you to date! You want to make sure that you select someone stupid enough to put up with you and not notice your constant attempts to sleep with their friends, siblings, landlords, parents, pets, etc. Nick Naylor once said that the beauty of argument is that if you argue correctly, you're never wrong. We believe it's correct to go for brainless beauties because they'll always lose arguments and hence you'll never be wrong. Infallibility is a real asset in a relationship. Some quick litmus tests to ensure that the object of your eye is reasonably dull include whether they know what a litmus test is, if they know more about Obama than any Canadian politician ever, if they know less amount Obama than they know about Obama's twitter account, if they're proud of finding Big Bang Theory funny, if they use internet memes ~~in real life~~ at all, if they're still playing "The Game" (no, we don't fucking care that you just "lost"), if they take this column seriously beyond an outlet for passive aggression, or if they decide to become the Editor in Chief of a paper that would actually publish this column.



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Whom Arthur should have chosen from his options

You are What You Eat: Check their eating habits now, because that metabolism will slow down and you might have a Chubby Charlie or Hefty Helga on your hands, crippling your wavering wrists. Another trick is to look at their mother or father to see where they'll be in a few years (or if the ass is fat where you'll be in a few hours).

Organization is Your Friend: If at this point, you find that there are still numerous candidates whose asses are fat, you need to take it like an engineer and solve this problem algorithmically. Give your candidates a ranking from 1-9 and ask them to in turn rank you from 1-9. If they give you classic "who are you? I'm not giving you some number" politely remind them that if they wanted nothing to do with you, they should have realized that before agreeing to talk to you and getting to know what you're like. Take the lowest sum of your two rankings and that person will be your mate. If you find that there is a tie, date them both and hope they don't find out. If either of you find yourselves discontented during the course of your congress, you can always rely on CECS to help you out (sidebar: this is an auditory joke in a written format, so please read aloud "CECS" as an acronym and not initialism, and pretend that we didn't have to explain this joke to you since that would be totally lame).

So now that you've learned to separate the wheat from the chaff, it won't be long before you're chafing and not wasting your precious time on riff-raff. Every day, when you're walking down the street, everybody that you meet deserves to be heavily scrutinized and rated. We hope that we've helped facilitate this process to make you a more efficient asshole.

A Movie Review: Dirty Dancing

ELIZABETH SALSBERG
1A NANOTECHNOLOGY

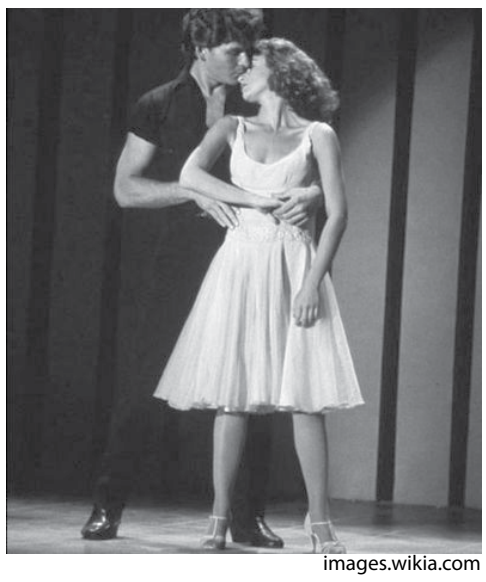
MOVIE REVIEW

It's time to sooth the nerves a little after midterms and horror flicks. This week's selection adds a new genre to our ever-expanding repertoire. Call it what you will, but this drama/romance/dance movie is certainly quite a change from our previous selections. *Dirty Dancing*, directed by Emile Ardolino is definitely something different.

We are first introduced to Frances "Baby" Houseman and her privileged family. They are heading to Kellerman's Resort for the summer, mostly so her father (a doctor) can finally have a real vacation. In case you've forgotten what that is, it has something to do with not doing work all the time and maybe even enjoying yourself.

In any case, Baby becomes interested in dance, when she sees resort dance instructors Johnny and Penny rocking out to "Where Are You Tonight?" on the dance floor at a staff party. Of course Baby can't take her eyes of Johnny and so the usual chick flick fluffiness begins. Well, it is Patrick Swayze…

Penny has slight problem—she needs $250 for an abortion. Baby asks her father for the money without telling him the reason and is successful after much coaxing. Unfortunately, the only appointment Penny can get is for Thursday night, when she and Johnny will be performing at the Sheldrake Hotel. Baby volunteers to step in for Penny as Johnny's dance partner and then the movie really picks up.



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Nobody puts Baby in the corner

Besides the storyline and actors (or should that be actor?), the soundtrack is also a key element of note. Throughout the dance numbers, we are treated to multiple famous 80s songs, such as "(I've Had) The Time of My Life" sung by Bill Medley and Jennifer Warnes (not the Black-Eyed Peas!) and "Hey! Baby" by Bruce Channel. The soundtrack is definitely what separates this movie from your run-of-the mill chick flick. In fact, the film won the Oscar for Best Original Song in 1987.

As per what inevitably happens in almost every chick flick, Baby's Dad finds out about her involvement with Johnny and the dance staff and is of course, furious. He demands that she no longer associate with "those people" again. This (predictably) ends up having quite the opposite of the desired effect, if not in a somewhat good-girl-gone-bad kind of way.

With Johnny's help, Baby's mere interest in dance at the beginning of the film eventually transforms into a legitimate skill. Baby is eager to learn and catches on quickly. Throughout the film, the dance numbers become increasingly more elaborate, to match Baby's relationship with Johnny and perhaps less obviously, the famous soundtrack.

The other major plot theme in the movie is the all too often overdone coming-of-age scheme. This appears at the beginning of the movie, with scenes of Baby and her Dad and is ironically highlighted by the protagonist's name. At the end of the movie, Baby drops her congenial nickname and (along with her father) learns to appreciate who she is.

The verdict: If you need something light and fluffy, this is the best way to go. The music is fantastic and the dance numbers are equally well executed. The plot is predictable but still logical, ensuring that the storyline is not just a washout. Don't be afraid to get up and dance…it may be the closest you get to real vacation for a quite a while.

The Zombie Apocalypse: A Human Perspective

ZACHARY GRINGAS
1A NANOTECHNOLOGY

Day 1:

I got a message early this morning; the zombie apocalypse has started. An infestation has started spreading throughout Waterloo, transforming anyone it touches into mindless, flesh eating monsters. The world has transformed from order, into a chaotic battle to survive.

Mission details were also sent out this morning. Apparently there are some railway maps hidden around the campus; special maps that will allow us to travel through the bridges and tunnels in safety. However there are only a few to go around, and with society falling apart, they were on a first-come first-serve basis.

It was early in the morning when I left. Crows cawed above me in the darkness, searching for the dead; or now, the undead. All I had with me was my trusty Nerf gun, and sock whip. These weapons could at least incapacitate zombies for a few minutes, but we had already been warned there was no killing them. They always just got back up.

I turned around to see one charging at me. I was barely able to get my Nerf bullet off before he got me. Apparently they were already out, hunting us, in the early morning. It wasn't safe anymore. I had to retreat to the safety of my classroom, and hope to hold up there.

With a mixture of stealth, luck, and a low zombie count, I was able to sneak through the rest of the day. But I knew that it was only going to get harder from here. I'd not only need to out-run, but out-think them if I wanted to survive.

Day 2:

The mission objective that came in was similar today; solve the mysterious riddles of one of the crazy survivors to earn one of the rail passes. The fool stayed outside and the growing numbers of zombies lurked around him, waiting to strike as we approached. Only after gathering a fortified group, weapons at the ready, did we approach and attempt his challenges. However, the swarm that charged us quickly became too great and we retreated. Our lives were more valuable than a single rail pass.

I took a different way home tonight. Took the tunnels and bridges through the building complex. Didn't see a single soul on my way back.

Day 3:

Today was when the missions got real. Three scientists were coming to try and find a cure for us, so we could escape from this mess. Three scientists we would need to protect.

There was no way we could protect them; not with our few numbers. They shouldn't have come. We were condemned to die, so they should have just left us alone. However, others didn't think that way. "They came to help us, so the least we can do is help protect them." I urged them not to go saying the odds were hopeless, but they wouldn't listen.

In the middle of an apocalypse, we were a race divided.

A small contingent of 50 of them went, hoping to save the scientists. From what I heard, it didn't go to well. That was the last I saw of them. Alive, anyway.

Day 4:

Bridges and tunnels. Bridges and tunnels. That's how to get around. I could see the zombies littering the streets below as I crossed the campus, but as long as they weren't inside with me, I was safe.

By now it was known we couldn't hold off the swarm. We needed to flee and to do that, we needed supplies. Through stealth, luck, and planning, our once-divided crew came together to sweep the campus for any last usable item. Together, we fought off the zombies. Together, we found what we needed. Together, we came up with a plan.

Day 5:

By now, most of the people I knew were trying to eat me. I knew that this would be the last day; not only because I probably wouldn't survive, but because of the desperate plan we had ready.

We were making a Superweapon.

Main base was set up in Hagey Hall. All across the university, Bio samples had been identified. The only thing left to do, was retrieve them. From across an entire campus full of undead, outnumbering us two to one.It was a race against death itself. The clock didn't help either. Eight out of ten samples, the size of water bottles, needed to be returned within three hours and we were quickly running out of live humans.

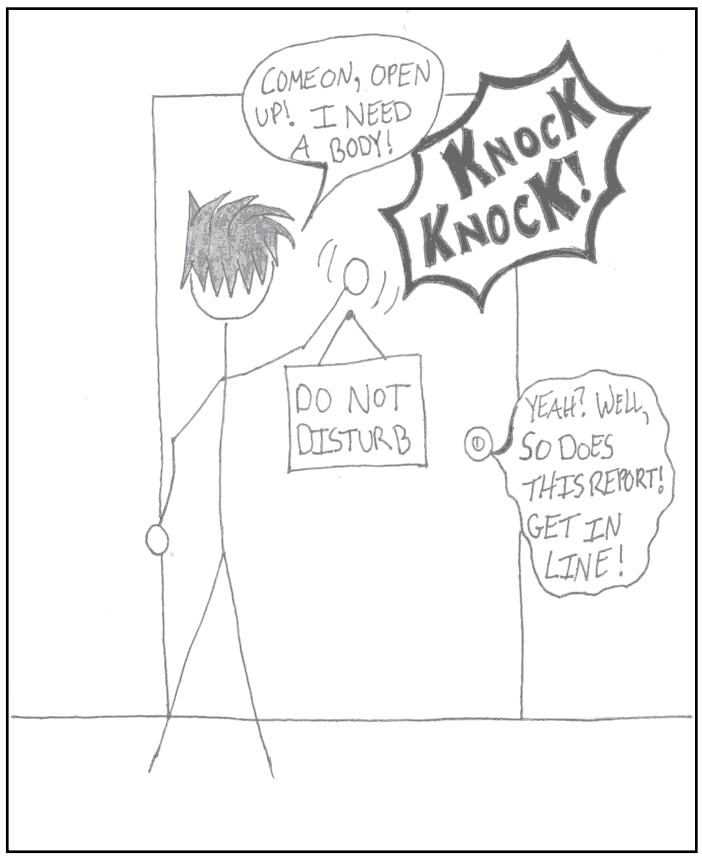
I started doubting we would make it. After having out-run some zombies and taken others down in the confined halls, I started doubting there were even any humans left. I stared out over the compound, as the minutes started counting down, waiting for our doom.

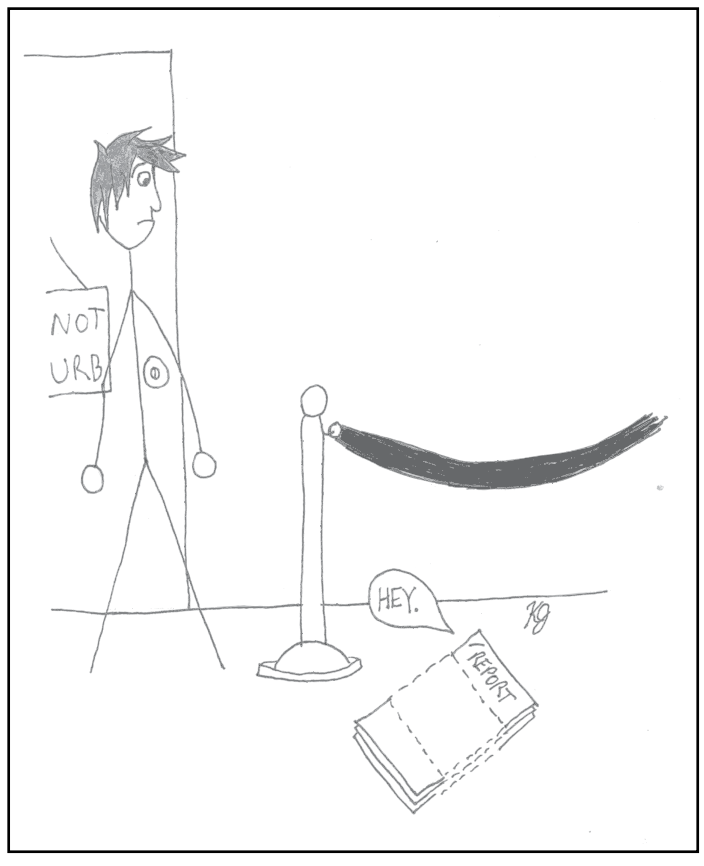
And then, out of the fourth window, like a gift from the heavens, came the last sample. Brought miraculously through the depths of hell itself, landing at the feet of the weapon.

Within seconds there was a miraculous flash, and we were saved. The humans had (somehow) won out against the zombies. This time. The zombies were annihilated, but as they disappeared an ominous warning blew through the air. They'd be back next term. And next time, they planned to win.

Too Geeky for Humour

By Kyla Rodgers
1A Civil



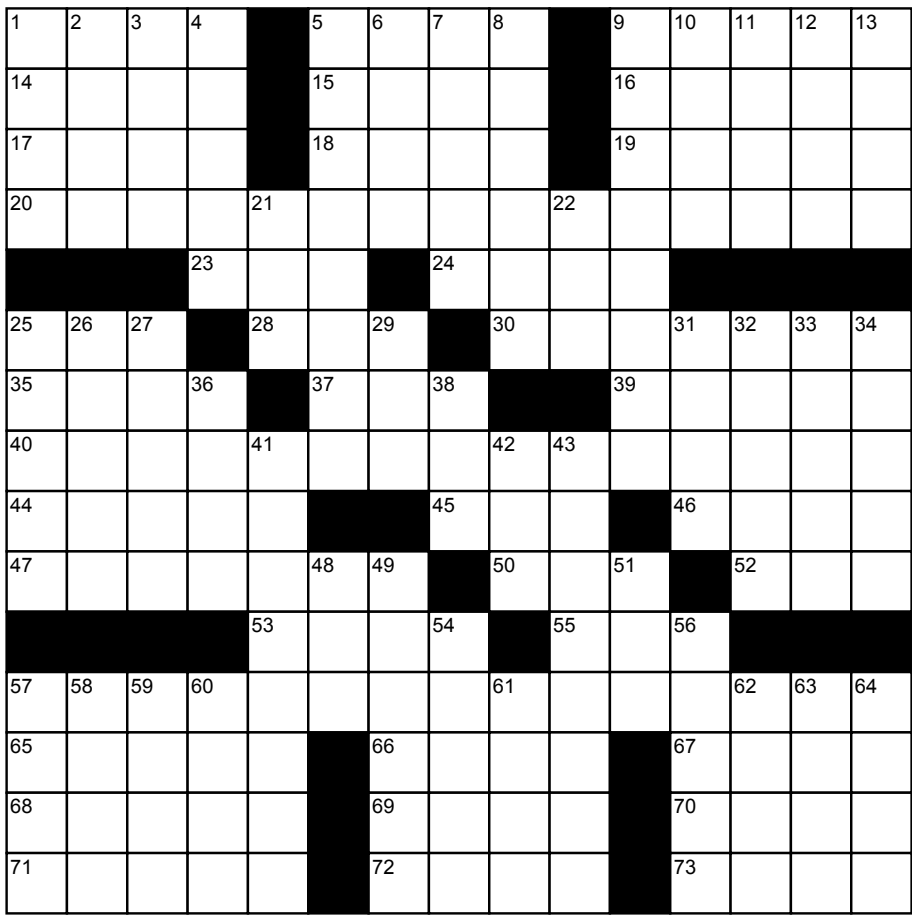


The Iron Crossword

Random Musings

STUART LINLEY
3B NANOTECHNOLOGY

Submit your completed crossword to the crossword submission box in the Orifice (CPH 1327) before next Wednesday to compete in the bi-weekly Crossword Competition!



ACROSS

1 Unable
5 Pageant identifier
9 _____ Motel (Psycho)
14 Do as told
15 Hoop go with
16 Marketplace
17 Trade
18 Middle Eastern
19 Cloth
20 AFI and Smashing Pumpkins genre
23 Oil cloth
24 Attempt
25 Merc. AMG
28 Definite article
30 Manger building
35 Jetty
37 Mime
39 Songwriter Lewis
40 Alaska archipelago
44 Meat (sp.)
45 Opposite of WNW
46 ____ off
47 Joy
50 Witch
52 Prepared (abbr.)
53 Film unit
55 Lie
57 Tabloid stories, often
65 _____ Express
66 Glare
67 Understand
68 "... ___ __ all, a good night"
69 Poker wager
70 Needlework
71 Bend down
72 Alexander II, for example
73 Half of a doorbell sound

DOWN

1 End section, musically
2 Brother of Cain
3 Straight up
4 _____ Durden
5 City on the Yangtze
6 Glow
7 Blind units
8 Nun duds
9 The old ball game
10 Cell nutrient, sometimes
11 "Africa" artist
12 Bana or Idle
13 Went down
21 Snitch
22 Wine container
25 The final frontier
26 Purple
27 Psychics
29 Global warming watchdog
31 Defeat
32 Hermit
33 Closed
34 Cheeky
36 Little one
38 Hydrocarbon suffix
41 Common jewelry shape
42 Sort of
43 Explorer, once
48 Black or Red
49 Express anger
51 Fool
54 Property claims
56 Pedalled
57 Health retreats
58 (See next page), e.g.
59 Shoe brand
60 Western alliance
61 Greek letter
62 Suspect
63 Thing, typically
64 Mouthful

Sudoku

#2012-13

JACOB TERRY
2T NANOTECHNOLOGY

Easy

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

Medium

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

Hard

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

Solutions for previous crosswords can be found on *The Iron Warrior*'s website at *iwarrior.uwaterloo.ca/distractions*.

THE IRON INQUISITION

Brian So and Meagan Cardno, 1A Nanotechnology

"Who wears your favourite moustache?"

"Jamie Hyneman from Mythbusters."
Josh McAndrew, 2B Math/Econ

"Why not Zoidburg?!?"
Dan Baldissera, 3B Chemical

"Colonel Sanders"
Maddy Liddy, 3B Nanotechnology

"Lisa Belbeck"
Casey Palermo, 1A Mechanical

"Mario"
Chris Hajduk, 1A Nanotechnology

"Burt Reynolds"
Josh Catton, 2B Chemical