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Waterloo Engineering Facelift?

David Yip

2B Mechanical



On Tuesday, November 9th, I missed a rather striking nightfall to attend a presentation by the Office of the Dean about it's Vision 2010 planning exercise. Why 2010? "Because it sounds better!" quipped the Dean. Sexy branding aside, six years is a suitable timeframe. Long enough to be effective, but not too far into the future such that the unknowns become too unwieldy.

Why plan? Dean Sedra noted that most universities do not have plan strategically, preferring instead to make small, incremental, reactive changes. A strategic plan allows us to define a goal, and make objective measurements of our steps towards that goal. In turn, this will help the faculty "close the gap between rhetoric and reality." Having specific objectives also makes the faculty a more attractive investment to potential benefactors and partners.

The aspiration is to be become "the best engineering school in Canada, and one of the top 10 schools in North America." Dean Sedra noted that our undergraduate program is already very strong, but to have a well rounded faculty, our graduate and research program must also be competitive. Specific goals outlined include: "maintaining and building on our strengths in undergraduate education, building our capacity for quality graduate education,

increasing our research intensity and impact, and enhancing our image as a multi-faceted engineering school."

Vision 2010 is actually comprised of seven sub-plans, one for each department within the faculty, and one overall plan for the faculty itself, with elements common to each department. Broad consultation will take place between faculty, undergraduate and graduate students, as well as staff. Dean Sedra emphasized the importance of descriptive quality of student experience data, and encouraged students to participate in the process.

It has five stages: the self-study, the draft plan, external assessment, a final plan, and finally annual benchmarking.

"Why plan? Dean Sedra noted that most Universities do not have strategic plans, preferring instead to make small, reactive changes"

The initial stage, the self study, is starting now. Committees are being formed, and consultation between the many parties that make up Engineering will take place. For undergraduate students, communication links in the form of Engsoc as well as department specific committees exist.

Direct communication with the Dean's Office is also welcome. Data will be collected and analyzed about the faculty's state of affairs. This phase will continue until the coming February.

From February until May next year, the draft plan will be drawn up from the results



"Dean Sedra" - The dean explains the strategic plan which will mark the future for Waterloo Engineering

of the self study. Following the draft plan, an external assessment by international experts will take place in June, to give the faculty a set of fresh eyes on our strengths and areas for improvement.

A final plan will then be drawn up in July and August 2005. As the execution of the plan progresses, annual benchmarking will "analyze updated data, measure progress, revisit and revise the plan as required." The timeline for Vision 2010 is as follows:

Following the official presentation, the Dean fielded questions from the undergraduate students in attendance.

Students brought up a number of interesting points. Regarding the consultation phase, what was being done to connect with industry, alumni, and offstream students? In the way of curriculum, students suggested a broader education, with

increased number of liberal arts course slots and selection, as well as more emphasis on importance of socially and environmentally sensitive sustainability solutions. I personally support both those ideas, as well as more emphasis on the creative design aspect of engineering problems, as opposed to straight math. To my surprise the issue of women in engineering was not brought up in question, but I am sure it is on the radar as well.

The dean assured us that all concerns and ideas would be duly noted.

For more information:
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2B Electricals, Softwares watch Andre the Giant

Kate Kelly

2B Electrical



On Friday November 12th, the 2B Electrical Engineering Class and the 2A Software Class (SE(x,y)) threw large class parties at POETS. Each class exhibited great participation, as a large crowd gathered at POETS to celebrate the end of another harrowing week at POETS.

Congratulations to both classes on a job

well done.

The afternoon was full of fun and excitement as the 2B Elecs unpacked and distributed their class tee-shirts for the first time. SE(x,y) showed up in force around 12:30 as the 2B Elecs trickled in. Refreshments were served, and both classes enjoyed a movie of Andre the Giant, the renowned wrestler, as they relaxed. At 1:30 the 2B Elecs had a surprise visit from Prof. Lipshitz, who partook in the party. June and Don also showed up to cheer on

Continued on page 5. See POETS parties



Letter from the Editor

Andre Beltempo

3B Mechanical

Editor-in-Chief



Ten years ago, in the small African country of Rwanda, over the period of about 100 days, at least 800,000 people were brutally killed, primarily by machete. That's about 5 people a minute. Stories of villages where all males were killed and women were raped for weeks before being hacked to pieces abounded. The international community, far from being unaware, had been well informed that the civil disorder was escalating, and that tensions were reaching a breaking point. A small U.N. observer force, consisting mostly of Belgians, and commanded by a Canadian, Romeo Dallaire, was present on the ground, and had repeatedly issued warnings that without serious intervention, thousands would die. The international community seemed even more apathetic than usual, especially in light of the very recent bloodshed in Somalia. Once the killing stopped, the international community vowed that 'never again' would such a genocidal atrocity be allowed to go unpunished.

How soon we all forget.

Today, in the western Darfur region of Sudan, stories of villages where all males are summarily executed and women are raped for days before being killed abound. Ethnic Arab militia are driving out the native people of this region, and doing so in an undeniably recognizable way. Government aircraft and helicopters are aiding in this endeavour. The destruction of foodstocks and massive refugee problem is the worst humanitarian crisis in the world right now, far surpassing that of Iraq. The current estimates for the increasing death toll which will result range anywhere from the deaths of a 'few' thousand, to hundreds of thousands.

What is the international community doing to stop this? Nothing. No troops, no sanctions, no embargoes. It was an effort to even agree on what they should call the crisis. This tells me three things: countries which claim to be strong international players, defending human rights and freedoms are looking out purely for their own interests, the international community, despite being very magnanimous with promises is utterly dependent upon U.S. action, and lastly, Canada is not exempt from this discussion.

Despite the belief (especially of the EU nations) that nation states do not act primarily for their own interests, nation states do just that. Although many rights abuses occur

in many areas of the world, few places have experienced any significant help from the international community. Places in South America, Africa, and South East Asia have all, at one time or another, been subjected to various disasters, and in each case, were largely left to their own devices. When it comes to words, the countries who actually have the capability of changing things are the most vocal. France, Germany, Russia and the U.S. always are the first to condemn an act, and, with the exception of the U.S., are usually the last to commit troops. The recent conflict in Iraq caused massive outcries from France and Germany, who claimed that they were concerned about the plight of the people of that country. In actual fact, despite what the popular opinion in these countries were, the decision makers simply recognized that they didn't want to get their hands dirty, and that, although they may not have liked Saddam, their interests were not being served by involving themselves in Iraq. These same countries, decrying the horrible American intervention claiming international law and human rights violations, do absolutely nothing when a clearly humanitarian crises in their geographical backyard threatens. Countries ten years ago made a pledge that Rwanda would 'never happen again'. Of the few big countries possessing the troops to intervene, all have stopped short of even imposing sanctions. In each case, the countries in question are looking after their own interests: China and Pakistan have oil interests in Sudan, Russia and the U.S. are overextended, and France and Germany do not want to act because they have no interests in losing troops in an African crisis.

In any case, international interventions of the large scale required in Sudan do not occur without a significant U.S. presence. Although they are the 'Great Satan' to their enemies and ridiculed by their friends, no significant country involves itself without U.S. support. Gulf War I, Somalia, Bosnia and Haiti all were initiated by U.S. commitments. The simple fact is, for large international missions, the only country willing to make the 'first step' and admission that they will sacrifice boots on the ground, are the Americans. This boldness is a double-edged sword, as a country which is brave enough to send troops into a crisis is more likely to act unilaterally, but today no country outside of America is brave enough to do so. It can be argued that smaller countries such as Canada and the Netherlands cannot step up to the plate alone. This is true. Larger middle players, such as Britain, Germany, France and Italy all have the military and logistic capabilities to ensure refugee safety and humanitarian aid. Britain and Italy are involved in Iraq, for better or worse. Where are Germany and France now?

Lastly, the most smug country in the world for rhetoric, which takes the most pride in the most meagre contribution, is Canada. Despite the fact that we were listed as 33rd in the world for peacekeeper commitment in the UN countries, and have categorically contributed less as a percentage of our population and economy since the inception of UN peacekeeping, Canadians live in the fantasy world of being the world's saviours, with blue berets on our heads and smiles on our faces. With the resources the Canadian military has been given, during the performance of every mission it has done an outstanding job. Having said that, a contribution of 500 people to a place like Sudan is more of an insult. Canada does not possess the capabilities to act unilaterally and save the people of Sudan. Why not? We're rich enough, and certainly vocal enough about how bad it is. Right now, at the UN, no one wants to step up to the plate and commit troops. Imagine if we, as a country, actually put our money where our mouth was and submitted the proposal to the UN that we would send five, ten or fifteen thousand troops to the region, along with humanitarian aid. What kind of message would this send to the people of the World? We are remarkably well placed to do this, since we do not have the added worry of actually defending our own country. It's time Canadians stopped being so smug about how stupid the U.S. is to act unilaterally and change the world for the worse. The best way to counter that argument would be to act unilaterally to change the world for the better, not bitch about it.

The U.S. is, at this point in time, the only country with balls. They do what they want. This scares people, and it should. But it also means that if they think they're right, they'll commit to something. Therefore, if they are convinced that Iraq is a threat, they do something. The rest of the big world players are wonderful orators when it comes to international politics, but timidly stand by when the potential that they might lose their own people for a good cause presents itself. To lead is to do. Shame on the countries that stand idly by while watching a country kill its own citizens, and do not even go so far as to impose sanctions. The international community would only act if the U.S. did first, and then they would let them do the heavy lifting. It's time that someone else stood up and sacrificed for all those lofty ideals which they praise, but which they aren't willing to pay for. Lastly, I am ashamed that my government has left our own capabilities so weak that the loudest statement we can make is a small protest at a podium. This is a time for action, and Canada can do nothing. To change the world order and do good requires more than complaint and debate, it requires prompt action.

the IRON WARRIOR

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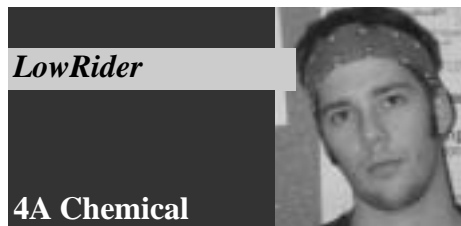
If you want to contribute ANYTHING AT ALL,

drop by our office (opposite the Orifice) or e-mail us at iwarrior@engmail

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The Iron Warrior encourages submissions from students, faculty and members of the university community. Submissions should reflect the concerns and intellectual standards of the university in general. The author's name and phone number should be included. All submissions, unless otherwise stated, become the property of The Iron Warrior, which reserves the right to refuse publication of material which it deems unsuitable. The Iron Warrior also reserves the right to edit grammar, spelling and text that do not meet university standards. Authors will be notified of any major changes that may be required.

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Hey LowRider:

I just don't get it! There are so many pretty girls in engineering, why don't you make a Women of Engineering Calendar? I bet all the boys would buy it and hang it next to their periodic tables. I would probably buy one too!

Sincerely,
-Guy who has 6 girlfriends

Dear E-Roc,

You're certainly right about the hotness of Eng girls. Let me list a few, just for all of the Softies to know what they're missing. There's this one chick I know who's like "Yarr!" and she makes good cookies. If only she were regulation height. Thanks for coming out. OK, consider my roommate's girlfriend instead. She's definitely the right height, and hot... but I think she has a rock collection, so forget her too. How about this girl in my class. She's tall and doesn't own any rocks, but on the other hand she sneezes kind of weird so never mind. This one for sure: she's sketchy B-Sock, which is bad, but she's in Chem, which kind of balances out if she didn't like C++ so much. She's cut. This is not going well at all.

I'm not cut out for making a calendar, apparently. I'll leave that to the pros, but I will buy one for sure.

-LR

Dear LowRider,

This term I thought it would be a great idea to host a party where we served a few BEvERageS to happily donating students. I thought it was fit to invite only the super-coolest guests to my shindig, hence, I invited none other than Mr. LowRider. Unfortunately, he declined my offer and now I feel dejected, upset and on the brink of total breakdown. Does this mean I'm a loser? Please help! I cry myself to sleep, say, twice a week.

Anonymous
Persumably Graduated

The past few weeks have seen almost simultaneously two of the most influential moments of the next four years; the slow demise of Yasser Arafat's health and the re-election of George W Bush. One is now comatose and nearly brain dead while the other is a long time revolutionary humbled by the shadow of death.

Although at the outset both individuals would seem remarkably different, they actually are more similar than some might believe. Both men claim their position of leadership without formal democratic election processes (you can tell me all you want about democracy, I still can't see how any democracy can require hundreds of millions of dollars to run for office). Both men have been ineffective at bringing about serious democratic improvements to their respective countries. Finally both men are mere puppets in the game of politics.

So given the similarities, how is it that

Dear LowRider: UW_LowRider@hotmail.com LowRider's Spectacular 1001 Word Penultimate Article!

Fearing loserdom,
Party Girl

Dear Party Girl,

Sorry I missed your party; I had a dentist appointment.

Now let's get to the real cause of your problem. In order for me to judge whether or not you are a loser, I need to know a few things about the party itself. How many people DID show up at your party? Are we talking like 4 or like 74? What was the music like? Was it AC[lighting bolt]DC or some other crap? How many people that I know were there? What fraction of them were people that I like? Did The TOOL show up? Were you over capacity? So many questions.

In conclusion, I have to turn down a lot of party invitations from girls like yourself. You should not cry yourself to sleep any more often than twice a week (unless you're in Software) just because I wasn't there. You're on the right track to super-cooldom yourself by being a loyal LowReader. Good for you.

-LR

Dear LowRider,

I recently received an unmarked package in my office (SLC 1103). I'm hesitant to open the box, fearing that it may be an angry machete-armed Malaria-infested Spider Monkey.

Should I,

a) keep the package for a little while and then direct it to my successor with a warning label attached,

or

b) send it to the Municipal Governance and Management Program in Georgetown, Guyana, where a cynical, alienated, egotistical, former executive of a large on-campus organization has been banished

to? (With a special letter from Haley telling him that he should have steam cleaned his couches before he left.)

Sincerely,

-Smirnoff guzzling executive of large, powerful on-campus organization

Dear Executive,

Sorry I haven't been to that bar that you're the CEO of for a while. I've been super busy with my volcano project. There is also too much stuff and things to do for stupid fourth year. Now, to your question. I have it on pretty good authority that you don't want to open that box anytime soon. Chris Edey got deported for a reason, and that's why I never trust expatriates or planners. I suggest you bilk an unsuspecting student for 50 cents and stick that box in a dryer in V1.

The last thing I need is you getting malaria before I get to interview you again. Practice up your calculus because I'll be seeing you next term, circa issue 2. It will be so rocking that B-Sok won't know what hit them. Those guys really suck, eh? They're definitely not worthy of my grade "A" advice.

-LR

PS: Tell FenceCom I said hi.

PPS: I almost forgot to make fun of Software in this letter. See, I'm trying to get Fish to write in like he always threatens to but doesn't. What a guy!

Dear LowRider,

Do you really have to graduate? Please please stay and write for ever and ever. What will we ever do without you?

-LowRider Fan Club Chicks

Dear Fan Chicks,

This is the way it goes. Just like when young Obi Wan gets his lightsaber, but

then he grows up and gets his head cutoff but he turns invisible. Then Luke gets Darth Vader later on. That's like a metaphor for graduating. Or, did you ever see the movie when Captain Kirk meets Professor X? That's more symbolic, per se, but the same kind of idea as doing two school terms in a row. And when McFly rides in the DeLorean? Well, it's a steel car which is pretty close to an iron ring if you ask me.

You'll be fine without me. The next few letters are excerpts from people trying out to be the next LowRider. They didn't make it to the interview round. Feel free to laugh their expense.

-LR

Dear LowRider,

Can you let me be the next LowRider? I'm in 1A Software and blah blah blah

-Softie

Dear Softie,
Request Denied.

-LR

Dear LowRider,

If I'm the next LowRider I'll be way funnier than you because crap crap crap

-Jerkhead

Dear Jerkhead,
F*** you period send

-LR

Dear Low-rider,

You should let me continue your legacy yada yada yada

-Cool Guy

Dear Cool Guy,

Learn how to spell my legacy first, dumbass.

-LR

Alumni Affairs: Weekend at Arafat's



people view them in such dramatically different lights?

Yasser Arafat, in his wildest dreams could never imagine killing as many as the US forces have been able to bury in the deserts of Iraq, while George W. Bush can only dream of having the cult-like following that Mr. Arafat has enjoyed over the past decades.

And still, one of these men is the leader of the free world and one is frequently cited as the leader of a terrorist organization bent on destroying democra-



cy.

I'm not sure how history will judge these two: will Mr. Arafat be seen as a man who fought the injustices imposed on his people by the state of Israel or just another leader of a failed revolution which came up short in making the jump from movement to institution? Similarly, will Mr. Bush go down as being the first American president to bring "true democracy" (whatever that means) to the people of Iraq, or just another war hungry individual granted far too much power for his

own good by the ignorant masses of the people of the United States?

If I know much about history, I think I know enough to understand that the growth of democracy in transplanted environments can lead to drastic results - none of which I'm sure the US is interested in sticking around long enough to witness. In the end, Mr. Arafat will obviously not be around long enough to see if his efforts will ever come to anything ultimately lasting. Truly it could be argued that Palestine is an example of true democracy trying to take roots in the poisoned soil of generational hatred while the people of Iraq are having their roots planted in American top soil and watered with 24 news propaganda coverage.

Given all their similarities and mutual interests, it is quite remarkable that the two worlds of Yasser Arafat and George Bush only truly crossed paths in the last few weeks. They should have met much earlier.

Editor's Note: Yasser Arafat passed away in Paris due to multiple organ failure on November 11th.

Eng Events

Viva Semi-Formal

Engineering Semi Formal gambles and beats the odds

Michael Sue-Kam-Ling
1A Chemical

The atmosphere in University Club two Saturdays ago was electrifying as the flashiness of Las Vegas merged with the spirit of Engineering to create the Vegas Nights Semi-Formal. Various groups of engineering students from all years and disciplines came out for a night of dinner and dancing, sporting the best of their elegant attire. It was truly a night with class and style in the air as even I, uncultured as I am, managed to figure out which fork was the salad fork.

The night began with everyone socializing impatiently as guests, especially the village-dwelling frosh, awaited the arrival of the evening's feast. Chicken, pasta, fresh vegetables and many different salads... it was an immense change from the typical Food Services rations served in the hell known as the VI Caf, not to mention the fancy desserts.

It wasn't long after the food was cleared that the eager Semi-Formal patrons flooded the floor and danced the

night away. One of the highlights of the evening occurred when EngSoc President Laura Mooney and Ryan Consell broke out into a fantastic display of swing dancing. Ryan further demonstrated his dancing abilities when he danced solo to Billy Jean by Michael Jackson. Even a fellow frosh and I put on a show (and I use that term loosely) when "What is Love?" came on and we singled out a girl to recreate the dancing antics of Doug and Steve Butabi from "A Night at the Roxbury".

Halfway through the night, the crowd parted as "Thunderstruck" blared on the speaker system and the TOOL was paraded around by the Toolbearers. Those present were then given a photo-op with the TOOL and many took advantage of it.

Overall, this term's Semi-Formal was a success. Prizes were given out, food was eaten, dances were had, and good times were had by all. I encourage those who did not attend to consider shelling out the cost of the ticket next term and giving it a shot. A special thanks goes out to Sabrina Giovino, Ian Tam and Sarah Vandaiyar who organized the Semi-Formal; it couldn't have been such a great night without great organizers.



Sandford Fleming Foundation
E2 3322, ext 4008, sff@engmail
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Fall Debate Results

The Debates were held on Friday, November 5 at noon. Thank you to all our competitors and special thanks to Prof. Cascante, the faculty co-ordinator for the debates.

FIRST PLACE TEAM

Hsiao-Chien Lin and Bobak Naini
Electrical and Computer Engineering

RUNNER-UP TEAM

James Gannon and Geoff Rawle
Systems Design Engineering

Funding for these awards comes from engineering student contributions and depends on them for continuation

Engineering Curling Bonspiel rocks!



Marc Joyce



3B Software

of drinks were available from the bar. The drinks were very necessary too, since curling three eight-end games in one day was pretty intense. However, thanks to some subsidizing from the EngSoc budget, everyone earned their reward. All curlers went home with a prize, regardless of the results.

I originally wanted to do a bonspiel as part of National Engineering Week last February. I actually went so far as to submit a budget proposal to the National Engineering Week Ontario Steering Committee to try and get partial funding for the event. Unfortunately, my proposal was rejected, but they still advertised the bonspiel on their website and in the Engineering Dimensions magazine.

However, nothing ever took place because I was not able to find any ice available for rent. In the end I decided to try doing a bonspiel again for this term, separate from any other events. The rest is history.

Now for the results! In first was the only team with three wins, Steve Grant's rink (Steve Grant, Kaleb Ruch, Mike Bishop, Karin Lethbridge). There was a tie for second between a couple of third-year teams, Them Guys (Sean Wells, Doug Kavanagh, Nate Holm, Chris Porter) from Software and Beer Barons (Mike Kuebler, Mark Campbell, James McTavish, Ryan Tremblay) from Civil/Mech/CS. Bringing up the rear of the standings, our last place team was

also the best dressed team, in their spiffy red FOC vests. Frau FitzGerald and the FOctastic Four (Andrew Kowpak, Heather FitzGerald, Haley vanPoorten, Liz Harris) played well despite terrible ice conditions and some stiff competition. I sure hope they and all the other teams had a good time.

Look for another bonspiel coming up this winter or next fall as I try to convince someone on B-Soc to organize it. In fact, if any B-Soc'ers are reading this and want to do it, get in touch with me and I'll be happy to help you out. Thanks again to everyone who participated and helped out with the organizing. Cheers and good curling!

After over a year of planning, the first ever EngSoc Bonspiel successfully took place on Saturday, October 30th. On an unseasonably warm day for curling, twelve teams from all over the university took to the ice in hope of capturing the top prize. The KW Granite club was the perfect venue for this event, since it is only a five minute walk from the south end of campus. Lunch was provided by Davenport Catering and plenty

POETS parties

...continued from Page 1.

the participants as The Princess Bride played, (hooray for Andre the Giant!). There was much revelry throughout POETS Friday afternoon, people chatted and enjoyed the free time (when we probably should have been in classes) and got a chance to participate in an event as a class. All in all, it was a great time!

Remember that POETS is a great place to organize class events, and the gracious

managers are always willing to provide, just make sure to give them some warning and specify what you're planning.

Check the EngSoc website for upcoming exciting events, and in the meantime, come on out and enjoy your official EngSoc establishment: POETS!

Editor's Note: My name is also Andre. This is purely coincidental. I swear.



ENGINEERING SOCIETY EXECUTIVE REPORTS

EngSoc President: The one who gives the orders and stuff

Laura Mooney



President

It's strange to think that this is the second last executive report I will ever have to make. This term there's an EngSoc election, and I encourage everyone to come out, learn about the candidates and vote

on November 24. Your EngSoc exec represent you to the Dean, to other societies on campus, to other EngSocs across Canada, and many other groups so you want to make sure they are representing you!

This term, we're restarting an event that has been pushed aside in the past couple of years. In the past, December 6 has been a day to reflect on the effect of violence against women and ways we can stop it and help victims. This year, in cooperation with Women in Math, we're

planning a fundraiser and public display on campus. If you're interested in helping out in any way, please email me (asoc_prez@engmail) and I'll include you on the volunteer list.

Also this term, we have two awards that require nominations. The Paul and Paula Plummer (P&P) Award Nominations are for graduating students who've made a significant contribution to the Engineering Society during their time here. Nominations will occur at the next EngSoc meeting (Nov 24), and all that's

required is to make a quick 30 second speech about what that person has done and why they should get the award. New this term is the Broken Hammer Award, to say "thanks for trying" when things haven't turned out as well as they should have. Nominations are also during the next meeting, and will be in the same format as the P&P award nominations.

That's it for this report - of course, if you have any questions, concerns or comments just email me and I'm more than open to discussion.

VP-Education

The one who does school stuff

Jonathan Fishbein



Vice President, Education

Hola Senor. Usted tiene cualquier informe del exec #5? (for those of you Spanish deficient ... or Babel-Fish deficient ... that's "Hello Sir. Do you have any exec report #5?") Well yes, yes I do ... and here it is! Things have kind of slowed down here with elections and all, but there's still some stuff going on that you should know about.

Course Critiques are in full swing. This means that in the next couple of weeks your profs should be handing out the critique surveys to fill out and return to the EngSoc office. This is our chance to say how we feel about the professors that have been teaching us and the courses that we take, so please take the opportunity to fill these critiques out. The results of these critiques are used by the faculty when they decide tenure and salary decisions for professors so they do make a difference in the grand scheme of things. Plus this term will be the first terms where you will be able view the results of these critiques online. The development of the online critique result system has hit one and half snags that we're trying to work around. The first snag is that Dean's office is being a little slow releasing the script that

they use to generate the reports from the raw critique data. I'm not really sure why this is taking so long since the Dean's office approved the development of the system and this script has no critical or personal data in it, but all we can do is keep waiting. The second half snag we've hit is that this script is written in SAS, which no one on the development team seems to have any idea how to use. So if you know SAS and want to help us out, send us me an e-mail at asoc_vpedu@engmail.uwaterloo.ca.

The second big thing going on is the faculty's 2010 plan which is getting started pretty soon. There will be some developments from the EngSoc front on this issue to try and get students more involved. I don't really want to get into it right now because we have to work out the details, but the entire plan will be presented at next EngSoc meeting.

In Rae Review Roadshow news, the Rae review will be in town for one night only holding a town hall meeting on November 25th at Conestoga College. I think my report in the last issue said it was on the November 5th, but that was horribly, horribly wrong. Also, the FEDS have put out a submission to the Rae Review. Anyone interested in taking a look at it can e-mail me or Jeff Henry (vped@feds.ca) to get a copy.

Well that's all the news that fits the page in this week. ¡Adios Amigos! (translation: Goodbye friends ... honestly, learn to use Babel Fish!)

VP-F

The one who does money stuff

Rajat Suri



Vice President, Finance

Not much is happening on the finance front, but me and the kids from novelties are organizing a class t-shirt contest! Also next week is Novelties Clearance Week, where novelties items will be selling in the CPH Foyer at record low prices. We will also be taking suggestions for any new novelties items that you guys think we should get, so let us know!

About the faculty-wide class t-shirt design competition...Basically the way it goes is that each class will decide on a class logo and t-shirt design for their class, and will submit that design in digital format to asoc_vpfin@engmail.uwaterloo.ca by next

Friday (ie the 19th of November) to be judged by EngSoc exec for a CASH PRIZE! So the best way to go about deciding on a logo for each class is to get a bunch of people designing different logos in the class, and then voting on the best one. Please note that if there are more than one design per class, the winning design MUST be voted upon by the entire class (and cannot just be decided by the reps).

Class reps are also responsible for finding out who in their class would want to purchase a T-shirt (price is around 15\$, but may get cheaper if there are many people willing to buy the shirt) and what sizes they would want. This information should also be forwarded to asoc_vpfin@engmail by next Friday. Also note that P***5 points will be awarded for both submissions and the number of people who sign up for T-shirts.

I'm looking forward to seeing some creative designs for each class, so get cracking!

VP External

The one that does stuff that has to do with Society stuff outside of school

Nick Lawler



Vice President, External

Here's another exec report from the big green desk of the VP External. I've only got a few things on the go right now. Firstly I need applicants for two conferences that are coming up in the near future. These are CFES Congress and FYIC. Both of these are taking place in the beautiful city of Toronto, with Congress at UofT and FYIC at Ryerson. I would like to get delegates all settled for these conferences by November 25th, so hurry and don't delay, get your applications in today! All of these conferences are funded by the Dean, and are both a great deal of fun, as well provide excellent opportunity to meet and greet other like-minded engineering students from across the country. FYIC is only open to first year students; however anyone can apply for Congress.

The K-W Santa Claus parade is com-

ing up on November 27th. The Engineering Society is again entering a float in the annual parade. The Lions Club is putting on this year's parade, and it looks like it will be a big event. Our entry will feature various student teams, as well as the Engineering Society mascot the TOOL. Wherever the TOOL goes, good things will happen, I promise.

In some more interesting external developments about 40 students from UofT will be coming to this year's production of the EngPlay! The students coming are mostly involved in UofT's own drama production SkuleNite. They are very interested in seeing our production. Of course when SkuleNite hits the stage in the winter, Waterloo will return the favour and attend in full support. The folks from UofT will be attending the matinee production on Saturday at 2pm. Tickets are available in the Orifice, and are also on sale at lunch in the CPH foyer, they are \$5.

Well like all good things my exec report comes to an end. I've only got a few of these left now, and I've had a great time serving as your VP External for the past 15 months. Cheers!

VP Internal

The one who does stuff that has to do with non-school stuff at school

Kate Kelly



Vice President, Internal

So much to do and so little time left, this term has flown by! This week is Arts Week, showing off all the artistic things Engineers can do! This coming week there are tons and tons of events! Genius Bowl is happening Tuesday the 23rd at 5pm in RCH 101, it'll be the best and brightest of all competing for great prizes! Sign up your team! The 5th Engsoc meeting and Election day are happening on Wednesday the 24th! It

should be very exciting. There will be an WIE Speaker and TALENG on Thursday the 25th....don't worry, WIE finishes before TalEng starts. TalEng is taking place in the basement of Philthy's at 8pm, if you've got an act or know someone who does, make sure they sign up in the Orifice! The EngPlay is showing Friday the 26th and Saturday the 27th! Look for tickets in CPH foyer! Finally, the Santa Claus Parade is Saturday the 27th. If you want to help out with the contact the directors, you can find all the directors on the EngSoc webpage: engsoc.uwaterloo.ca/www/directorships.php After that it's EOT and Potluck!

Oh my, what a term!

WEEF Participation and Status Update Now with 20% more graphs!

WEEF Proposals – Winter 2004		Requested
CHEMICAL AND ENVIRONMENTAL CHEMICAL		
1	Digital Electronic Burettes	\$2,500
2	Equipment Required to Increase Capacity of ChE032 Lab	\$4,000
CIVIL and ENVIRONMENTAL CIVIL		
3	835 Orion Dissolved Oxygen Meter	\$1,898
4	Kontes Filter Domes	\$1,760
5	Smart Symposium SSID250 and travel Case.	\$3,260
6	Survey Equipment - Levels	\$5,071
7	PI Displacement Transducers	\$2,080
EC&C		
8	Projects in Semiconductors and Electronic Circuits	\$12,300
9	Oscilloscope for room E2-3344 / E2-3347	\$4,858
10	Oscilloscope GPIB to USB adaptor for room E2-3344 / E23347	\$954
11	Wireless Microphone System for room E2-3344	\$6,672
SYSTEMS DESIGN		
12	PCI DAQ backup Card for Control Systems Sd352 Course	\$2,927
MISC		
13	Lathe – Student Shop	\$21,000
	Sub-Total Departmental	\$69,280
STUDENT		
14	Midnight Sun Solar Race Team	\$5,000
15	Formula SAE	\$7,500
16	UWAFT	\$5,800
17	The eNTiTy (NTT) Project	\$1,500
18	Club for Undergraduate Bioengineers (CUBE)	\$2,300
19	2004 Waterloo Off-Road Mini Baja Team (WOMBAT)	\$3,100
20	2004 Phoenix	\$2,000
21	University of Waterloo Robotics Club	\$890
22	UW ASIC GROUP	\$1,620
23	UW ASIC- Mentor Graphics FPGA Advantage Software	\$615
24	UW IEEE	\$930
25	Waterloo Aerial Robotics Group (WARG)	\$1,250
26	Autonomous Mobile Robot Network (4th yr project)	\$890
	Sub-Total Student Groups	\$33,395
	TOTAL	\$102,675

Figure 2: Fall 2004 Proposals

WEEF Participation %by class

82% Overall participation

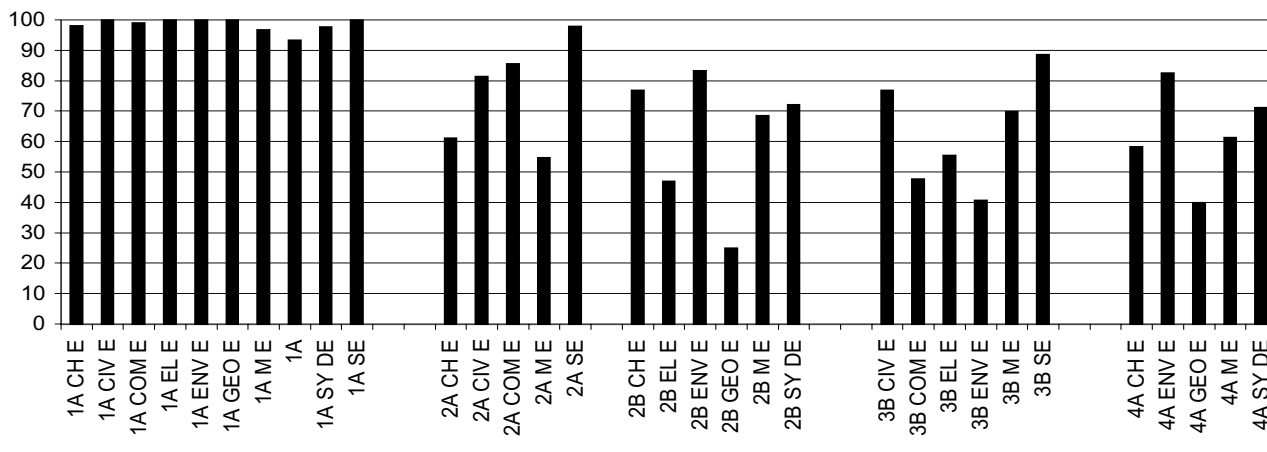


Figure 1: Fall 2004 WEEF participation by class



Ryan Walker

WEEF Representative

of you donated to WEEF. The results are tabulated in figure 1. The endowment principal is now over \$5.4 million. This amount allows WEEF to allocate \$45,000 this term. Last Tuesday the proposals were presented to the class WEEF reps and myself. An overview of what is being proposed can be seen in figure 2.

Thursday November 25 in RCH 302 is funding council where we will decide who the \$45,000 is split between the pro-

posals. Ask your class WEEF rep about who is asking for what and give your opinion. There will be pizza and refreshments for the WEEF reps while we decide where the money should be spent. It is very important that all classes be represented at funding council so that we have voting authority. Reps should show up in RCH 302 by 4:50 so that we can start on time and finish before anyone has night class.

This term, participation was one of the highest I can remember. Nearly 82%

DIABETES Awareness Month: The more you know. . .

Andrew Dodds



1A Mechanical

November is here. It is the last month of classes, the month of Remembrance Day, and also Diabetes awareness month. I know how many people are happy that the term is almost over (about as many as are dreading finals), and I know we all continue as we were taught as children to pay our respects to all those involved in and touched by war. My question is: how many people are aware of diabetes?

It was in grade 4 that I was introduced to diabetes. A classmate had it, and she gave us all a little demo that just looked like she was making herself bleed for no reason, as far as an eight year old is concerned. Then she moved to another continent, and so diabetes faded from my memory. A couple years later, I was hospitalized on my mother's birthday, and there was that word again: diabetes. Without any warning or family history, I now had this incurable condition which entailed only a lifetime of expensive treatment.

Most people only know of diabetes from television commercials with old ranchers or Indian chiefs, offering pills to manage diabetes. That is type 2 diabetes, which affects the majority of the 1 to 1.5 million Canadians touched by the disease. However, I have a different type, known as type 1, or juvenile diabetes, which is never that easy to control.

Here's a quick explanation of diabetes. We eat food to get sugar. Our body burns sugar so that we can move, think, and live. Our pancreas, an organ flattened under the stomach, secretes insulin into our bloodstream based on what we eat. Insulin could be compared to 19+ ID at the Bomber on most days: if you don't have it, you can't get in (in diabetes speak, the sugar can't be used).

Diabetics have malfunctioning or useless insulin secretion, and so type 2 diabetics need to use injections of insulin, pills, or diet and exercise regimens to stay healthy. Juvenile diabetics can only resort to the stabby stabby often reserved for heroin addicts and flu shots. I myself have a pager-like insulin pump to keep me alive, bringing my annual needle count down to 120 from 730. Instead of costing \$0 if you sign over

Continued on page 12. See Diabetes affects millions

Upcoming Events from EngSoc

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
21	22 Exec all candidates forum	23 Genius Bowl End of Campaigns	24 EngSoc Meeting #5	25 - WIE Tech. Speaker - TalEng	26 - Engplay - WEEF Funding Council	27 - EngPlay - Santa Claus Parade	Check out up-to-the-day event postings on the EngSoc website www.engsoc.uwaterloo.ca
28	29	30	1 EngSoc Potluck Meeting	2	3 EOT	4	

Eng Soc Elections

ENGINEERING SOCIETY EXCLUSIVE ELECTION COVERAGE

The Elections are coming!

IW Release

IW News Bureau

As of Thursday, November 11th, the candidates for the executive positions were:

President:

Nick Lawler

VP Education:

Jonathan Fishbein

Melissa Hurd

VP External:

Jason Jagodich

VP Finance:

Adam Schubert

Patrick Brown

Sabrina Giovinazzo

Marc Joyce

VP Internal:

Michael Buczkowski

WEEF:

Katherine Chiang

Hopefully you'll have a chance to meet some of the candidates during class visits, or you will by early next week.

We hope you'll drop by the All Candidates Forum on Monday, November 22nd at 11:30 to quiz the candidates on their plans for the next 16 months. Then, come out to vote on Wednesday from 9 AM to 4:30 PM in CPH Foyer to select the next Engineering Society Executive.

Editor's Note: Only nominees submitting their platform by the Nov 12 midnight deadline are printed in this issue.



Arrr! I be voting!

Nick Lawler**Acclaimed - President**

Hello, my name is Nick Lawler and I am your new Engineering Society President. I've been acclaimed to the President position. I am currently studying Civil Engineering and I am just about to finish 3B. I've been involved with the Engineering Society ever since my 2A term. Most recently I've been serving on the EngSoc exec as the VP External. This has been a terrific experience; I've gained valuable knowledge on all aspects of student government, and student life here at Waterloo and abroad.

As VP-X through the gracious donations from the Dean of Engineering I was

able to attend numerous engineering students' related conferences all across Canada. These conferences provide terrific information on other EngSoc's, the future of engineering education, as well I was able to make lots of contacts with other engineering students from across Canada, the United States and abroad. My experience as an EngSoc exec allowed me to develop strong leadership and planning skills that will perfectly lead into a term as your EngSoc Prez.

Where do I want to take the Engineering Society? That answer is simple, to the top! Already we have a terrific base of active and excited students, who want to be involved, and have some fun to go along with the hard work it takes to be successful here at Waterloo. I will make sure our charitable and entertainment events continue to grow and attract students from all across the faculty and different departments. I have a few ideas for

the future Engineering Society. I intend to investigate the possibility of creating closer ties between engineering student groups within and the Society. Currently we have many student groups with the faculty that run at a parallel with EngSoc, by tying us together we can make better use of our resources, and money.

A few of our student spaces are showing their age, these include the Orifice and POETS. Working with my colleagues on B-Soc, I intend to investigate how we can revitalize these spaces. For POETS, this may include the hanging of new pictures, creating an upstairs that is a better study space. The Orifice provides many great services to Engineering Society members. By making slight changes to the setup and arrangement, we can make better use of these resources, and also ensure more people know about these services. Another space is the newly renovated third floor of RCH. This space is fairly dull and blank

(even for a UW building). There has been talk to setting up a permanent Engineering Arts display, or the commissioning of a mural for the walls. I intend to work with B-Soc and the faculty to see how we can make our newest building more inviting, and colourful.

Well folks, that's about. I promise that as our new EngSoc Prez I will work hard with my fellow exec members, creating a fun, inviting and relaxing atmosphere for all members of the Society. If you have any questions, comments, or suggestions about things that could be done here at Waterloo please don't hesitate to drop me a note at: ndlawler@uwaterloo.ca. Also, please remember to vote in the upcoming EngSoc election. A few exec spaces are up for contention, and each and every candidate has great ideas about where they want to take our Society. Good luck on finals, see you in the summer.

Michael Buczkowski
Acclaimed - VP Internal

I'm looking for the WMD... But I'm not Bush!

My name is Michael Buczkowski and I want to be your next Vice President Internal. I am presently in 2B Chemical Engineering and I've been an active member of the engineering society since my first term. I began as a class representative and then moved on to directorships. You may have seen my face working the Engineering Novelties Store last term or this term, and if I'm not in class I'm usually hanging out in POETS. You also probably saw me during Engweek this

term where I helped run events or even as a class rep advisor at and engineering society meetings. I've wreaked enough havoc from low in the ranks of the society and I need a higher viewpoint to search for the WMD I need!

You might be asking what kind of WMD I'm looking for and let me tell you it isn't biological, chemical, or nuclear ones. I'm looking for the weapons I need to destroy engineering ignorance and promote fun. I love engineering here at Waterloo and I want to help promote it within the faculty. I have the feeling that there are a lot of people who feel the same way I do. They've heard the old adage of how engineers work hard and play hard and so have I! I have a lot of good stories to tell so ask anybody in my class or drop

by POETS and I'll regale you with endless tails of adventure. You've got to admit that is pretty good wordage for an engineering student!

The most important thing about going to school in Waterloo is having a balanced education. So much importance is placed on academics that people tend to forget that a social education is just as important! There are so many cool people that I have met over my terms so far at Waterloo that I can't even begin to list them. I can tell you from experience that the more I get involved the better I do academically. (Let's hope that trend continues!) There are so many great events that I want to help make even better that it is hard to even begin listing them. I also have some great ideas for some new events and direc-

torships to cater to everyone in engineering. I also want to hear from the students as well, has anyone ever asked what you think? Probably, but I'm gonna ask you again!

I could go on about reasons why I think I'm qualified to be the VP Internal but I think the reason that qualifies me the most is I like to have fun and I want to make sure that you have fun too. (Either that or the fact that I'm not Bush) Those of you who met me this term during Scavenger Hunt or FROSH week know this, and if you've met me during my 2 and 1/2 years here you know this too! As you see me in the weeks leading up to the election I think you'll see what I mean and the great job that I can do in this position. In closing all I have to say is: Engineering F**k YEAH!

Jason Jagodich
Acclaimed - VP External

What's up Waterloo?! My name is Jason Jagodich and I'm running for the position of Vice President External of the Engineering Society. I am a 2B geological engineering student and most of you probably know me only as Gunners. Why would I make a great V.P. Ext you ask? I'm a very social and outgoing person. In the last two years I have spent a great deal of time organizing events that bring engineering stu-

dents together. I live at Unit 36, the civil engineering house, and we host many events that engineering students have enjoyed over the years, a good time is had by all at these events. Also, this term we have began hosting fundraising events for U.W. students such as the women's field hockey, and women's rugby teams. Such events make it possible for engineering students to not only meet students from other faculties, but to show their support for them. These events strengthen the community we have here at U.W.

I am also involved in many other facets of the school community. In 2004, I was an

orientation/frosh week leader. My role as an EDCOM was to help organize and run numerous frosh week events such as the Big Bang, Junk Yard Wars and Edcom Smash. This upcoming year I am going to be FOC for the engineering frosh week. The members of the orientation committee are responsible for all recruitment, sponsorship, and major planning for the week. Also, the committee is responsible for all event coordination with other faculties.

I have witnessed the school community flourish within the engineering faculty on A-Soc. Go A-Soc!!! However, I feel that there is room to create a community among all

young engineering students in the country. Currently, there are various conferences, which allow engineering students from different universities to interact. From CFES Congress to The Conference on Women in Engineering there is something for everyone. If elected Vice President External I propose to have more interschool events. These events could include anything from bowling to a pub-crawl. This would allow students to meet other young engineers forming friend-

Continued on opposite page. See adjacent article

ENGINEERING SOCIETY EXCLUSIVE ELECTION COVERAGE

Jonathan Fishbein

Candidate,
VP Education

Greetings my fellow engineering students! My name is Jonathan Fishbein and I want to be your VP Education of the Engineering Society. You may be thinking in your head, "hmmm...that Jon Fishbein kid. That name sounds kind of familiar." Well, for one thing, I am the current VP Education of EngSoc A and have met many of you during my term. You may be asking, "hey Jon, if you're already VP Education why do you want to be VP Education again. Why not run for president?" Well that's an interesting question Mr. or Ms. Anonymous EngSoc member.

Firstly, Nick Lawler is really the Hulk and would probably kick my ass (the true reason why no one will run against him). But more importantly, I originally ran for VP Education to help define the position. In the past, very little initiative and change used to come out of the VP Education's office. Since taking on the roll of VP Education, I feel that the VP Education has become one of the most important executive positions on the EngSoc executive team. I have pushed to get us more involved in our education by representing students on various faculty committees and reporting what happens on these committees back to every interested student. I spearheaded a successful campaign to finally put the course critique results online, something EngSoc and Waterloo students had been trying to do for years. I have

restarted our relationship on education matters with the Federation of Students by sitting on the FEDS Education Advisory Committee and Co-Op Student Council Executive Committee. As VP Education of EngSoc, I have accomplished many things for the engineering students at this school, but there is still much more that I want to accomplish.

The future for engineering students can still be a lot better and we are being given a tremendous opportunity to make it that way with the Faculty's 2010 plan. If re-elected as VP Education I will undertake an ambitious plan to organize the general engineering student body to craft submissions for the 6 year plan for each of the engineering departments on campus. This initiative will ensure that students get the input and attention they deserve when the faculty creates the 2010 plan.

Another initiative I want to undertake is an engineering wide TA Critique system. If we can critique our professors on how good a job they do teaching a course, why can't we critique our TAs who are specifically responsible for interacting with students? I plan to write a proposal for this system and submit it to the dean's office. With this plan we can increase our teaching accountability among our TAs.

Now, I can give you an honest answer to original question of why I want to continue to be VP Education. I want to continue to be VP Education because I truthfully enjoy making a difference in the quality of education for all engineering students. I hope I can count on your vote to re-elect Jonathan Fishbein for VP Education of EngSoc.

Melinda Hurd

Candidate,
VP Education

MAKE YOUR VOICE HURD

My name is Melinda Hurd. I am in 2B chem, and I would like to represent the engineering student body as the vice president of education. Over the past two years I've become extensively involved in the engineering society having acted as director for resume critiques and class rep advisor, and as a frosh leader. I have developed a great sense of pride in the engineering society at Waterloo and I am excited to have this opportunity to influence change and to represent the student body through this new position. Feel free to approach me at poets or at various engsoc events, I am always willing to discuss your concerns and opinions.

There are three initiatives that I will implement as your vice president of education.

In the new year, students graduating in 2009 will begin the professional development courses during their co-op term. To face the challenges that will arise within the first years of this program, I will initiate forums to allow students to voice their concerns and to allow us to form constructive criticisms to present to the advisory committee. The professional development courses are a new requirement that we cannot evade, however, I will make it my responsibility to ensure these courses are developed to further reflect the students' needs.

My experience as director of resume cri-

tiques has indicated that this service should be further developed. Resumes are unquestionably important to all students as we regularly up-date and present them to the Jobmine gauntlet. The service currently focuses on first year students; however, I feel that there are many upper year students that would benefit from resume critique sessions. I would develop the resume critique directorship to include a second resume critique session after the initial phase matching for those entering the continuous stage and initiate workshops for resume write skills - ie. "How to make seemingly crappy co-op jobs sound like gold to employers".

VISION 2010 is an exciting development within the faculty of engineering that will allow all of the students to affect the evaluation of the undergraduate engineering program at Waterloo. Department committees will soon be formed and student involvement is a must! I plan to create a "VISION 2010 Student Advisor" directorship for the student committee members from each department. This directorship will then provide these members the opportunity to formally discuss the issues facing each department, present these issues directly to the student body through engsoc meetings, and provide a visible contact point between the student body and both the department and faculty committees.

The underlying impetus for my initiatives is to ensure that engineering students remain informed about issues facing their education and responsibly voicing their concerns to the necessary committees. The quality of education in the faculty of engineering is pertinent to all students and I will ensure that your voice is HURD. Please take the time to become informed about each election candidate and VOTE on NOVEMBER 24th MAKE YOUR VOICE HURD - MELINDA FOR VP ED.a

Marc Joyce

Candidate,
VP Finance

Hello engineers! I case you don't already know me, I am Marc Joyce, and I want to be your VP Finance. I am in 3B Software Engineering and will be graduating (hopefully) in 2006. I grew up in Waterloo and have always wanted to be in engineering, so being here now is fulfilling a dream for me. I am very enthusiastic about engineering and I am looking forward to representing all of you as an EngSoc executive. I have been actively involved with the Engineering Society since my third year, both as a

director and as a class representative. Last term, I was Shadow Day director, as well as National Engineering Week director. Both jobs taught me lots about organizing events and dealing with people outside the university. I received a President's award for my work in organizing a display of student projects in Conestoga Mall for National Engineering Week. This term, I have just completed organizing the first ever EngSoc curling bonspiel, which was a complete success. I had to deal with collecting and disbursing cash for this event, as well as making sure I stuck to my budget. I also have an academic interest in financial matters, as I am pursuing the Business Option in addition to my BSE degree. All of my non-technical electives have been in accounting, business and economics courses. I believe I have the experience and training necessary for the position of VP Finance. I have many important goals for my term as VP Finance. I realize that the budget is the most important thing EngSoc does every term, since most other activities depend on it. I am eager to put as much effort as I can into this, to make sure everyone gets the funding they need. In addition, I am dedicated to getting expense cheques issued as fast as possible. I think this has been a problem for EngSoc in the past, and I will do everything in my power to reverse this trend. In conclusion, I love money, and I am definitely not a NASCAR fan, so vote me for VP Finance. Please send your questions about my platform to mejoyce@engmail.

Adam J. Schubert

Candidate,
VP Finance

West of the boonies, born and raised. On the pasture is where I spent most of my days. Chillin' outside and relaxin' all cool and I'm shootin' some b-ball outside the school, when a couple of farmers who were up to no good started makin' trouble in my neighbourhood. I got one little scholarship and my Mama blared "You're movin' to Waterloo to study over there!"

I whistled for a cab and when it came near the licence plate said "Shooby" and it had dice in the mirror. If anything I could say that this cab was cool but I thought man forget it "Yoho to Waterloo!"

I pulled up to my rez around seven or eight and I yelled to the cabby "Yoho smell ya lata!" I looked at my school and thought "What can I do?" I said "I'm runnin' for VP Finance for Engsoc Waterloo."

Alright, cut the music cuz it's time for me to get serious. November 24th you'll be voting to decide who you want involved in Engsoc. You'll have to ask yourself some hard questions. Who do you want to be your VP Finance? Who has the energy, the tenacity and the enthusiasm you want to see out of this position? Who's got the mad street cred, mad rhymes, mad moves and mad skillz?

I may look like your average pretty boy, but I come from the city with the

highest crime rate per capita. I've spent one work term living with a drug dealer in my basement and another work term living at Jane/Finch next to a Rastafarian haircutting business with Cosmopolitan Magazine and ganja in the waiting area.

As J-Roc would say, I'm totally "whack" and can handle myself in "pimp-tight" situations. One would say, "I spin more rhymes than a Lazy Suzanne"... but two would not.

"Adam Schubert is so cash money!" - Anonymous

How can you deny cash money from being VP Finance?

On a serious note, I've talked to everyone under the sun about this position and what it involves. The more they tell me that all it takes is basic addition, subtraction and multiplication skills, the more I know I'm right for it. I understand that it takes a lot more than the basic skills they're asking for. When it boils down to it, the best qualified person for this job is the one that is the most enthusiastic about Engsoc. When it comes to enthusiasm I got some mad skillz.

Over the course of my campaign I'm going to do my best to show every one how exorbitant of lengths I'm willing to go to, to prove my enthusiasm for Engsoc. If you have any suggestions for the VP Finance position for next term I will be available 24/7 to listen to them. Please feel free to email me and pledge your support (ajschube@engmail.uwaterloo.ca).

I'd like to leave you with some words to live by:

"Giv'er! You're damn right that's a plan right there!" - Dean Murdoch

...continued from Candidate, VP-External: Jason Jagodich ships, and possible future business contacts. In the upcoming summer term the VP External is responsible for a few major events. The most important of these is the EngSoc contribution to the UW Canada Day Celebrations.

I'm open to any suggestions anyone has for improving A-soc in any way. Feel free to contact me with any questions or concerns. If you want a personable, outgoing, enthusiastic Vice Present External representing your student body, then, don't vote for the other runners, vote for Jay Gunners!!! VOTE Jason Jagodich (GUNNERS) FOR VICE PRESIDENT EXTERNAL!!!

Eng Soc Elections

ENGINEERING SOCIETY EXCLUSIVE ELECTION COVERAGE

Sabrina Giovinazzo

Candidate,
VP Finance

As the saying goes, "money makes the world go round" and so who should get a chance to be the mastermind behind this?

Sabrina should!

Hi, I'm Sabrina Giovinazzo. I'm currently in my 2A term in Chemical Engineering. I'm involved in various EngSoc directorships, such as Semi-Formal, Women In Engineering and Frosh Mentoring; as well as being a class representative and so much more! I'm dedicated, enthusiastic, hard working, and will go beyond the usual duties of VP Finance to make the next exec great!

Why should I be VP Finance? I've had lots of experience in the past dealing with money, as I was a cashier at a restaurant. I organized bills and payouts, made deposits and handled lots of money, to make me more than prepared to take on this job. After all, who doesn't like money? All that

money, from engineers' bank accounts, all for me!!!!!! Ummm, I mean, all for me to spend for EngSoc. Who am I kidding? *Sniff*, I only wish I had that much money!

So everyone likes money, but what am I going to do with this money that's different? If you've ever had a directorship, you know what it's like to have to wait for money so you can pay for events. These are the events that help make engineering a great faculty and lots of fun. Being a poor engineering student with no money in the bank, you want money as soon as possible to fund events. In the future, I will send each director sample budget proposals, so new directors will know how to submit a proposal and what possible expenses they might incur. Also, the mail slots in the Orifice are rarely used, but are a great communication link between directors and VPF. Requests could be left there for the VPF so directors can get their money faster and easier, rather than through only e-mail. I would also have office hours set everyday, making it easier for people to find me if they have a problem, or need a cheque at the last minute.

When it comes to money: \$ab\$ - makes you an offer you can't refuse!

Katherine Chiang

Acclaimed -
WEEF Representative

For those who don't know me, allow me to introduce myself. I'm currently in 3B Enviro Chem, and I have been my class WEEF rep since 1B, as well as assistant director since 2A (I was responsible for the redesign of the WEEF website in Fall of 2002). You probably have seen me hanging out in POETS or the C&D all the time.

As your acclaimed in-coming WEEF director, I have couple things in mind for the next few terms. First off, I plan to recruit a team of assistant directors, who will be responsible for various tasks within WEEF. I'd like to invite students

to get involved with WEEF, especially the younger students, as we will need someone to step in once my term ends. Second, as any WEEF director would, I aim at reducing the amount of refunds. This term, we had some really good turn out for WEEF participation in first year classes, and I hope to keep that trend going.

I'd like to take this opportunity to thank the past WEEF directors for being such great mentors: Marc, Mike, and Ryan. It's going to take a lot of work to top what you have accomplished, and I only hope that I will be able to do the same.

I'm open to, and always looking for new ideas. If you have ideas, or just something to say, I want to hear from you. And remember, WEEF is GOOD, and it's gonna get better!

Theory about God

Taneem Talukdar

2A Systems

Is God a Random Number Generator?

I am one of the many students on work-term who find themselves with excess time at work and a connection to the Internet. And like many, I do one of 3 things:

1. I play games (Have you tried Bubbles? <http://ebaumsworld.com/bubbles.html>. My high score is slightly over 2100)

2. <Shameless plug> I frequent the 08SYS forum (08sys.com), famous for a rather high degree of activity during work-terms

3. I eat and ponder the meaning of Life And the Universe

Having spent some time on number 3 the other day I want to share an insight with Iron Warrior readers.

My friend from 08SYS, Philip Newman, programmed a little simulation he calls the "Village." This is available at: <http://www.eng.uwaterloo.ca/~pnewman/village/village.html>

The program generates red dots and blue dots. The red dots are people. The blue dots are food. The red dots move towards the blue dots to consume them. If they do not consume any blue dots within a given timeframe, they die. The blue dots are continuously replenished as they are

eaten, but at random locations. The red dots will always go to the closest one and follow a straight line.

It is a distillation of one of the main things that any animal will do.

Now, run the simulation with say, 5 humans and 5 to 10 dots of food. The knee jerk reaction might be to think that the 5 humans will move randomly with respect to each other. But this is not the case. Because every time you run the simulation, the majority of the human dots will eventually group together, roaming from one blue dot to the next. It is easy to see why this is true. Mathematically, it is very likely for a randomly placed blue dot to be within the vicinity of multiple red ones. And this triggers the group convergence.

A common question that one asks when thinking about the complexity of living things is this: how can all this complex behaviour "just happen" or "how could it have started and all just worked like this"? Even in very basic life forms, there are examples of social behaviour and teamwork. Among human beings it is central to our existence.

But when one looks at the red dots going after the blue dots and sees them converging time after time, the power of the underlying mathematical motivation for this tendency to work in groups is revealed starkly.

If you are thinking that I should have just stuck to Bubbles, you're probably right.

The Upsides to Engdating

Hilary Lockie

Kiri Neufeglise
1A Chemical

Some of you males have been led to believe that EngDating is not a good idea. Something was said about dating someone smarter than you, the fact that there's far too much competition, the awkwardness of a break-up and the general idea that there is something wrong with Engineering girls being more than capable of holding their own when it comes to BEVERages.

You have been led astray.

There is more than nothing wrong with dating an EngLady, in fact, if one of you EngBoys possesses enough charm to snag

one of the few of us, it's great for you. We EngLadies may be pretty, like shiny knives, and everyone knows how helpful shiny knives can be. Not only are we sharp and bright, but we can also help you get through the tough shit.

The one thing that can be said about Engineers is that we're all smart. However, why was it said that dating someone around your same intelligence level is a bad thing? Not only can you get more than enough assistance on your homework if you're having trouble, but you can also actually have an intelligent conversation. And really, do you EngBoys truly want to date a girl who's IQ is smaller than her bra size? It seems that it might cause a bit of strain in the relation-

Continued on page 15. See Advantages to Engdating

Terabyte DVD's

Quoc Huy T. Le

4N Electrical



How much do you think a DVD can hold? 4.7GB? 9.4GB? 17.0GB? Well, unless you neglected to read the title of this article, it is now theoretically possible to hold over one terabyte (1 TB = 1024 GB) of information on a DVD. Researchers in countries such as the UK, Switzerland and Greece are coming up with ways of drastically increasing the amount of data that can be etched onto a piece of plastic similar to that of a CD or DVD. How is it possible that a more than 50-fold jump in storage capacity can be obtained in less than half a decade? To answer that, a quick tutorial on how CDs and DVDs work is in order.

On a CD, the data is stored as a spiral series of pits and valleys. Each pit represents one bit of information (either a 1 or a 0). Using a laser the ROM drive is able to read this pits and valleys and retrieve the stored information depending on how the light reflects back from the CD data surface. CD storage can be from 650 megabytes to 700 megabytes.

A DVD works pretty much the same way. They are exactly the same size and there are still pits and valleys each representing 1 bit of information. The difference is that a laser beam of a shorter wavelength is used, so that the bits can be packed even more closely together. Also, to increase storage capacity even further, two metallic layers are used on one side (a semi-reflective gold layer on the outside and an aluminium layer on the inside) as well as the other side of the DVD which results in a four-fold increase in storage capacity. DVD storage typically ranges from 4.7 gigabytes (single-layer single-sided) to 17.0 gigabytes (dual-layer dual-sided).

Alright, let's move onto the terabyte DVDs. How do they do it? First, a laser of even a shorter wavelength is used to increase the data density. The next step is

to double the number of layers. Instead of using only two layers, it is now possible to read data from four discrete layers using different metal alloys for different levels of reflection. This step alone doubles the amount of data that can be stored.

The third and most ingenious method of instilling more data onto a DVD is that of using different types of pits. By adding angled ridges to the pits the way in which the light reflects from those pits is altered. So, instead of a pit returning one bit (either a 1 or a 0), one pit can return a string of up to ten bits (for example: 0001010111 or 1100101110). This results in a ten-fold increase in the amount of data storage!

So how much stuff can be stored on a terabyte DVD? Well, to put it into perspective, you can hold all 350 episodes of *The Simpsons* on one terabyte DVD. You can also store all 178 episodes of *Star Trek: The Next Generation* on one terabyte DVD (I would image this would hold true for any *Star Trek* series). When you calculate it out, one terabyte is roughly the equivalent of over 472 hours of broadcast quality video.

This is only the tip of the iceberg. With innovations like these, dramatic increases in data storage will occur more frequently. Already companies such as Matsushita, Ricoh, Pioneer, Mitsubishi and three other universities are heavily involved in researching and developing ways to fit 1.5 terabytes onto a single DVD.

So are there any drawbacks to this technology? Other than the most obvious one of not having enough free time in a month to finish watching a terabyte's worth of film, there's not much at which to frown. Because of the inherent properties of the technology it is pretty much a given that all new media formats will be fully backwards compatible down to the archaic CD.

However, now that massive commercial storage is on the horizon, piracy of software and entertainment might just get that much worse. Of course, that really won't be a big concern until the internet speeds up a bit. Until then, whatever you like to watch right now, just sit back and let the photons do their stuff. And remember to marvel at how only little piece of plastic can bring you so many hours of joy.

Great cast - poor script

Stratford play: Noises Off



Cindy Bao

3N Electrical

The success of the play *Guys and Dolls* certainly set my expectations high for other Stratford Festival performances. After hearing great things by word of mouth, I decided my second visit to the theatre would be to see "Noises Off", which sadly turned out to be just a bit off, period.

Akin to Charlie Kaufman's *Adaptation*, "Noises Off" is a farce about putting on a farce. Michael Frayn, after witnessing the offstage dynamics of real theatrical productions, scripted a not-specially-talented ensemble of Otstar and their attempt to present "Nothing On", a typical British bedroom farce that tours around the seaside resorts.

The first act takes place during the last dress rehearsal the night before the opening. Between the lines, or rather, the forgotten lines, we are introduced to the cast and crew members. The farce "Nothing On" itself didn't warrant any laughs; the real jests were supposed to come from the Otstar personalities and the sneak peek into their tangled private life. It was interesting for the first 15 minutes, but soon evolved into a tiresome test of patience for my type-A personality to see the cast questioning the motive of their characters, while repeatedly getting stuck mid-scene.

The highlights of the play concentrated in the middle act. We are led backstage during the opening performance where the tension between the lots translated into actions. Nonetheless, the show must go on during the entire chaos. With limited dialogs, the comedies were

played out physically and the delivery was absolutely hilarious. Just think silent films with Charlie Chaplin or Buster Keaton.

In the final act, we are presented with the closing performance of "Nothing On" a few months later. The backstage hostility is now so ferocious that one actor exited the set only to come back with bandages. The show falls into pieces and is merely patched together with too many plates of sardines. (Don't ask!) Although being the shortest of all acts, I felt as if it lasted forever.

One definitely can't complain about the originality of the script. Yet, I was reminded of how British humour doesn't go well with me. Everything was way over the top, one loses focus amidst it all. However, if you enjoy Monty Python, it may be right for you.

Giving credit where it is due, one must not overlook the excellent performance of the Festival actors. It takes great talent and experience to portray mediocrity. While all the characters in the play are somewhat stereotypical, they are not presented as one-dimensional.

The most memorable of all was Sara Topham as the blonde, dimwitted Brooke Ashton. She got the perfect timing on her character's off-the-beat "sorry". When she looked for fallen contact lenses crossed-eyed, it got me everytime.

The scenic artists also amazed me with the set design. It is entirely one piece with complete front and back stage and rotated between each act. That is what I call ingenuity.

At last, I must mention that the gentleman sitting next to me was laughing so loud during the whole evening, I thought that the studio must have paid him to be here to cue the audience like me when to be polite and show the cast our appreciation.

Rating: 2.5 out of 5 stars.

Quirky and touching

Movie: Garden State

Charling Li
2B Mechanical

Garden State stars Zach Braff and Natalie Portman in a confusing but sweet tale of emotional awakening. Braff (who also wrote and directed the film) plays Andrew Largemen, a struggling L.A. actor who returns home to New Jersey (the Garden State) for the first time after 10 years to attend his mother's funeral. Andrew (or as his friends call him, Large) has been heavily medicated on anti-depressants for the better part of the last 15 years of his life, based on prescriptions from his psychiatrist (who is also his father, now how's that for a conflict of interest?). As a result, he lives in a drug-induced, emotionless haze that ends when he goes home for the funeral and leaves the drugs behind.

Large returns to a home town he doesn't recognize, and friends who haven't really changed (for the better or even at all) in 10 years. He proceeds to meet our heroine Samantha (Natalie Portman), a compulsive liar who is just so unique and adorable without being annoying that you just wanna pinch her cheeks and be good friends with her. Large spends his time at home with Sam and his old friends, finally coming to terms with his mother's death (and life, too), and his father's attempts to restore their family to a state of happiness that never existed. In the midst of all this, Large falls in love with Sam (because we all didn't see that coming!), helps her with her psychological issues, and gets on the path to figuring out what he's doing with his life and so on. I'm sure we can all identify with that last issue at some point in our lives, which is why this movie has such an emotional impact.

All in all, the film is charming and

quirky. My initial response after viewing the movie was: It's kind of messed up but leaves you with such a warm-fuzzy feeling! (Insert 5 full seconds of "awwwww" right here) However, the more you think about the movie, the better it gets. It's a bit of a thinker, and being a passive movie-watcher myself, I didn't catch a lot of the film's meanings until afterwards. I was personally inspired by Sam's character. She's guileless, unpretentious and completely comfortable with whom she is, that being an epileptic compulsive liar and all. So she has mental problems, but in some ways she's saner than most people!

One thing that really tied the movie together is the amazing soundtrack. Play-worthy songs include Coldplay's "Don't Panic", the Shins' "Caring is Creepy", Cary Brothers "Blue Eyes", and the beautiful song at the very end of the movie, "Let go" by Frou Frou. I'm not even sure how to pronounce that band's name, but it's a great song nevertheless. Heck, just get the entire soundtrack, it's definitely worth it.

Verdict: Sweet & thoughtful. Most guys will probably be adamantly against watching it, but will end up secretly liking it

Rating: 4/5 but with the great soundtrack, 5/5



"Zach Braff" - writer, director and star of *Garden State*, seen here wearing a shirt made of leftover wallpaper.

Charobeem Cooks: Recipes for the ages



Carolyn Sutherland

1A Mechanical



I am glad to be back for a second issue because have I got some tasteh chicken and rice recipes for y'all! For those of you who don't know how to cook rice, just put 1 cup of water for every cup of rice into a pot. Add a little extra water and let the rice soak up all the water. Once the rice has become big and puffy with water, bring it to a boil, stirring often. Once boiling, turn the heat off, put a lid on the pot and let it sit for 20 min. or so, depending on how much rice is being cooked. DO NOT TAKE THE LID OFF! Removing the lid defeats the whole purpose of pressure cooking the rice! If the rice is undercooked, just cook it again! That's the great thing about rice; it's hard to go wrong with it!

CHICKEN CELERY

Prep: 25 min.

Serves 4

235 Calories

2 tbsp. soy sauce

2 tbsp. ketchup
1 tsp. cider vinegar
1 tsp. ground ginger
1 tsp. cornstarch (or sauce-thickening flour)
1 tsp. salt
1/3 cup water
1 clove garlic, peeled & minced
2 green onions, trimmed & thinly sliced
2 whole chicken breasts, skinned & boned & cut into 1/2-inch strips
2 cups celery cut into 1/2-inch strips
3 tbsp. vegetable oil

1) In a bowl, make a sauce by mixing the soy sauce, ketchup, vinegar, ginger, cornstarch, salt, water, garlic and green onions. Set aside.

2) Heat the oil in a heavy 9- or 10-inch skillet over moderately high heat. Add the celery, raise the heat to high, and cook, stirring with a large spoon, for 2 min. The celery should be crisp-tender. Remove them & set aside.

3) Add the chicken to the skillet. Cook, stirring over high heat for 2 min. or until the chicken is no longer pink. Do not overcook.

4) Return the celery to the skillet. Stir the sauce and add it to the skillet. Cook, stirring over high heat until the sauce thickens - about 20 sec. Serve over rice. This recipe can be halved.

The original recipe called for sweet peppers in place of celery, but I prefer the celery. I also recommend not adding the salt, because not only is it healthier, it doesn't smother the taste of the sauce. Also, please note: DOUBLE THE AMOUNT OF SAUCE AS THE RICE ABSORBS A LOT OF IT AND LEAVES NONE FOR THE CHICKEN! Thanks to an old Reader's Digest cookbook, entitled 'Quick, Thrifty Cooking'.

This is another tasty chicken recipe that involves rice! While similar to the Chicken Celery recipe, it's the sauce that sets both these yummy meals apart. And so you all know, you don't need to follow the measurements EXACTLY. With practice, you can just 'guess-timate' the amount you want!

CHICKEN STROGANOFF

Prep: 16 min.

Serves 4

385 Calories

2 whole chicken breasts, skinned & boned
4 tbsp. butter or margarine
1 tsp. salt
1 medium-size yellow onion, peeled & finely chopped
1/3 lb. mushrooms, sliced
1_1/2 tsp. paprika
1 cup water

2 tbsp. all-purpose flour (or sauce-thickening flour)
3 tbsp. dry sherry OR WATER!
1 cup sour cream or plain yogurt

1) Cut each chicken breast against the grain into 1/2-inch strips. Melt the butter/margarine in a heavy 12-inch skillet over moderately high heat. Add the chicken strips and sprinkle with the salt. Cook for 2 min. or until chicken is white, stirring constantly. Add the sherry (slash water!). Reduce the heat to moderate, cover, and cook an additional 2 min.

2) Meanwhile, combine the flour and sherry/water in a small bowl. Add the mixture to the skillet and cook, stirring until the mixture thickens - about 1 min.

3) Add the sour cream/yogurt and stir until heated through. Do not let the mixture come to a boil. Serve over rice. This recipe can be halved/doubled...

NO, I've never used the sherry before and neither am I encouraging the use of it, so all of you underage frosh better stick to water! Also, I recommend eliminating the salt, because all of you get enough of that what with the way the vending machines are sold out by 11:30am in RCH! Thanks are in order again to my invaluable 'Quick, Thrifty Cooking' cookbook from Reader's Digest. Feel free to contact me at csutherland@engmail.uwaterloo.ca

Columns

Dating 101

He's just not that into you

Cindy Bao

3N Electrical



So after a great first date, or second, he declined your invitation of going back to your place, or worse, he just never called again and disappeared from the face of the earth. For all of you who still wonder what the heck is going on, we are told that the answer is now finally here, "He's just not that into you."

The grand revelation actually broke out over a year ago when Jack Burger, Carrie's insecure writer beau in Sex and the City, later dumped her via a Post-It. Snap out of it, Carrie, he sent that six-word message loud and clear.

As if the HBO cable network doesn't have a wide enough outreach, two writers from the show, Greg Behrendt and Liz Tuccillo, cashed the idea into a now-No. 1-bestseller "He's Just Not That into You: The No-Excuses Truth to Understanding Guys." The concept is very simple. According to the authors, if the guy doesn't ask you out, call you back, sleep with you, or for those who just really don't get it, he is married or breaking up with you, he's not interested enough.

Most memorable was Greg's personal example of how it should work. He asked for a bartender's number, but the lady only gave him her name and said "If you want to call me, find my phone number." So he looked it up in the phone book and after talking to several ladies by the same name, he found the "chosen one".

How very touching! But wait, isn't it a warning sign of a stalker? Has years of seminars on harassment and controlling,

Diabetes affects millions

...continued from Page 7.

your soul, mine cost \$6,000 and is tethered to my body by a long thin tube. The cost of keeping me alive surpasses \$10,000 a year, and this is NOT covered by OHIP. Luckily, my mother has 80% coverage so long as I remain a dependant. (I dread the day I declare independence and am forced to bear that financial burden)

It is the month of November which has been declared diabetes awareness month. If anyone has watched CBC's "The Greatest Canadian", surely Mary Walsh getting Sir Frederick Grant Banting into the top 10 for the discovery of insulin, aiding millions of diabetics worldwide, should

attest to the importance of awareness. Recognize any of the following names? Halle Berry, Johnny Cash, Ella Fitzgerald, Mary Tyler Moore, Elvis Presley, Andrew Lloyd Webber, Elizabeth Taylor, Neil Young, Vanessa Williams. These are just some of the people we'd be without if nobody was aware of diabetes.

Diabetes still takes a grand toll on our population and our finances. By some estimates, direct costs total over 9 billion USD annually. Considering that diabetes can lead to blindness, amputation, heart, kidney, and cardiovascular disease, among many others, the true cost is much higher. Without con-

abusive personalities changed nothing?

Not since the Rules was published in the late last century has a dating advice book enjoyed such Gospel status. Ellen Fein and Sherrie Schneider taught women how to play hard to get, e.g. never accept a Saturday date after Wednesday and only reply once for every four of his emails, Greg and Liz are telling us to quit over-analyzing and stop playing the guessing game.

Yet is it so much more empowering for women that, instead of keeping the guys guessing (since they really don't bother), we are moving on quicker than you can say "he's just not that into you"? Ultimately, we are assumed to still be in the passive position of being wooed and letting the guys decide what the next move shall be.

What happened to the go-getters our generation are raised to be for just about everything else in our life? That dream (co-op) job, that tiny yet cozy apartment (shared with roommates who eat your food and never do the dishes), or the latest gadgets you put down a week of your co-op salary for (if you are not in engineering, change that to a pair of Jimmy Choo)...

Furthermore, for those of us who are consistently in search for an answer, which one is worse? Pondering why he is so busy and does not have time to call you up or what it is about you that made him just not so into you... While I used to be able to blame it on the guy's character flaw, now I have to take it the hard way. Knowing "it's not him, it's me" sure is a blow on my ego.

While "He's Just Not That Into You" ascends to the Academy of Overrated, alongside of Atkins, The O.C., Yoga and Kabbalah, I am just really waiting to hear from my Mr. Big. Maybe he's busy, or just not that into me. Oh, wait! Did I give him my unlisted phone number?

control, diabetes is almost another HIV, subjecting the victim to any number of highly deadly outcomes. Thankfully control is ever-advancing, and these statistics are still decreasing.

Personally, diabetes has done my life a lot of good. It has taught me responsibility, among many valuable things. It led me to my most incredible relationship thus far. It has given me friends, hope, and a \$2,500 scholarship. All that does help to outweigh

the prospect of more diseases, going from healthy to dead in less time than I sleep in a night should I lose control, and the fact that my average lifespan has gone down by 15 years if I have perfect control.

We've come a long way in the past 80 years. We've come a long way since putting diabetics in freak show cages. I've come a long way since having to learn how to shoot up at the age of 10. My teachers have come a long way since questioning my parents about drug abuse. Diabetes is a terrible disease, but so is cancer, so is hatred, and usually those and other things take the spotlight. But even if it was just for this brief moment, I am glad that I could inform you about diabetes, give the disease and its people the spotlight for a minute, and maybe the next time you see me drawing blood from my fingers, you won't think it's Halloween.

"What happened to the go-getters...?"

T'is the Season for Decorating

Carolyn Sutherland
1A Mechanical

The season of Christmas is upon us once again and let me ask you; are there wreaths in your house yet? Do you find yourself using Christmas lights as your main sources of light? Have people called you "the strange one" or has anyone speculated the existence of your social life? If any of these applies to you, you don't need my help and should probably skip to another page. BUT, if you find yourself pondering why the heck would there be Christmas decorations in your house in November, then you need help. Specifically, decorating 101 help.

Now hold on a second! 'Tis barely the start of November, you ask, and already I must don the red and green? Yes, you must, because there is a new system of rules this season recently instated by xmas enthusiasts; November is now officially known as pre-December, and December is now pre-Christmas! That means the celebrations and festivities start a month early! Hurray!

But don't forget that with the early holidays certain duties must be upheld. What duties, you ask? Decorating duties, of course! It is your job to uphold your honour by decorating like no tomorrow! There are no limits! Gaudy decorations are beautiful, buying in bulk is your best friend and if you can see the wall/floor/ceiling then you need to cover that up with more! So pull out your decorations and the do-it-yourself gingerbread house kits, for I am here to dispense the entire 2 months worth of decorating expertise I have gained while in residence. Specifically, Christmas decorating 101 advice.

1) Christmas Lights: Go out and buy as many lights as you can; bonus if they're blindingly colourful and shaped like seasonal things such as snowflakes or mini fruitcakes. Try stringing them along the ceiling in amusing patterns and shapes, like the TOOL. (Nothing freaks your Mathie roommate like the image of a pink tie crushed in the grip of a lean, mean wrench plastered on the ceiling.) Consider covering the entire wall of a room with lights, while leaving the other walls blank. Mix up your lights so that the colours clash horribly.

2) Garland: You can't go wrong with this stuff. Make sure you buy lots of it, and make sure it is the thick variety that sheds its plastic leaves everywhere. That way, even your floor can look festive. Plus, while you're at it, the fallen greenery hides beer bottles, empty Timbit boxes, and whatever else might reside on your floor that should not be delved into.

3) Trees: What would the holiday be without a good old pine tree shedding brown needles all over the living room? That's why you should go with plastic! Be sure to get at least seven big trees and at least fifteen smaller ones. Cover each tree with lights, popcorn strings, candy canes and all those Popsicle stick crafts you made in the third grade that your mom saved for you. Strategically place each tree around your house so that at least one tree will always be within view no matter where someone is. That way, anyone who visits can't escape the trees! I recommend replacing any tabletop lamps with the little trees. Avoid putting any of the trees near a fireplace... especially if it's lit.

4) Red Bows & Poinsettias: You know what I mean by bows... the giant, red ones you see in department stores. They just scream Christmas, plus they can be used to decorate the miles of garland within your house. Poinsettias are lovely red flowers that are synonymous with the season and relatively low maintenance, mostly because they start to die off in January. Dress this flora up in red and green pots, cover every surface in your house with them and give yourself a pat on the back.

5) Trinkets: Figurines of angels, shepherds, Jesus, Santa, snowmen, dreidls (Yes, they're a Jewish tradition but if it happens during December, then it's good enough!) and all other things Christmas-related are extremely versatile due to their small size and can be found at most dollar stores. Buy them in bulk and use them to cover any small, awkward empty space not already swamped by garland and poinsettias.

6) Keep It Neat: Hide all the wires, masking tape and string if possible. Even if you have followed the above guidelines and have the most decorated house on your block, you'll drag that xmas factor down if you have your nativity scene sitting on a mess of wires and tape.

If you remember these key points, then you're well on your way to having the most envied house on the block, but remember; the more the better! Always use lots of decorations and don't ever stop. As a general rule of thumb, if you can see the walls or anything else that is NOT covered with lights, trees and garlands, then you've still got work to do.

Feel free to do other things not mentioned here, such as 'sprinkle icing sugar on anyone who enters the house to simulate snow' or 'light gingerbread houses on fire while chanting the roof is on fire to the tune of winter wonderland'. Little things like that add your own individuality to whatever gaudy monstrosity your place has become. So head off to the dollar store, dig up the boxes from the attic, and get decorating! Happy pre-December!



"Lighting" - With just a few dollars, you can rig up something to rival the sun. . .

Girls dig guys that take care of themselves

Mark Alocilja
2B Mechanical

So I'm chillin' in class, trying to make head and tail of another digital logic lecture, and I hear a conversation between my two homies, Dominic and Xavier. Dominic says: "Check it, I was late for me class, but I ran into this really fit woman on the way to class. Oh yeah, my face is kinda dry, I need some lotion or something." Nothing quite like a fine, fit woman, but you can't go meeting her with a dry face, so I was obligated to help a brother out. "Wikkid." I said, "But you have to take care of that dry skin bro." Try Nivea Daily Protective Moisturizing Lotion. It keeps your skin moisturized without a greasy feel." After this, a few moments of dead silence ensued.



"Mark? Yeah, I'd date him." - Elisha Cuthbert

Now you probably don't get advice from your fellow brethren on how to look or feel better, but the truth is, the ladies dig a guy who takes care of himself, and any advice you can get to do so will put you one step closer to being the mack. After explaining my suggestion, Dominic was like: "Whoa. You have to write an article about this, like a metrosexual article."

Now before you all start thinking I'm metrosexual, I just have to make it clear that I just like to groom myself. Nothing wrong with grooming yourself, is there? I like to use facial cleansers and moisturizers, aftershave, and soy paste hair texture pomade. Um... forget you read that last part. Fact is, an eye for detail is what makes factories hum, engines thrum, and women swoon.

So. Just time for the winter, Mark's winter care tips. Just think of it as an abridged Men's Health. Complete with pictures of pretty ladies that probably dig a guy who takes care of himself.

Face care

They say first impressions are always the most important, be it an interview or a rendezvous with the opposite sex (or the same sex, your pick). And what's the first thing people see when they look at you? Your face. So you had better make sure

your face is up to challenge. The three basic things a guy needs to do to take care of his face are cleaning, shaving and moisturizing. Yeah, I said it, moisturizing.

First off, use of a facial scrub twice a week is a good idea. "New products developed specifically for men contain fine abrasives that gently exfoliate dead skin

cells," says a Men's Health style specialist. "They make your complexion look healthy and vigorous, as if you've just come in from doing something a lot more fun than office work." Exfoliate dead skin? "Whatever." you mumble, but the part about the healthy and vigorous look sounds good, doesn't it?

Recommendations:

Nivea for Men: Deep Cleansing Face Scrub
Adidas Active Skincare Daily Energizing Face Wash

Next off is shaving. Now I can't show you how to shave, but there are some great tips from them experts out there. "For a big-date shave, go with the grain once, reapply cream, and go lightly against the grain." As for aftershave: "Ignore the commercials, rub it in, don't slap it on."

Recommendations:

Schick Quattro quad-blade razor
Nivea for Men: Aftershave Balm

Finally, the subject that sparked this article, moisturizing. "Warm water opens pores and hydrates the skin." says Tina S. Alster, M.D., a professor of dermatology at Georgetown University. "So moisturize after you've showered and shaved. This will also combat the facial dryness associated with shaving." 'Nuff said.

Recommendations:

Nivea for Men: Daily Protective Lotion
Neutrogena Men: Aftershave Lotion.

Hair care

Hair is a subject of taste, but one place I do recommend me boyz try out is

Absolute - Hair and Skin. This is quite some place, where some of the finest ladies cut your hair with the utmost precision and care. Did I mention they gave me tea? And while one fine lady was giving me a hair cut another fine lady was giving me a hand massage? And then I was offered wine? And after the hair cut a scalp massage ensued, followed by a nice shampoo? Now who does that? They apparently do. I next expecting them to take to the back a gimme a little lovin', but these girls are mad good pros, so I should have known better. Plus my girlfriend would have made her displeasure known. Catch is, it's \$25, but if you log on to their website, they have a free gift coupon for first timers, which drops the price to a steal of \$15, which if I'm not mistaken, is the same price for a haircut at Apple 2, minus the 5-star treatment. Check it, Mark gives Absolute Hair & Skin the Mark Stamp of Approval. (Photo editor's note: I also give Absolute two thumbs up.)

Wrapping it up, the only other tip I can give you for the winter is use lotion to keep your hands moist. (Whatever else you do with it, keep it to yourself.) With the cold out there, your hands can become chapped and dry. No one wants dry hands, especially if those hands aren't (or are) being kept to yourself.

Check it, most of these products can be found at Shoppers Drug Mart (see Conestoga mall) or other fine pharmacies.

Absolute Hair & Skin is located at 8 Regina Street North. (www.absolute-hairandskin.com)

Note: Mark has recently taken to speaking like a British playa following overexposure to the *Ali G Show* on HBO.

Book Review: The Machine Stops

Adam Philip
3B Mechanical

The Machine Stops
By: E.M. Forrester

The Machine Stops is great for many reasons, two of them being that it's free as in beer and that it's frighteningly prescient for a book written at the turn of the century. Forrester wasn't known for science fiction and generally wrote what would have then been considered contemporary work, so "The Machine Stops" is a real break from the norm. The story follows the life of Vashti, one of the members of the community that lives within the Machine. The Machine is the universe to those that live inside, by issuing the proper commands from the 'book', anything can be brought to those who live inside. This lack of toil leaves humanity to pursue its ultimate goal of arriving at truth. In Vashti's time it is assumed that everything worth recording has been studied and all that remains for scholars to achieve is the removal of bias created by the original observer. This bias is removed by each subsequent generation distilling the information into its basic elements and giving lectures on the newly distilled topic. Vashti, however, does not fit in this mold, the first sign of trouble appears when he contacts his mother and informs her that not only has he been exercising but that he has also left his own room.

As I stated above "The Machine Stops" is remarkably prescient. Not only did it accurately predict transatlantic flight, tele-

vision, robots, and information networks, but it also predicted many of the behavioural trends that would be associated with these technologies. For instance, Forrester predicted that people would come to trust the technology implicitly and perform rituals to ensure its proper performance (such as saying a prayer to the book). So far as I can tell much the same thing occurs with Windows machines. Since the title is a dead give away about the eventual fate of the machine, it is worth noting that this is probably one of the best fictional treatments on the subject of machines gone awry. While many authors deal with Gollum-like creatures that turn on their masters, "The Machine Stops" provides a much more mature treatment of the subject by projecting that eventually we become unaware of the underlying nature of the machine. Anyone who's ever worked in an old plant can give first-hand testimony on what happens when the original maintenance guy on a piece of equipment retires. The combination of prescience, plausibility, and detail make the book a classic rather than a piece of science fiction best relegated to the dust bin when the technologies it projects have all been acquired.

Acquiring "The Machine Stops" is a simple task, since it was written nearly a hundred years ago, all copyrights have expired and it can be found on the Project Gutenberg servers or with a simple Google search. Thus far I've never found a hard copy, so if you hate reading from a computer screen your best bet would be to print it off yourself, however given that its actually a novella this shouldn't break the bank. "The Machine Stops" is a remarkable book and definitely worth a read.

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Columns

Patrick Brown
3B Mechanical

Once again, the Engineering Society's drama production is coming up. If you have never seen our intrepid classmates attempting to brush off the engineering stereotypes, then maybe you should. This term's offering is looking to be quite the show.

The first part of the show is a group of four short plays making up "All in the Timing." "Sure Thing" is a tell-all of the dos and don'ts of dating, quite expertly



done by Ryan Consell and Melissa Cesana. If you want to learn what not to say, you would definitely have to come see this one.

"Words, Words, Words" tells of the experiment of an infinite number of monkeys on an infinite number of typewriters, from the viewpoint of the monkeys. What do they talk about while hacking away? If you would like to know, then maybe you should come and see. David Held,

Natasha Pounder and Mike Buxton play our evolutionary cousins quite well.

"The Universal Language" gives us a look at the troubles with learning a new language with an added twist. When you have a stutter, your own language is hard enough, but try something new sometime. Brian Sachdeva and Blair Davey will take you through the intricacies of Unamunda, the universal language.



"The Philadelphia" is a look at a day in the life of a man who can never get what he wants. He just has to remember not to want what he wants. Andrew Lysyk, Geoff Quinsey and Christine Thompson don't play off each other quite poorly, which is exactly what we don't not want.

The second part, "Cut!", is a slightly absurd look at the acting world. This play within a play within a play within a play within a play within a play (trust me on this one, that's no typo) challenges the audience as well as being quite funny.

The cast of "Cut!" is as follows:

A: Julia Badea
B: Quoc Huy Le
C: Zac Balson
D: Brad Bushell
E: Bryan Sachdeva
F: Matt Strickland
G: Natasha Pounder
H: Alan Somji
Techie: Stephen Siu
Jack: James Johnson
Nick: Geoff Quinsey
Shannon: Karima Dharssi
Jennifer: Mahtab Ghamsari
The Director: Michelle Divers

UW Drama Presents: The Tempest

UW Drama
IW Press Bureau

In keeping with a tradition of magical Fall productions of Shakespeare's plays, UW Drama will be taking audiences on a trip to Prospero's enchanting island later this month, mounting the department's first ever production of "The Tempest". It's a play with immediate and obvious appeal. A magical island.

Other-worldly natives. First love, harsh revenge, ultimate forgiveness and even a pair of clowns for comedic relief. 'The Tempest' is also dense with poetry, including some of the most famous lines Shakespeare ever penned. In this highly physical production, the cast and director have worked hard to tackle the visual challenges of the play, without recourse to complicated technical machinery. "We wanted to rely on the magic an actor can create with movement, sound, dance and song," says director Julie Hartley. "To

that end, we are experimenting with African chants, primitive ritual, Moroccan drums, rhythmic movement, masks and the haunting powers of the human voice. In our production, Prospero's island has a culture all of its own. The 'natives' are an integral part of the magic of the play." Despite the enchanting, other-worldly mood of the play, the team has worked hard to draw references to contemporary society in the production. Hartley says, "The play is all about power. What happens to people

who get it, and to those denied it. We see power at work in the family, in relationships, in social interaction and in those who rule and make decisions. 'The Tempest' has much to say about the people who lead us, and the personal motives that drive them." "The Tempest" is a highly charged, visually exciting and provocative production that will appeal to audiences of all ages. It runs from November 17 to 20 in the Theatre of the Arts, starting at 8:00 pm nightly. For tickets, call the Box Office at 888-4908.

In Remembrance (of the Canadian Military)

Andrew Dodds

1A Mechanical



I bet that when November came along, you all remembered that it was Diabetes Awareness month. No? Well at least I imagine you remembered why there were all these people dressed in military uniforms, and these fake red flowers up for sale. It only took me three days.

November 11th marked the end of a terrible war, and here in Canada, we have used this day to remember all those involved in the war. We honour those who fought to protect us from evil. We remember their sacrifice for our country, and for the world in the countless wars of the past century.

We remember the people who were touched by the war, those who worked in factories building tanks, making guns, and sowing up boots. We remember the families that were torn apart too soon. We remember

the brothers, sisters, sons, daughters, fathers, mothers, and friends who all fell before their time for a reason we might still not comprehend to this very day. We remember the entire commitment of Newfoundland wiped out in WWI in one stroke at the battle of the Somme. We remember the Canadians who fought at Juno beach, breaking further into the German front than any of their American and British allies. We remember the tragedy of the Holocaust, and the loss the whole world felt with that loss of all compassion. We remember Pearl Harbour, and the mindless slaughter that drove a nation wanting to stay on the sidelines into the forefront of the war. We must never forget.

But, do we not forget too quickly? When WWI was in its early stages, Canadians pledged 50,000 troops, which escalated to half a million mere-

months later, over 6% of our population, one in sixteen. Now, with wars raging less organized but more widespread around the world, our army lies at 60,000 troops, a commitment of less than 0.2% of our current 31 million citizens. This is foolishness, especially when the casualties that we

record do not come from the front line, but come from the slipups of our allies, casualties of friendly fire.

It is my belief that Canada's military is inherently wrong. For years, satirists have had no trouble portraying our army, navy, and air force as a man on a bike, a man in a canoe, and a man

valiantly flapping his arms. While I assure you that I do not disregard the efforts and sacrifices of our current military personnel and their families, I do believe that the military is a burden to Canada, and little help to the world.

Our commitment to the war on terror

"Our commitment to the war on terror next to that of the U.S. is equivalent to the one pop can tab you donate for a wheelchair. . ."

next to that of the US is equivalent to the one pop can tab you donate for a wheelchair: almost worthless. The effort to come to your door to collect the pop tab, or to assemble and organize separate arms, vehicles, and chains of command outweighs the meager contribution of the tab or our 60,000 men and women. The money, and the people, could be put to far better use.

One of those uses is in peacekeepers. No sight around the world stirs up hope in the hearts of the near-hopeless like the Canadian flag. This would be a far better use of our money than buying duct-tape kindling subs and dealing with replacing Sea Kings and patching up brand new Cormorants with brand new cracks.

A military has two basic uses. The first is defense. We do not need defensive forces, thanks to the US. Being such an integral part of the North American continent with them has allowed us to fall under their careful watch, and they will not let anyone

Continued on page 17. See Military

Space Politics: The results of the Bush re-election

Jason Verheyden
3B Mechanical

So Dubya's back and he aint going nowhere for 4 years. The GOP controls both houses of the feds, and to top it all off the Supreme Court is going to get stashed high up with Bush appointments by the end of his term. Suck it up – get over it.

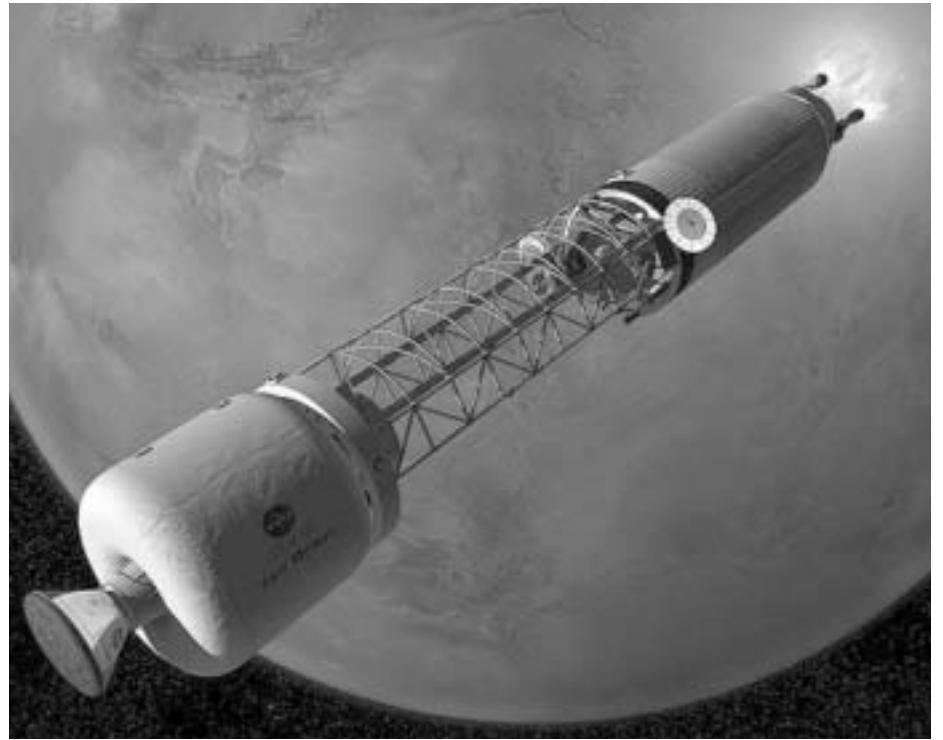
What does this all mean for the future of space exploration? It means some pretty exiting things. If John Kerry had won the election there was some doubt that he would follow the Bush Vision for a return to the Moon and then beyond to Mars. Regardless of whether you agreed with the War in Iraq or the War on Terror, or any other issue with Bush, by far it has been the Bush administration that has done the most radical and necessary changes in NASA since the Apollo Moon Landings.

In Kerry's defense, his campaign team knew that issues surrounding space policy aren't worth a red cent in American politics, and was pretty ambiguous on most statements he made around space policy. Nor did he have the time or the resources that Bush had to truly develop a space policy. Mostly he would tend to criticize the Bush on space along the same lines he would criticize Bush on everything else: he's doing it wrong, I'll do it better. It was as if the Kerry campaign was completely oblivious to the cultural war that has been waging in NASA since the Apollo moon landings. It was oblivious to the X-Prize. It was oblivious to everything. There was a little known "space debate" held that included representatives from each campaign. It did little to change my impression that the Kerry campaign was not serious when it came to space policy. What's worse is that Kerry's votes over the years on space exploration have been consistently against space exploration. Kerry's voting record has left the impression that he believes we're better off to cure the problems here on earth before we look to the

stars. Off course it could be that curing some of the ills here on earth means looking to the stars but that's just dreaming nonsense.

NASA has effectively been a chicken with its head cut off waiting around for someone to shoot it and put it out of its misery or give it a swift kick in the behind in the right direction. If there was anything good that came out of the Columbia tragedy it was that it has lead the White House to take notice of the problems at NASA and has forced action. The Bush administration pretty much ignored it before that point. I had hoped that Kerry would see the wisdom in giving new direction to an agency that has existed without a purpose for 30 years. Bush has given the agency the kick in the behind the question is whether it's in the right direction.

Since Bush made that speech, some really positive things have started happening. For one NASA scrapped Orbital Space Plane (OSP) which was a disaster waiting to happen before it even began. Basically it was NASA's attempt at creating a Space Shuttle II. It'll now go into the halls of failed projects for NASA that includes the National Aerospace Plane and the X-33. Talking about the X-33, I can still remember watching footage from Al Gore explaining that the reason why they were choosing an unrealistic, unfocused Lockheed design instead of the much more realistic and already tested Delta Clipper was because Lockheed's design provided the greatest opportunity for research and development. The Delta Clipper was developed by Ballistic Missile Defense Organization in the Pentagon – it was a rocket that could take off and land vertically had quick turn-around and a ridiculously small ground crew. In other words why go for a surefire winner when you can go for a design that would have more "technological spin offs?" Well the Lockheed never ended doing a darn thing. The Delta Clipper became a shameful knife in the back of any space enthusiast



that would bother to watch the web casts of Delta Clipper test launches on the web back in the 90's and saw for themselves how much farther they were ahead of Lockheed's "theoretical" Venture Star. My problem with the OSP is that NASA didn't seem to learn its lesson from its last two failures at coming up with a replacement for the shuttle.

Next Bush appointed Craig E. Steidle as the head of NASA's new Exploration Systems Office. Of all the decisions the Bush administration made no one can argue with the appointment of this guy. He has been the source of every story that has shocked space enthusiasts this year and it's like he came out of nowhere. He's trying to create "Centennial Challenges" that would hand out cash prizes similar to the X-prize for space exploration (If you don't know what the X-Prize you're hopeless). This was tantamount to admitting that the X-Prize was a good idea, after all that time people from NASA spent criticizing those nutsos out in the dessert; this was vindica-

tion! Sweet vindication for X-Prize fans everywhere especially since the X-Prize hadn't even been won yet. He's also suggested a fly off between the two final competitors in the new replacement for the OSP the Crew Exploration Vehicle (CEV). Imagine having two working space transportation systems fight it out in a good old fashioned fly-off. None of this garbage where the winning team is chosen years in advance, and then claims later on to need more money for whatever stupid reason they can come up with. Then come some more cost overruns and some disappointing tests that show that their initially inflated numbers for reliability and performance don't exactly match up to the real numbers at all. No, this time there will be a fly-off, out in the open, and everyone will see how the design performs before any deals are made.

Continued on page 19 See New vision for NASA may mark new space era.

Advantages to Engdating

...continued from Page 10.

ship when you have to explain all of your jokes to her. Engineering girls not only understand your humour, but might also laugh along, especially the nerdy jokes. If anything we end up making our own to go along with you.

Being EngLadies ourselves, we have a simple solution to the problem of seeing your significant other too much: DATE SOMEONE IN A DIFFERENT CLASS. Better yet, date someone in a different stream if you can manage it. That way, if it doesn't work out, you don't ever have to see her again. Face it boys, it's not like we want to see you all the time either. Just make sure you're not the one suffocating her because, remember, she's smart; she'll ditch you if you're digging into her homework time.

Not-so-cheap date? Unlike Arts and AHS girls, our Engineerettes won't want to drag you to some interpretive dance show that costs \$50 a ticket. Most of them don't mind just to drink BEVERages in someone's backyard for \$10 a cup. And if your girl ends up being more of a drinker than you, why are you in Engineering anyways? At least she'll understand why you need to leave early in the morning to walk off your hangover.

Although we do admit that it is tough competition to get our attention, we'd prefer an Engineer over an artsie any day. You're

dedicated, you're smart, you have a good sense of humour and you know exactly what we're going though. Plus if you make yourself worth our time, then we're more than willing to ignore those 49 other guys vying for our attention. All we can say is, don't give up.

Looking for someone diverse is one thing, but looking for someone who's your complete opposite is something different. Whether you date an artsie or an Engineerette, you need to have something in common or it won't work out anyways. The advantage of an EngLady is that she might just share your love of video games and other nerdy activities. It's still possible to broaden your horizons; if you're in mechanical, date a chemmie. If you're in civil, date a syssie. And for the record: it is clever to go to the EngSocial together, because if your girl goes alone, she'll get mobbed.

Some of the more attentive readers may have noticed that this article is a response to a certain article in the last issue of the IW. To those of you that agree with this rather controversial article, you must have had a bad experience. Or no experience at all. For this we are truly sorry. For those of you in disciplines more highly saturated with girls, you'll notice that most of us are quite worth the effort, but those of you that agreed with the last article, don't waste your time. You'd be better off with an artsie anyways.

IW Writer Apology



Andrew Dodds

1A Mechanical

I am sorry that I have offended some readers. I had hoped that my opinion column from the previous issue would easily be seen from the humorous side I attempted to show it from. Reading over my work just now, I still feel that for the most part, I was actually bashing us guys for that often stereotypical behavior of ours (needing to be smarter, party harder, etc), making us seem shallow, and portraying it from the viewpoint of a shallow person. On the other hand, I still agree with my idea. I admit indeed that I saw and met many interesting girls during frosh week, but they are scarce and as was referred to in this week's response article, with the comments about the social, hard to get to. In class, all females have the blessing of choice. No matter what kind of girl you are, in engineering classes they all get their share of attention. Perhaps it is a bit

"I had hoped that my opinion column from the previous issue would easily be seen from the humorous side. . ."

different for the authors of this article, the concentration of females in Chemical Eng being higher than about any other place. Part of my previous article that was edited out due to size and keeping with the general theme of joking about a shallow stereotypical view was a closing statement that while I had written all those things, if you think you have found or have indeed found a wonderful girl in engineering, then by all means you have my blessing and I wish you happiness. Heck, I see it every day. My housemate is still dating his girl, both from my class, and they've been together since the second week of classes, going completely against everything in my article, and I am proud of that success. For the most part, the article was designed to give girls an empowered (although I see now regrettably it would seem also a bitter) feeling, poke fun at the guys and see if they might be a little more open-minded, and overall just make people laugh with what I had hoped would come off as a playful, witty, and fun-to-read article. Again, I am sorry to have offended any and all females, and express my deepest regrets. Sincerely, Andrew Dodds.

Columns

DNA Computers There's One In Every Cell

Quoc Huy T. Le

4N Electrical



We all have conventional computers at home and we've all heard of the possibilities of Quantum Computing. IQC (Information Quantum Computing), however, is in its infancy and is still at the earliest stage of development. There is another promising branch of computer research that is happening right now: DNA Computers.

You can think of every living cell as a tiny little computer. Information is stored and processed on the strands of Deoxyribonucleic Acid (DNA). Depending on the chemicals released the DNA reacts in a corresponding manner to unravel, unravel, prepare itself for duplication or cell mitosis.

Imagine, if you will, that one can customize the sequence of the A, T, C and G nucleotides. This is essentially "programming" the strand. You then let millions upon millions of these strands combine and interact with each other. After performing a little chemical magic with special glass and a gold-plated surface with

some solutions to wash away erroneous answers and voilà! You have a solution!

This, of course, is an oversimplified explanation of how DNA computing will work. It is still in the earliest stages of research. Its conception by Leonard Adleman came about a mere decade ago in 1994. There are still many decades to come before we can buy a DNA computer at the local computer shop.

The concept of reading the information stored on DNA strands is similar to that proposed by Alan Turing back in 1936. Instead of having a tape with holes representing 0 or 1 punched into it, we have the base pairs of adenine, thymine, guanine and cytosine.

Adleman showed that DNA computing could come up with the solution to the traveling salesman problem. Given a number of cities with pre-determined geographical locations, the challenge is to find the shortest route that will take the salesman through every city exactly once. The demonstration was successful (albeit very lengthy in time and human assistance). The concept had been proven.

For a few number of cities the prob-

lem is simple enough. However, the number of solutions grows exponentially with the addition of a new city. Imagine another problem where, given a certain number of roles in a play, one wants to find the probability of successfully casting the production. Again, it is simple for few spots and few auditioners. But it grows geometrically as the number of people and roles increase.

DNA computing naturally lends itself to certain types of problems; namely, ones that are based on combinations, permutations or repetitive calculations. In Israel scientists have developed a rudimentary DNA computer that can perform 330 trillion

operations per second. That's more than 100 thousand times faster than the fastest PC.

How is it so fast? The answer is simple: parallel computing. Whereas silicon-based computers, no matter how fast, always runs in serial (only one operation at a given time), DNA computing can run every combination simultaneously. The trick, then, is to remove all the erroneous solutions to a problem and select that which is the correct one.

"...one gram of DNA can hold as much data as one trillion CD's..."

Game Review: Sims 2 Dollhouse for Geeks

Tsu Chiang Chuang

4N Computer



Maxis has finally decided that it was time to release a new version of the hit game: The Sims. Needless to say, the fans were not disappointed after the million expansions packs that have followed since the first release. I am not one of them. However, I needed a game to review, so I sat down and spent a weekend playing it. Needless to say, it is now gone from my system.

Before I start ranting, I will like to ask you. How do you review a game that is so open-ended like The Sims? Heck, how do you even review a game like The Sims, when it defines its own genre of gaming? For people who have never heard of the game, here is a quick summary. The Sims is a simulation of life. You control a character, called a Sim, through his or her life. You get to decide on their career path, personality, taste, house décor, etc. In summary, you are playing make-believe or doll house.

One of the cool new features of Sims 2 is that the character editor is highly dynamic. You can spend hours just customizing the looks of your Sim. No more need for hack, if you want your character to look like the Roswell alien or like Barbie. Thanks to the improved graphics engine, the characters do look a lot better than the first one, as do the backgrounds. However, the Sims still speak in gibberish.

Oh, and did I mention the genetics? Sims can now conceive babies. If Mary with blue eyes and blond hair marries

Bob with blue eyes and brown hair, their daughter Sally will have blue eyes and brown hair. Thank you Mendel for the lesson, but that is boring. Instead, what happens if you breed an alien and Barbie? Mutant town here we come! It might be fun to watch, but also slightly disturbing.

With the concept of breeding also comes the new concept of age. Your Sims will age and with that they will also die. Yes, I know, it is a sad thing...or not. So what happens while your main Sim character is aging? Well, your baby Sims grow from baby to toddler, from toddler to child, and so on. In the first Sims, the

child Sim was a very flat character without much depth. In the revised edition, lots of added attention has been put in the toddler,

child and teen Sim. They each have their own characteristics, and they are also influenced by the upbringing of their parents. If the Sims parents are rude, the child will grow up to be a brat. If the Sims' parents love and take care of their kids, he or she will grow up to be an outstanding Sim, whatever that means...

Maxis also added pre-designed towns with background stories. You can play one of the many preset scenarios, among them: Romeo and Juliet, a standard soap opera town, Strangetown. The first two scenarios are self explanatory. The last one is about a strange town similar to Area 51 with aliens and strangeness.

When I first played The Sims, I couldn't figure out why anyone in his right mind will play the game. (I still don't by the way.) I got really frustrated with the first generation of The Sims. The AI of the game itself was, to put it mildly: retarded. You had to tell your Sim that it was time to visit the john, or to wash the dishes, or even to go to sleep. In summary, there was a lot of micromanaging involved, which in turn meant lots of



"Hey honey, I'm home! What the ...?" - Sometimes life in Sims 2 can get quite interesting. It is almost like watching a soap.

time wasted and not a lot of fun. This is slightly improved in The Sims 2. The Sims are more intelligent. Again intelligent is a relative term. Finally, to make things more interesting, your Sims have aspirations. They either want to be a brainy scientist, a millionaire, a sex machine, or a family person. With these aspirations come new goals, new desires and new fears. This adds on to the game, but also complicates your life. Good and bad I guess.

After all the ranting, the Sims 2 still has some good points. In my opinion, one of the fun parts of the game was to experiment with random things. Basically, what happens if you sit a guy in front of the television for every hour of his waking life, or if you make your Sim orga-

While the main focus of research lies in the computing and processing power of DNA, there is also something to be said about its storage capacity. To put it in perspective: one gram of DNA can hold as much data as one trillion CD's, or 150 billion DVDs, or 700 million terabyte DVDs (see article **Terabyte DVDs**).

Scientists' imagination doesn't stop with just solving complex mathematical problems. Within half a century doctors hope that these little processors can help advance the course of nanotechnology. Imagine little tiny devices that can be injected into the human body to not only diagnose, but release medicine on the fly and cure practically any disease from an unstable heart condition to a rare neurological disorder.

The computing industry is fast approaching the day where silicon chips cannot be miniaturized any further. The problems of heat-dissipation and growing inefficiencies with serial computing is close to becoming the bottleneck in the development of breakthrough software and computing devices. With the conception of radical new ways of processing information such as Quantum or DNA Computing society can be assured that a rush of research is underway so that the envelope of technology can be pushed a little further.

nize a kegger every day? It screws up their lifestyle apparently.

Also, another added feature in Sims 2 is the ability to make movies. It is quite nice, you can make your Sims act out soap operas and record it. It is one of the redeeming qualities of the game. I got to admit that sometimes the random quirkiness of the Sims crack me up. Note that there is even a movie already out there about Strangetown. Go and watch it, it is interesting to say the least.

Overall, if you want to play make believe or just like to screw up people's lives go ahead and play this game. Word of warning, this game is very open-ended, so the game is what you make out of it. Personally, I don't like that. Then again, I never enjoyed playing house.

Safe-for-Work Websites

How to waste your time without being fired

Sheldon Petrie
3B Mechanical

For those of you who are well aware of the numerous web sites (no, not those kind) which offer family friendly entertainment are few and far between. Most of the stuff that passes for entertainment online is typically littered with XXX pop-ups.

Beyond news sites like CNN, Google and the vast array of others, those who want to be entertained with games and funny articles utilize various web sites to fill the entertainment gap.

The web sites this article covers are SFW

(Safe for Work) so there is no nudity. At any rate the PG friendly web sites focus on different areas of interest but are each quite funny and entertaining. The first sites which one should be familiar with are BBspot and TheOnion.

BBspot is run by a man by the name of Brian Biggs and its main purpose is an arena to poke fun at inept computer users and write some very funny spoof articles about the world of computers and geekdom in general.

Along with the fake news stories there is much original content which basically takes a real-life computer event/problem and turns it into a truly hilarious "news story". One of the most popular (and user-fooling) articles dealt with the Nigerian 419 scam.

What the BBspot article entitled "Nigerian Philanthropist can't give away his millions" and has fooled literally hundreds of computers users into emailing Mr. Biggs asking him how to get into contact with Esenam Ayele, a fictitious Nigerian Billionaire wanting to get some of his money, even despite warnings both before and after the article that it is fake, on a daily basis. These emails are covered in a feature published every few days called the BBspot Mailbag where the details some of the more hilarious emails he's received and

the replies he's made.

A few more favorite weekly features include the Polls, Weekly Horoscope, and the BBspot Top 11. Again, the theme is usually computer related (Startup Messages you don't wanna see, Lies Computer Science students tell themselves) but will often times go into Star Wars (Rejected names for Episode 3, Storm Trooper Pet Peeves) and so on.

Regardless of what you are looking for www.bbspot.com delivers the goods on fun stories, original content and more.

The next web site you should check out is the Onion, the granddaddy of net satire and spoof news stories, social commentary, and opinion articles. Unlike BBspot

which is staffed by one man with occasional guest commentators, The Onion is a real publication started in 1988 by a team of writers and artists to publish a weekly newspaper filled with articles, editorials, opinion pieces with a sense of fun and not taking themselves too seriously.

Articles on the Onion deal with any and all topics from U.S. politics such as "Kerry Unveils One-Point Plan for Better America", "CIA asks Bush to discontinue BLOG", and "Al-Qaeda Chatter Deteriorates into Gossip"; the battle of the sexes including "Bargoer starts to hit stride after hitting on fifth girl" and insightful social commentary "Deadbeat dads march on Los Vegas", "Movies praised for not being as bad as it could have been" and so forth. The topics are truly variable like a real newspaper but do have an air of truth to them. Additionally, they are most definitely intended for an adult audience. Some of the articles openly discuss sex or sexual activities, in an off-handed, matter-of-fact kind of way.

Unfortunately, over the past year or so the Onion has transitioned from a free online site with all of their archives available to a premium pay site with only the current edition and three weeks of archives. A great many of genuinely funny articles are pay-only. Despite this The

Onion is a good read once a week (updated on Wednesdays).

The third and final web site that you will find entertaining is one that is so popular that it has transcended the internet and became a full-fledged cult phenomenon. Whether it's random chalkboards with pictures of Trogdor, random quotes from Strong Bad's emails in everyday conversations, the Techno song, and the hundreds of other things you may be convinced to try after visiting homestarrunner.com.

After a few short years what started out as a few Flash animations has turned into one of the most original, creative, and utterly side splitting hilarious web sites ever conceived. Featuring an array of characters as diverse as most engineering faculties, there is no shortage of stories to be told and fun to be had.

The name of main web page refers to the "star" as he likes to be called. Despite having no arms, Homestar Runner is quite dexterous and very annoying in conversation, having no sense of when to be quiet, little short-term memory and a strange sense of humour.

Other characters include Bubs, Coach-Z, Pom Pom (a huge balloon), Strong Sad, Strong Mad, Marzipan, The King of Town, The Poopsmith, Strong Bad and The Cheat. Most of these characters defy description but upon suspension of disbelief their adventures are original and inventive.

All of the material is presented in Macromedia Flash format so a broadband connection is a must for proper browsing. Upon loading the web page an intro splash page comes up prompting you to either "come on in" to the main browsing page or "watch intro" to watch in welcome video to the site hosted by Home Star. Beyond this navigation is done through flash pages with active/animated links.

The bigger features include longer animated stories/shorts focused around holi-

days such as Halloween and Christmas. Others stories revolve around minor characters only seen on occasion such as Marzipan, Coach-Z and the King of Town. A wide array of downloads are available which include wallpapers, audio theme packs, and soundboards.

Most people discover this web site after being shown or given a link to the main attraction of the entire site, the previously mentioned Strong Bag Emails. While the simple concept of answering ones emails might sound fairly mundane, Strong Bag takes the art of writing an email to heights never seen and unlikely to be equaled.

With over one hundred emails and counting each email is a creative reply combining sound, text, video and images to tell a short story relating to or inspired by the original email. They are released on a weekly to bi-weekly basis.

A unique quality of the emails is that ones have gotten so popular that they are a recurring theme such as Techno, Stinkoman, Eh Steve, and more. Another email tradition is that Strong Bad will always find a way to point out all of your spelling and grammatical errors along with making fun of you name, even if you don't provide one. Each email aside from the first 10 or are littered with hidden features

usually in the form of clickable text (ordinary words are linked to bonus material) and in rare cases the "end" of the email is not the end of the email.

While a great deal of time and energy goes into creating these cartoons and emails, the characters they have created launched an entire merchandise line which supports them financially. They have transitioned from part-

time to a full-time job for the Brothers Chaps, as they usually credit themselves.

In addition to all of these features the web site also boasts a large array of interactive games, character bios, and lots of hidden stuff. Check it out.



"Trogdor" - The Burninator

Smoke what?

will definitely affect your health. I myself am not a habitual smoker. However, I do like to enjoy the occasional cigar, say for example, to celebrate the finishing of my exams. This new legislation would make it impossible for me and my friends to go out for drinks and a smoke to celebrate. Some people tell me that cigars are even worse for my health than cigarettes and should be banned. Honestly now, I think there are things far more harmful than having one or two cigars every eight months, such as the drive-by shooting near my former high school in Scarborough, or getting hit in the eye by a lawn ornament.

As it's becoming more and more difficult for tobacco smokers, things are taking a different turn for smokers of a different kind. Apparently, the government is planning on reintroducing the bill to decriminalize marijuana. If this bill were to pass, you will no longer have a criminal record if you are caught with less than 15 grams of pot. You will however, be fined \$300. Need I remind you

that smoking tobacco in a non smoking area can cost you up to \$5000. Now maybe I'm reading too much into this, but I think someone is trying to suggest something here.



Military

...continued from Page 14.

invade or attack us, since that could threaten their security. Besides, the US has first dibs on invading us many years from now. The other use is for quelling battles on distant fronts. We have far too few soldiers and military armaments to undertake such an ordeal. Our contributions are and will always be a pittance, a mere show of face.

Some might laugh if a nation as developed and as large as Canada were to have no military at all, but think of the things we could use the money for. We could use it to bring aid to countries in need, or to help prevent the disasters from occurring in the first place. It could be used to solve so many other problems, or to contribute in so many more beneficial ways. As patriotic as I am, the Canadian military no longer has a place in the world. They are merely awkward misfits that will need another major world tragedy to serve a purpose, or to muster up enough ranks to be useful. Let us hope that we will never need a military again. We must never forget.

Edward Tan

3N Computer



Some of us may remember the smoking ban that was implemented in Toronto back in June of this year. Essentially, this law prohibits smoking in public places such as restaurants and bars. Now, the Ontario government wants to implement a similar ban in all of Ontario with even more restrictions. The problem with the original legislation was that smoking is still allowed in private clubs. Hence, some establishments abused this policy to continue to allow smoking. The solution to this problem is to remove tax benefits from these bars and restaurants.

So those are the facts. How do I feel about them? Well, I can understand the purpose of such a legislation. I mean, constant exposure to second hand smoke

POINT VS. COUNTERPOINT

Are Engineers Morally Responsible for Their Technologies?

Quoc Huy T. Le

4N Electrical



There is a reason why we must be registered with organizations such as the Professional Engineers of Ontario (PEO) in order for us to be able to legally call ourselves "engineers." It is because our position is one of responsibility. Much like doctors and lawyers, we are civil servants and the knowledge and training we get as well as the jobs for which we are hired to perform gives us the opportunity to do both good and harm.

Engineers have a legal responsibility to take appropriate steps to ensure that their designs are sufficiently safe. Moreover, engineers have the ethical task of ensuring that their inventions are only used for the good of mankind. Engineers are morally responsible for their technologies because it is through them that these technologies come into existence.

Before we begin, let us make a distinction between moral responsibility and legal liability. Let us say that a group of engineers invent a new type of weapon of mass destruction under contract by the army and the military goes and obliterates a village with it. The engineers then certainly cannot be charged with murder. They are legally not liable for the damage done.

What we are concerned with here are the ethics involved in the creation of such a weapon. The discussion, then, is one of internal moral accountability. In other words, were the engineers responsible, at least in part, for the destruction of that village? The answer is an undeniable "yes."

How can they not be? In our little hypothetical situation, the means by which the village was destroyed was created by the engineering firm. Had the engineers not proposed, designed, built and tested the weapon it could not have killed anyone. Of course, this is not to say that the army could not have used conventional weapons to annihilate that community. But at least in that case, the engineering firm would have nothing to do with it.

"It is not the invention itself that is bad, it is its use." For certain technologies (guns, missiles, bombs, fighter jets, battleship, etc.) the use is pretty clear. If you're an engineer designing the guidance system for a missile, you're going to find it quite difficult to convince yourself that "the missile will only be used to keep the jets from blowing away..." There is only one use for a missile and if you help create one, you are partaking in the moral implications of the results. Though, it is understandable that money is a large factor in how much regret one may feel. Placing the onus of responsibility on the contractor tends to get easier the larger the contract is.

To be fair, there are good uses for seemingly evil inventions. Guns, after all, are required by law enforcement officers to help them protect the community. However, just because a piece of technology has some good applications does not mean that the engineer can turn a blind eye to where and to whom his or her invention is being sold.

Is it right to sell your guns to the police? It most certainly is. Is it ethical to invent a gun plated with a hydrophobic metal alloy that does not hold fingerprints and sell them

on the black market to organized criminals? It is absolutely not. Engineers are trusted to do everything in their power to ensure that technologies fall into the right hands and are being used for a just purpose. Otherwise, they shouldn't be created in the first place.

Okay, so you're a good-goody moral engineer and you've just invented this great new system. The problem is that some other less-moral engineer decides to build on your theories and turn it into something evil. What can you do? There are things engineers can do to control their work. The best one is to get a patent. For technology, it is effective for at least twenty years. This means that whatever you invent cannot be duplicated by any other firm without your explicit consent. This is but one way that an engineer can keep his or her work under control.

Perhaps the biggest controversy of the twentieth century was nuclear power. Though there is great potential for nuclear reactors in terms of energy for the public, there is no question that the principles behind nuclear fission were instrumental in the most devastating bomb explosions in history. One can rightly ask, "Were those involved with nuclear theory responsible for Hiroshima and Nagasaki?"

It depends on about whom you're speaking. If you're talking about the physicists who discovered the processes of nuclear fission, then no, they were not responsible. Nuclear fission, much like the violently exothermic reaction of detonating tri-nitro toluene, is simply a physical process of nature that was bound to be discovered sooner or later.

However, the scientists and engineers who constructed the explosive device which utilized these principles were as guilty as the pilots who flew them over Japan or the commander who ordered the strike. The Manhattan Project had only one goal and those who were working in those refineries knew exactly for what their product was going to be used.

The scientists and engineers who, on the other hand, use their knowledge to build huge fission reactors to power a city aren't guilty of anything. To the best of their abilities they make plant as safe as possible. They exemplify what a positive and excellent application is of the principles behind nuclear energy.

What this all boils down to is the motive behind what is being produced. It is obviously possible for an engineer to invent some new device for building support, for example, and some loon to take that invention and beat another man to death. In that case, it's just plain common sense that the engineer is absolved of all accountability since his or her invention was not being used in the way the engineer had intended.

However, when knowledge of the final use is known (such as when an engineer designs a laser used to guide missiles, or a new type of engine for fighter jets), then the engineer must carry with him the burden of responsibility for the consequences of bringing that piece of technology into existence.

Otherwise, when good and bad uses can be conceived for particular tools, it is the engineer's commission to do everything in possible to ensure that his or her devices fall into the hands of the right people and is only used for the good of humanity. Otherwise, it would be an abuse of the engineering profession.

Edward Tan

3N Computer



Since we are all studying engineering and many of us will one day become professional engineers, the topic of moral responsibility is very important. I mean, should engineers be held morally responsible for the things they design and build? The short answer is no. Before I get into my arguments I would like to outline the difference between moral responsibilities versus competence. If an engineer designs a bridge and the bridge collapses and kills hundreds of people, then the engineer

should be held responsible. This is due to incompetence, since the bridge did not do what it was designed to do. The question of moral responsibilities arises when our creations actually do what they are suppose to. This in itself can be broken into two categories. On the one hand, we can be doing research in order to find a cure for cancer,

but then the research is used by someone else to design a biological weapon. On the other hand, we could be knowingly designing the biological weapon itself.

I will start off by discussing the first scenario. If someone designs something with the best of intentions, should they still be held morally responsible? Some people may try to compare this to manslaughter. With manslaughter there is no criminal intent, but the fact is someone is still dead. This however, is not a valid comparison. Manslaughter is death caused by criminal negligence. This example is more similar to the case of where a bridge collapses due to someone's incompetence. The bottom line is, if someone creates something that

is beneficial then they should not be morally responsible for someone else who uses it irresponsibly. I am a firm believer that the human race should continually work to improve itself. This is done by exploring new ideas, new research and new inventions. There is always uncertainty when a new frontier is explored. If we punish people when they discover something that is potentially harmful, then no one will be willing to take these risks.

Finally, there's the example of someone who knowingly creates something that is harmful, such as a nuclear weapon. Even in such a case, I would still argue that the creator should not be morally responsible. It is the person who decides that the weapon needs to be built and the person who decides the weapon needs to be used who should be held responsible. Power and responsibility goes together; you can't have one without the other.

"There is always uncertainty when a new frontier is explored. If we punish people when they discover something that is potentially harmful, then no one will be willing to take these risks."

You need to have the power to make decisions and influence change in order to be held responsible. You can't hold someone responsible when something goes wrong if they never had the ability to change anything in the first place. For example, if the engineer refuses to design the

nuclear weapon, the person who wants the weapon can always find some other engineer to do the job. It would require every single engineer to unanimously refuse. Whereas, it would only require the person in charge to change his decision to make a difference. Einstein contributed to the development of the first nuclear bomb. Do we consider him to be an evil person for introducing nuclear weapons to this world? The statement "purposely creating an evil invention" is an ambiguous statement. There is no such thing as a purely evil or good invention. Everything can be used to either benefit or to harm others. So obviously the responsibility lies with the person who makes this decision.



"Ivy-Mike" - In a single mushroom cloud we see the tremendous power and destructive capability which engineers have to confront as they harness technology.

ARTS CORNER



The Legend of Hero Man

Quoc Huy T. Le



4N Electrical

with strength to spare and searing speed he gladly helps all those in need, spreading peace and order through the land. always singing his justice song he apprehends those who do wrong. evil-doers fear the Hero-Man!

Hero-Man, his name implies is a hero, in public eyes except to one, the baddest of the all. Villain-Guy, the evilseed, dominates with vile greed. of all the scum, he has yet to fall.

Hero-Man, with cunning and care, tracked down Villain-Guy to his lair where his scheme was about to be unfurled. Villain-Guy built a machine, the likes of which no man had seen, which he was going to use to rule the world.

"stop!" Hero-Man did say, "your evil plan will halt this day! i'm here to see that you're destroyed tonight!" "what?" Villain-Guy had said, "i think that it is you who's dead! the two of them, locked in vicious fight.

the laser coming from Hero-Man's eye

was reflected towards his thigh and burned a large hole right through his leg. he was in trouble, there was no doubt, when his two kidneys were punched out. to Villain-Guy he did plead and beg.

battered and broken, Hero-Man cried. Villain-Guy had no mercy inside. he picked up Hero-Man by his tongue. Hero-Man started to turn green when he saw Villain-Guy eat his spleen and starting to play bagpipes with his lung.

Hero-Man could take no more as his intestines slicked the floor and Villain-Guy wore his liver like a hat. and, as the final part, Villain-Guy grabbed Hero-Man's heart and grand-slammed it out the window with a bat.

so that's the legend, my good friend, of how Hero-Man met his end, spreading fear and chaos through the land. so if you should ever think you're strong, don't go and pick fights, because you're wrong, or you'll be dead, just like Hero-Man.

Want to show off your artistic side?

Have some poetry you'd like to share? Got any comics you doodled during calculus class? Submissions are always welcome at iwarrior@gmail.com, or in the Iron Warrior mailbox in the Orifice.

New vision for NASA may mark new space era

...continued from Page 15.

Even the CEV gets me a little tingly. The design could still be a winged design similar to the Shuttle, or could be a capsule design similar to the Apollo days where travel to space was half as expensive. I can't see any prejudices in design here. I'd love to see a winged CEV compete against a capsule design. It would settle one of the greatest arguments of all time for space enthusiasts: winged or capsule? One criticism I find valid is that the scope of the design may be too broad. The CEV is supposed to be a craft that can operate as a vehicle that can transport people to the space station and at the same time deliver humans to the Moon and Mars. It may have been more prudent to narrow the CEV's focus. However the way the CEV program is working out there will be two phases called Spiral 1 and 2. Spiral 1 focuses on crew transportation to space. Spiral 2 involves creating a variant of the Spiral 1 design for use in Lunar and Martian transportation. What has ended up coming out of this process is the recognition by many that most

likely the final CEV design will be a modular design, with the main CEV module being the module that carries crew to and from earth and orbit. Extra modules will added to the main CEV design for extended missions. However, If I'm not mistaken this was exactly the approach that the Apollo missions took as well – and it seemed to work.

For once NASA has direction – it has purpose. It is now an agency solely dedicated to exploration of the solar system. This may be huge blow to anyone who thought the opposite: that NASA should be agency solely dedicated to scientific research. The truth is that having the agency pursue both goals was problematic at best. Who's going to win in a budget fight: the scientists that want to test dead frog legs, or the engineers that want to explore Titan? A choice needed to be made once and for all, and Bush made it, regardless of right or wrong.

All of that being said "W" has some gaps in the plan. The shuttle is being phased

out in 2010. The CEV is supposed to fly by 2014. The question on everyone's minds is what will NASA do for 4 years? There are many that even question whether or not the shuttle will last till 2010. How will the US go into space?

Some have a theory that this may have been intentional. It may be part of some plan by the powers that be in the Bush administration to permanently divorce NASA from low earth orbit. The idea is that NASA acts like a 900 pound gorilla in the commercial launch market and that other private competitors have problems competing with a government organization supported by taxpayer's money. Eliminate NASA from low earth orbit, and it will free up the private sector to take over – or so the theory goes. NASA then would focus its sights on the Moon and beyond. Developments over the past week have pretty much backed up that theory.

This past week Robert T. Bigelow announced that he will offer a \$50 million

dollar America Prize completely financed by him alone. This prize will go to the first team that can get 5 people into low earth orbit twice in 2 months. What's significant about this is the reason why he wasn't going to offer the prize completely financed by him alone initially. Apparently he was in talks with NASA at the time to fund \$25 million of the prize. This is like NASA flirting with the anti-NASA space prizes that just 10 years ago it said could never be done. The prize by the way is being offered until January 10th, 2010. Just in time for the shuttle to be phased out. Obviously NASA isn't oblivious to the fact that it will need to possibly contract out crew transportation to the private sector. Any takers? You've got 5 years to do it.

Either way Bush has been convinced to take a chance and radically reshape NASA. The question is will it last? The real test will be when the Democrats finally come into power and whether these changes take hold. If it survives that test, and the CEV does get off the ground, NASA may actually not look to the Apollo days as its glory days – now it will be looking forward.

"For once NASA has direction - it has purpose."

Photographer Profile: Yousuf Karsh

Capturing the Heroes Inside

David Yip

2B Mechanical



The revelation, if it comes at all, will come in a small fraction of a second with ... a brief lifting of the mask that all humans wear to conceal their innermost selves from the world. In that fleeting interval of opportunity the photographer must act or lose his prize.

- Yousuf Karsh

Karsh was one of the greatest Canadian photographers of all time. The London Sunday Times wrote: "...when the famous start thinking of immortality, they call for Karsh of Ottawa."

This was no exaggeration. His portfolio is literally a roll call of leading figures of the 20th Century, for example: Albert Einstein, Alexander Calder, Andy Warhol, Audrey Hepburn, Dwight Eisenhower, Ernest Hemingway, Fidel Castro, Jacqueline Kennedy, Frank Lloyd Wright, George Bernard Shaw, Helen Keller, Humphrey Bogart, John F. Kennedy, Muhammad Ali, Picasso, Trudeau, Princess Grace and Prince Ranier, Robert Frost, Winston Churchill.

Of these, his portrait of Churchill is perhaps the most famous. Even if you do not actively remember seeing the portrait, doubtless you will appreciate it if you know anything about Sir Winston Churchill and his leadership of

Great Britain during the Second World War.

As the story goes:

"Churchill marched into the room scowling, regarding my camera as he might regard the German enemy." His expression suited Karsh perfectly, but the cigar stuck between his teeth seemed incompatible with such a solemn and formal occasion. "Instinctively, I removed the cigar. At this the Churchillian scowl deepened, the head was thrust forward belligerently, and the hand placed on the hip in an attitude of anger." The image captured Churchill and the England of the time perfectly - defiant and unconquerable. Churchill later said to him, "You can even make a roaring lion stand still to be photographed".

This picture of Churchill is reportedly the most reproduced in history. Karsh sold it to Life magazine in 1941 for \$100.

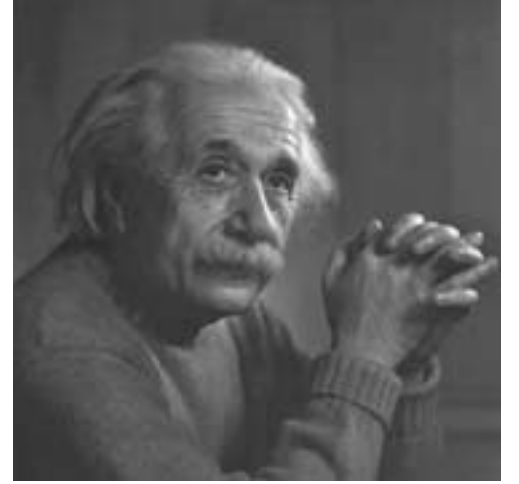
Karsh was born in what is now Turkey

in 1908. As he was growing up he witnessed the genocide of Christian Armenians by the Turk government taking power at the time. (As referenced by Hitler "Who remembers the Armenians?" as a retort while he was planning his Final Solution). In 1922, Karsh and his family fled to Syria, and two years later he was sent to live with his photographer uncle living in Sherbrooke, Quebec.

In his autobiography he remembers his first impression of Canada: "We went from the dock to the station in a taxi - a sleigh taxi drawn by horses with bells on their harness which never stopped tinkling. Everybody looked happy and I was intoxicated by their joy."

Karsh helped his uncle at his studio, and his uncle George Nakash saw potential in the young Karsh. Financial troubles precluded Karsh from his physician aspirations, and Nakash arranged for his nephew to apprentice with portraitist John Garo, returning four years later to establish a studio in Ottawa, with the famous copyright 'Karsh of Ottawa'. Perhaps by some chance, Prime Minister Mackenzie King arranged for Karsh to meet and photograph visiting heads of state and dignitaries. His work also attracted the attention of celebrities of the time.

Karsh always took time to speak to his subjects before photographing them. His style is that of the heroic portrait: - they capture a mystique, and mythology that makes for very publishable picture. The way his subjects were photographed further give us the sense of someone to look up to, that we should all be striving towards something great. Karsh himself was an admitted hero-worshipper, and it has been surmised that it was his witness of the horrors of the massacres of Armenians that drove his interest in those



who used their power to effect good works. "The impulse behind much of Karsh's work," one writer has said, "is, in a sense, philosophical, and stems from a belief in the dignity, goodness, and genius of human beings." His pictures lend themselves very well to mass reproduction, and have been used in countless magazine covers, postage stamps, currency, and other mass media.

Incidentally, his brother Malak Karsh also became a well-known Canadian landscape photographer. His image of logs floating down the Ottawa River was used on the now-defunct one dollar bill. A portrait of Queen Elizabeth II appeared on the reverse of the one dollar bill, a portrait taken by his brother Yousuf.

Karsh closed his studio in 1991. His last photographs included Nelson Mandela and President Clinton. He is a recipient of the Canada Council Medal and is a Companion of the Order of Canada.

In 2002 he passed away in Boston, where he was first mentored by Garo in his early years.

With files from masters-of-photography.com, and cbc.ca.



the Iron Inquisition

Richard Hui: 2A Chemical

Whom did you remember for Remembrance Day?



"My grandfather."
Shaun Adamson - 2A Chemical



"Not necessarily remembering, but thinking about the present... like our freedom is still at risk now."
Ben Lahnalampi - 1A Mechanical



"My grandfather who was in the RCAF in World War II."
Ryan Tucker - 4A Civil



"My uncle, he was a gunner in the air force, and he passed away at age 21."
Janet Metz - Engineering Co-op Advisor



"The soldiers and peacekeepers."
Ellen - 2A Health Studies
Kathryn - Child Youth & Family Studies



"My grandfather - he used to teach flying in WWII for the Australian air force."
Patrick Gallagher - 1A Mechanical



"My grandfather who was a gunner in WWII."
Sarah - 3A Arts



"All of them."
Chris Ervin - 4A Systems