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the IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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Exclusive Look at
Pearson Airport
Expansion

Page 5



Walking for those
who Can't:
How you can help

Page 6



LowRider
interviews some
Presidents

Page 11

Engineers Raise \$1400 for MS Society



Michael Henheffer

4B Computer

On the morning of Saturday, March 6th, approximately twenty dedicated engineers got together to pull a bus from CPH to downtown Kitchener for charity. At about 10:45, we finally got the bus moving and kept a good pace going, perhaps with a little bit of assistance from the driver, all the way to downtown Kitchener, about 6.5 kilometers away.

What the pullers may have lacked in numbers they definitely made up for in spirit. We could be heard cheering throughout the course of the trip. Many verses of the engineering hymn were sung along the way as well. At several points in the trip, we broke out into songs such as "The Wheels on the Bus" to show our spirit to all of the onlookers. There were also several appearances of a certain 60-inch mascot that helped keep the spirits of all the pullers up. The TOOL drove by in the back of the UWAFT truck at many points along the route. It was even brought along by foot for part of the trip.

After an hour of hard work pulling the bus we had finally reached our destination in downtown Kitchener. I think it is safe to say that everyone involved was quite tired at this point so we got back on the bus for the drive back to campus. Upon



(top) Engineers head down King Street pulling a GRT bus accompanied by the TOOL. (above) Matt Strickland and Dan Foong strain to move the bus forward, much to the amusement of some other "push" participants.

Continued on page 7. See "Bus Push for Multiple Sclerosis Society".

Engineering Showcase a Success

Marc Joyce
3A Software

Last Thursday, several of Engineering's project teams took the show on the road and put their work on display at Conestoga Mall in Waterloo. As a part of our local festivities for National Engineering Week (NEW), the mall gave us space in one of their busiest hallways to showcase what Engineering students have been up to. Displays were set up by the University of Waterloo Alternative Fuels Team (UWAFT), Formula SAE, the Waterloo Aerial Robotics Group (WARG) and the Waterloo Off-Road Mini-Baja Team (WOMBAT). Members from each team took shifts staffing their displays and answering questions from the many interested people walking by. As well, an appearance was made by our beloved mascot, the TOOL, in its display case.

After meeting the teams at 8:00 AM in E3, the NEW directors (Andrew Kowpak and I) coordinated getting all the vehicles and displays to Conestoga Mall by 8:30. UWAFT's Eskimobile was able to drive through the mall right to the display location while the WARG and Mini-Baja exhibits were also being set up. With less than a minute before the mall was supposed to open, the Formula SAE car was pushed into the mall and we were ready to

Continued on page 8. See "National Engineering Week hits the mall."

UW Engineers Take Top National Prizes

Prof. David Clausi
OEC/CEC Faculty Consultant

Engineering students representing the University of Waterloo competed successfully in the annual Canadian Engineering Competition (CEC) this past weekend (March 4 - 7) at McMaster University in Hamilton. Categories of this annual competition include both societal and technical design aspects.

"UW students generally excel at the provincial level, but this is the first year in recent memory where we have had such strong success against the rest of the country at the national competition. All of our provincial UW winners succeeded at this national competition and deserve special recognition", said Prof. David Clausi of

Systems Design Engineering, who acted as the UW coordinator for the event.

The CEC only accepts entries based on only the top two competitors from each provincial engineering championship. This creates a very competitive atmosphere, since all of entrants are accomplished and proven. In the midst of this strong competition, the four UW teams all had strong placements - two first places, one second place, and a fourth place.

A first place prize was awarded to Hsiao-Chien Lin (Computer Engineering) in the Editorial Communications category. He provided an editorial from a personal viewpoint entitled "Tactical Nuclear Weapons: The Right Direction For Nuclear Technology?" Hsiao presented his viewpoint that the current initiative to produce sub-kiloton nuclear weapons has

inherent dangers that pose a tremendous threat to the world.

Another first place prize was captured by the team of Robyn Paul, Matthew Cheung, Ksenia Golod, and Jordanna Kwok (Computer Engineering) in the Entrepreneurial Design category. Their M-CED - Mobile Cardiac Emergency Medical Services (EMS) Dispatcher is a system designed to collect and analyze real-time cardiac data for a user. Upon detection of a heart attack, the system sends a wireless alert message to facilitate the prompt delivery of medical assistance to the user.

A second place prize went to Elliot

Continued on page 9. See "Waterloo Victories at CEC."



Why are Leanne and Sharon so happy? Because they attended the Career & Mentorship in Engineering reception on March 3rd. Read all about the event on page 7.

Letter from the Editor

Jeff Henry

4B Computer

Editor-in-Chief



The fourth issue has arrived and with it comes the second last opportunity for me to use the soap box of this column to talk about a point of view I have on some topic of general irrelevance to most readers. This issue, however, I would like to talk about the state of education here at this university and, more in general, at other institutions across this province and this country.

Admittedly, we face a number of challenges. Since 1993, tuition has skyrocketed by an average of 137% including regulated programs and from 1995, UW engineering base tuition has ballooned by 160%. Over the same time period, the number of students receiving financial aid in Ontario has dwindled from 210,000 to 130,000 and most students who still receive public student assistance do so at the maximum limit. Still, close to 40% turn to private loans with no interest relief or debt reduction programs offered through government-sponsored public assistance.

Individual institutions have generally been faced with annual budget cuts and the not so occasional massive budget cut. As a result, professor to student ratios have climbed in Ontario from 17.1:1 in 1988-89 to 22.1:1 in 1999-2000. Further, there is an estimated \$1.3-billion in deferred maintenance of aging university buildings across this province. With the university-age population continuing to grow and with real funding actually decreasing over the past five years, the future has not looked bright.

Clearly, the quality of post-secondary education has been under attack for a long time. Government programs at the federal level designed to bridge the funding gap (i.e. the Canadian Millennium Scholarship Fund) have instead been funneled by most all provinces into other programs outside of post-secondary education as the systems in place lack the necessary ear-marking control.

Winds of Change

Last fall, we saw a new government take power at Queen's Park and, effectively, on Parliament Hill. Both leaders talked at length about a change of direction and of tactics. At the provincial level, we saw a promise for a fully-funded, two-year

tuition freeze, during which time OSAP would be assessed and repaired and an appropriate level of funding would be restored, with Ontario moving back to the national per-student funding average and out of the basement.

Back in February, the Speech from the Throne was delivered in Ottawa. It stated that "The Government's goal is to ensure that a lack of financial resources will not be allowed to deny, to those with the motivation and capacity, the opportunity to learn and aspire to excellence in pursuing a skilled trade, a community college diploma, or university degree."

Government Policy Hitting the Fan

All of that, of course, is talk and what governments do matters much more in practice than what they say.

Our provincial Minister of Training, Colleges, and Universities is rumoured to have approved the previously leaked plan that would freeze regulated tuition and cap the increase on deregulated tuition at 5%. Universities would be compensated at 1.4%. While the Premier stated emphatically that he rejected the plan on the table, the expectation is that the final plan, which is anticipated in the relatively near future, will not be measurably different.

Federally, when Paul Martin met with the Canadian Alliance of Student Associations (CASA) shortly after the Throne Speech, he was presented again with policy to make post-secondary education a national priority with a Pan-Canadian accord and dedicated transfer payments. The Prime Minister rejected the proposal with the comment that education wasn't enough of a national priority. Paul Bonwick, the Parliamentary Secretary for Human Resources and Skills, later expressed continued support by the Prime Minister for higher debt and, indirectly, higher tuition stating that "certainly students have some sense of responsibility to bear some of the costs [of education] and one of the ways we can do it is increasing the ceiling on the student loans."

Will There Ever Be a Rainbow?

With the provincial government operating with one fiscal hand tied behind its back and with the federal government prioritizing continued provincial transfer cuts to pay for the Prime Minister's "Get Re-elected" initiatives, only small changes are likely in the immediate future.

However, the Ontario Undergraduate Student Alliance (OUSA), of which the Federation of Students is a founding mem-

ber, is making progress. Suggesting a better approach to funding the freeze and a detailed plan about how to go about fixing OSAP, the message has been heard by dozens of MPPs. Progress, of course, only comes with significant effort through constant pressure.

Federally, and in response to calls from member schools to have more campus-based campaigns, CASA, of which the Federation of Students is also a founding member, is circulating petitions calling on the government to seek a Pan-Canadian accord on and dedicated transfer payments to post-secondary education. As part of the process on getting education to be a significant national priority, the 20,000 signature petition will be presented in the House of Commons during the CASA general meeting at the end of this month. To sign the petition, contact your current Federation of Students Vice President Education, Liam McHugh-Russell at vped@feds.ca. I also hope to have some petitions available in the Orifice by the time this issue is circulating for your convenience.

Department of Homeland Security

An important question to ask despite all the government-directed initiatives out there is how our own institution and our own students can coap with the current climate.

Well, we need to be aware of is that the strongest voice for students can only be students, whether they be the Federation, our student senators, or our Engineering Society executives. When faced with fiscal scarcity, all parties have their own agenda that they act on out of self-interest while keeping that agenda close to their chests. In order to ensure an adequate funding as possible, along with fair and reasonably straight-forward institutionally-delivered financial aid, we must continue to be vigilant. Tom Ridge would have, long ago, rose our threat level to orange.

It is also important to do what we can to make a case for more accountable professors and to make our debt burden and aid difficulties clear to the administration. So, I encourage all of you to read Jon Fishbein's executive report on page 6 to find out more about what you can do now.

Questions? Comments?

We welcome letters and feedback from all our readers. Please email us at:

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the IRON WARRIOR

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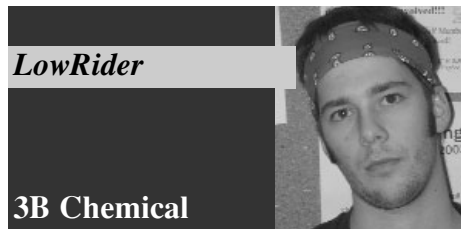
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drop by our office (opposite the Orifice) or e-mail us at iwarrior@engmail

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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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Mr. LowRider,

So I have this problem, I just moved into this new place for the winter term and this includes having new roommates. It seems that one of my roommates has taken a liking to my hot engineering girlfriend (really, she is one of those diamonds in the rough). He has even tricked me by taking her out on "fake" dates, and I always catch them on the couch together when I get home from a hard day of work at school. Now, I am not sure what to do. Do I eliminate the roommate, lock up the girlfriend or what? And remember I am not into sharing. Please Help!

-The Muscled-Out Housemate

Dear Muscled-Out,

Thanks for writing and for being the first person to ever call me "Mr. LowRider". It more than made up for the numerous typos I had to fix in your letter.

With regards to your problem, don't worry about it. I'm sure that your loyal brand new roommate would never try to come between you and your hot girlfriend. Just relax, have a nap and don't read the next article.

-Mr. LR

Dear LowRider,

I live with this guy from North Bay who - for argument's sake - we'll call "Chris". He's a really good guy and all, but I'm worried about our friendship. See, his girlfriend practically throws herself at me every time she's over at our house. She's always wink-

Dear LowRider: uw_LowRider@hotmail.com

LowRider Endorsed by Current FEDS President (not so much by the next one) See Page 11

ing at me and undressing me with her eyes. I mean, she's all over me like a fat kid on cake. LowRider, how should I respond to her wily ways?

Signed,

- Confused...and Slightly...um...
Aroused.

Dear Confused etc.,

Hey... I'm from North Bay! Lucky for MY roommates that I recognize your email address (iwearfrillypanties@hotmail.com) as not being one of theirs or I'd kick all their sorry asses just to be on the safe side. In any case, a simple computer code can solve this problem. Just type the stuff below into the nearest computer and your problem will be solved. It's some pretty high level logic but don't worry, I put comments in to help you out. Note that the billion logic 'Do Girlfriend' will tell you whether or not to, well, you know.

```
Function LR_Advice (Do Girlfriend)
{
if roommate's girlfriend == ugly
  Do Girlfriend = False
  % Just checking!
return
```

```
if (You > Roommate) and (YouAreTougher == True)
  Do Girlfriend = True
  % Beat him up and you get the girl, guaranteed!
```

```
else if (You > Roommate) or (YouAreTougher == True)
  if You have a baseball bat = True
```

```
Do Girlfriend = True
else Do Girlfriend = False
% This part speaks for itself
```

```
else Do Girlfriend = False
```

```
But While Roommate == sleeping
  Do Girlfriend = True
```

```
% If you can't beat the guy up, just be smarter than he is!
```

```
return
}
```

Who says that nothing from first year is useful? That golden syntax would score a 10/10 from Don Fraser any day of the week.

-LR

Dear LowRider,

So I was at MOT the other weekend and met this cool guy. Then he told me that he was Superman and I was like, "Dude, you're SUPER cool". We even had a friendly arm wrestle. Unfortunately, I think he thought I was trying to pick him up and, ya know, my boyfriend doesn't think that kinda stuff is cool. I feel like I was leading him on, but I was honestly just trying to make friends. What do I do? Or should I never talk to this guy again because, hey, he feels good beating girls in arm wrestling.

Anonymously,
-The Burger Girl

Dear The Burger Girl,

As soon as you found out that he was Superman, you should have gotten some kryptonite. That way you'd win the arm

wrestle for sure, and Superman would thus have to grant you 3 wishes. But since you lost the arm wrestle, the worst-case scenario is that Superman throws your boyfriend into space.

On second thought, I'm going to take a wild guess and say that this guy might not have really been Superman. He's probably crazy and thinks that he is. Then the worst-case scenario is that you now have a crazy guy stalking you. Just hope that he jumps off a building trying to fly before things get too out of hand.

On third thought, he could be not Superman and be not crazy too. This sounds a little unlikely, but it's really your only hope at a normal life given the other 2 possibilities. As for whether or not to befriend this guy, consider that arm wrestling with girls is a pretty minor fault compared to boxing with girls, being a Geo or picking your nose in public.

-LR

Dear LowRider,

Is that it for this week? We want more of your scorching wit, your searing punctuation, your burning good looks and your red-hot bandana! Whew!

Best regards,
-Laura M.
President, LowRider Fan Club

Dear Fan Club President,

Good to hear from you again. Of course that's not it! Turn to page 11 for the best interview of all time, with me versus Chris Edey versus Becky Wroe!

-LR

You Don't Need a Full Reading Week to go to Daytona

Daren Toppin
4B Mechanical

It all started, as all good ideas do, in the early morning hours - that time between when the moon sets and the birds start to sing. Four mechanical engineers buried in the depths of E3 struggled to finish yet another CFD assignment that was due the next day. A severe caffeine shortage was imminent when, suddenly, one of the four let forth with a solution to their problem: "this spring break, let's go to Daytona!"

The idea sounded odd, at first. For one thing, a Waterloo engineer's "spring break" consists of 2 days plus the weekend; hardly time to do anything, let alone to head down to Florida. Furthermore, being in the 4-stream class, bank accounts were already getting dangerously low thanks to the 8 straight months of school, and a trip anywhere would likely put everyone over the edge. Realizing that maybe a spring break road trip was just a little too crazy, the idea was placed on the back-burner in order to get back to that other thing we all do



here...school.

But Daytona isn't an idea that will just go away because of a few excuses. No, Daytona is an idea that sells itself. As spring break, and IRS, quickly approached, any of the four mechies who might have thought about backing out of the trip eventually convinced themselves to go. The four even invited a fifth who, over the course of several days, shifted from believing a Daytona trip to be too costly and too time-consuming to supplying the trip with propane tanks and portable hibachi. Maybe it was the snow, or maybe it was the thought of spending two more agonizing months at school. Or maybe Daytona's lure is simply that strong.

Eventually, IRS came and went and the intrepid five (Eric, Garrett, James, Mark and myself) piled into two cars the day after, for sun, surf, and sand. A mere 24 hours later, we were in Daytona. Bleary-eyed, we checked into the second motel we found for \$49 US a night for four person occupancy. If no one in your Daytona group is over 25, get ready to be warned by a baseball bat-wielding motel manager not to cause any trouble. Of course, we weren't down there to cause trouble but to have fun, which is exactly what we began to do.

A quick word of advice: if you're heading to a sunny destination near a beach, make sure you take some sort of convertible, preferably a jeep with a wicked sound system, so that you can ride around in style. This was doubly-important in Daytona since you're allowed to drive on the beaches there. And trust me, you'll want to cruise on the beach at least once. After you're done cruising with the top off, the next stop is the



local club scene. Being Canadian Spring Break Season, as the locals called it, the three main clubs would compete every night for the sort of patronage only college students can provide. Deals such as 25 cent beers, cheap doubles, and \$15 unlimited drinking (with a complimentary souvenir mug!) are the norm, as are not-too-stringent dress codes, a decent girl:guy ratio, and a return to indoor smoking. Watch out for the latter; the last thing you want to do in Daytona is to sneak up on someone who's been drinking while they're holding a cigarette in one hand.

So does a trip down to Daytona only mean you'll drink yourself silly every night just to recover on the beach the next day? Well, it could, but there's also something

near and dear to an engineer's heart to see: the Daytona Speedway! They do tours of the track, and it's highly recommended for anyone remotely interested in cars, racing, or very large chunks of asphalt. You can also relive your childhood by taking a 1 hour drive up to Orlando to see Disney World, Universal Studios, and SeaWorld. Then there's Cape Canaveral and the Kennedy Space Centre, still a little quiet these days but at least you can take a few tours.

In the end, we all came back a little more tired than when we left Waterloo, and maybe with a few more scars, but it was all worth it. If you're thinking about taking a road trip somewhere, stop thinking and just go! You'll thank me later.

Columns

The Continuing Irrelevance of the United Nations

Andre Beltempo

3A Mechanical



The United Nations was a brilliantly idealistic concept, founded in the aftermath of the shattering events of WWII, when genocide was commonplace and entire countries were laid waste in the most gargantuan struggle in human history. During this conflict, Franklin D. Roosevelt, then President of the United States coined the term during one of his addresses. The precursor to the UN was the League of Nations, which had been established after the First World War to prevent armed aggression. Unfortunately, the upheavals of the first war were never dealt with to everyone's satisfaction, and, when the senior founding member, the U.S, reserved the right to act unilaterally, this left the door open to Mussolini, Hitler and Togo. From then on, without military

force to back up its protestations, the League of Nations degenerated into nothing more than a forum for discussion, while the real world players continued on as if the League never existed. When the UN was founded in October, 1945 by the five permanent members of the security council and others, including Canada, many believed that this time it would be different. Many believed that in the new atomic age, especially after having struggled for so much, that the newly minted UN would have both the full political as well as the military support of its founding members, who were at that time the most powerful countries in the world: the U.S, the U.S.S.R, Britain, France and China. The truth, even then, was somewhat less rosy. France was recovering from Nazi occupation, and was nearly destitute. Britain was recovering from a long war in which it fought unaided for nearly 3 years, and

was almost no better off than France. The Chinese, upon expelling the last Japanese soldiers from the mainland, immediately resumed their civil war, with the Communists receiving Soviet aid. The Soviet Union, despite their massive war machine and aggressive posturing, was entirely burnt out, having borne the brunt of the German war machine, and was reeling from the loss of almost 20 million citizens. The only real hope and power behind the UN in 1945 lay in the United States, who emerged nearly unscathed from the war as not only the most powerful nation in the world, but the most powerful nation in the history of mankind, with over 60% of the economy of the planet accounted for in the continental United States alone. Additionally, the advent of atomic weapons heralded both the promise of cheap unlimited power and the threat of cheap unlimited destruction. It was in this context, then, of new hope and new fear, of rebuilding and restarting, that the world placed their faith in a shiny new supra-national organization which would uphold ideals such as human rights

“(The) dream died soon after World War II, but it’s taken 40 years for everybody to realize it.”

and self-determination, backed by all the nations of the world. It seemed as if a new unity had been bought from the ashes of the horror that had just occurred, and many believed that the U.N. would become the ‘government’ of the world. For a year or two, it really looked like

it might work. The U.S. and world war machines disarmed, by 1947 reaching the lowest level in modern history. Then came the Berlin airlift, when the Soviets started playing games, sitting in the U.N. security council and saying one thing while doing another, and the Iron Curtain slowly drew itself around Eastern Europe. Then came the shock of the Korean war, and the realization by all that war was still, sadly, very possible. The U.N. mandated action in Korea set the stage for a U.N. military, but the reluctance of the U.S. to send troops to this cause torpedoed even this outcome. Once the Soviets got The Bomb, the dream was over.

Despite what everyone thinks, the U.N. did not decline into irrelevance on the world stage in 2003, when the U.S. unilaterally invaded Iraq. This was just the most recent and most blatant final nail in the coffin for the U.N, delivered by none other than its founding member. The U.N, in its entire history has only condoned two direct military actions, that in Korea, and the Gulf War in 1991. Yet, in between, many other wars have been fought between combatants, and this despite the fact that the General Assembly offered an avenue for negotiation and reconciliation, and despite the fact that many countries respected the ‘opinion’ of the U.N. The recent events in Iraq prove that despite all the frilly rhetoric, the laws of the jungle still reign supreme, just as they did during the Cold War. Then, everyone

believed the U.N. legitimately held power, but realistically, it was being used by the West as leverage against the Soviet Juggernaut, as an umbrella to deflect the rain of world opinion, and to constantly seek ‘legal’ justifications to any action deemed necessary by the West. The principles of the U.N. assume that countries adopt moral standards similar to those of people, and that only by maintaining these high moral standards, each ‘person’ in the world will not threaten the others. Unfortunately, countries reserve the right to look after their own interests, up to and including committing murder, with the justification being the survival of the state. This has never changed, and despite the question of whether conflict is ‘legal’ in the international lawyers’ books, Britain and France have both embarked on numerous interventions without the explicit approval of the U.N, as at Suez in 1956, or North-West Africa during the 1960’s, or the Falklands during 1982. The Chinese, Russians, most of the Middle-East, Africa, parts of South America and the Indian subcontinent have all embarked on military excursions and

been excoriated by the U.N for doing so. Some of these were backed during the Cold War by one Great Power or the other, as the now infamous war in Vietnam constantly reminds everyone. There have been few instances of ‘success’ by the U.N. in averting major conflict. In terms of the strict foreign policy power equation, the U.N. is an abject failure, and always has been accepted as such, although this was never fully admitted by anyone to anyone. The U.N, despite its apparent powerlessness, still manages to draw a significant following



who continue to believe in the original founding ideals, and who continuously cite the real successes of the U.N. in the humanitarian and human rights fields. The U.N certainly has the resources and capability to appear throughout the

world on a humanitarian front. But this separates it little from the Red Cross. Despite its quite real impotence, it still can act as an impartial arbiter in areas of trouble, as the very recent example with Haiti shows. It is interesting to see that the U.S. landed hundreds of Marines in Haiti, at the behest of the U.N, and few in the world see this as a continuing sign of U.S. global domination. The fact that invoking the U.N can still shield the world from the bald truth astounds me to no end. Canada has been linked inextricably with the U.N and Peacekeeping, believing sincerely that when we send troops to Bosnia under the auspices of the U.N, we are doing our bit for the good of the planet. Unfortunately, the Balkan situation was unresolved until NATO became involved, and real power was exerted. Canadian forces in Bosnia are under NATO, not U.N command. In Afghanistan, the same conditions exist. Canadians and the rest of the world are deluding themselves if they believe that they can bring peace to the world by good will alone. That dream died soon after World War II, but it’s taken 40 years for everybody to realize it.



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TECHNICAL SPEAKER COMPETITION RESULTS

FACULTY WINNER

Maria Simoes, Computer Engineering
“The Phantom Player”

DEPARTMENTAL WINNERS

Jay Detsky, Systems Design Engineering
“Magnetoencephalography (MEG)”

Subram Sarathy, Chemical Engineering
“Design of a Hydrogen Production System”

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

Pearson International Airport Gets New Look

John Olaveson

2N Civil



There once was a story. I don't know how it begins, or how it ends, and much of the middle of that story is a mystery to me. But I do know a few pieces of the tale through my travels here as a Waterloo co-op student. I will attempt to weave those into a few coherent thoughts so you can kill some time during (or maybe after) a lecture. As most stories go, I think this one started as a dream. The dream undoubtedly told others, since a dream is of no use unless others know of it. This dream was grand, monumental, and ridiculously expensive. But somehow, money was found, workers were hired, and the project began to take tangible form. I am talking about Pearson Airport's new Terminal 1 building. It was started back in 1996 as part of a modernization and redevelopment project encompassing the whole of the airport. No one seems to remember now that the redevelopment was not just about building a new terminal. Many other places in the airport have been modernized and updated. For example, each terminal now has many more security checks in place. The bill for the total redevelopment of the airport is projected to run somewhere in the area of \$4.4 billion. That's in Canadian funds, just so we're clear. About 3.3 billion alone went into the new terminal. Imagine owning a 3.3 billion dollar house. What luxuries it could have!

The new terminal will not let you down. It has everything to get you from here to whatever tropical destination or ski resort you have in mind; everything except the airplanes, that is. The building is not open to the public yet, with the grand opening scheduled for April 6. Some citizens have been through, and have seen the sights. The Greater Toronto Airports Authority (GTAA), which controls the whole operation at Pearson, has had a few trial runs where up to 1500 people come on down for the day and pretend to be passengers. Fake luggage goes through non-operational x-ray scanners. Fake tickets are given to fake passengers. Fake airplanes take the fake passengers on fake flights to fake destinations, like Alberta and the Congo. The flight attendants are real, but the peanuts they give out leave you feeling unsatisfied. Almost everything at the new terminal works now. The baggage conveyors bring luggage from the trolleys to the return carousels in the gigantic arrivals hall. The moving sidewalks shuffle people along at a decent walking pace. The fire alarm squeals with its ultra-loud, ultra-deafening siren almost continually, although this should be fixed by opening day. The computer network is active, the phones all ring and the lights stay on. Now if only the airlines and airplanes were here...

The scale of the project makes this Civil Engineering student stagger. How much concrete was used in the foundation? How much steel was used in the superstructure? How many of the thousands of other required materials were given a home here? The Terminal building, the parking garage and the roads that link both to the rest of the world can be seen as soon as one crosses the airport boundaries. Seven lanes of roadway are suspended above the ground against the side of the building. Other roads snake out of the side of the garage and become lost among the highways of Toronto. Some



The spacious new baggage claim area on the arrivals level of the completed new Terminal 1 at Lester B. Pearson International Airport

major issues arose during construction. The road that carries passengers and staff to the old Terminal 1 runs right through the service level of the new building. Imagine having to build on top of a highway. The beam structure is unique. It needed to accommodate the completed building as well as support the pieces as they were built from the roof down. The building's final design was not even complete when construction began. The builders were chasing the designers, right on their heels. This process cut the overall time of the project by at least a year. There's nothing like winging it with a few billion dollars and five years on the line. Take a step into the terminal from the

huge, brand new parking garage, and you can see the massive support beams and pin connections that keep the place standing. The cross-ties of that support structure use double w-sections. The roof, hanging many meters above the floor of the arrivals hall, is made of curved panes of glass. So much sunlight comes inside during the day that electric lights are not even needed. However, if even one of those bulbs burns out, the maintenance crews will basically need to learn to fly if they want to change it. Since the light bulb receptacles are recessed into the meters-high ceiling, a cherry-picker would be needed to raise a maintenance man high enough. How many maintenance

workers does it take to change a light in the new Terminal 1? One to change it, one to operate the crane, one to peel the rubber off the carpet after the crane drives over it, two to demolish a hole in the wall to let the crane in, and at least six (including architects and engineers) to find a way to patch the new hole in the wall. This engineer does not even want to think about the cost. Anyway it's added up, it'll come to a grand total of, oh, too much frigging money! Of course, this cost will be downloaded to passengers, who pay an additional charge of \$12.00 on each ticket out of Toronto as an "airport improvement fee". The terminal will not be truly complete when it opens to air traffic on April 6 of this year. Even now, workers at the airport know things that cannot possibly be done in time. Many minor things are being pushed to the side as major matters arise. Things such as labels on doors and finishing coats of paint in rooms make way for fixing electrical deficiencies and ensuring that the fire alarms and sprinklers are all working. There is not enough time left to get everything done. But rest assured, faithful passenger, the airport will not open if there's a controllable risk to the health and safety of the public. There is even a system of defibrillators throughout the terminal in case anyone has a heart attack. What convenience! All in all, the new terminal is a wonderfully monstrous integration of engineering and art. There will be museums to pass the time, structural members to gawk at, and airplanes to see out the windows. There are a lot of windows in the building. Walls of windows and roofs of windows, even a small stretch of walkway that's made out of windows. Hopefully, the new passengers will appreciate this too. . .

Of Robots, Dinosaurs, and Dignitaries

Jeff Henry

4B Computer

On Friday, February 27, 2004, after more than a decade of effort to acquire the necessary funding, the Centre for Environmental and Information Technology was officially opened.

Dignitaries looked on as SCORBOT-ER III, a robot used in the ECE 486 robotics course, cut the ceremonial ribbon. David Caplan, the provincial Minister of Public Infrastructure Renewal, did the honours by pressing the red button.

The \$36.5-million 170,000 square foot building houses a 150-seat lecture theatre and 19 specialized laboratories for teaching and research in earth sciences and electrical and computer engineering. While three-quarters of the funding came from the province, the remaining monies came from private donors.

Speaking about the University's push to construct CEIT, UW President David Johnston said, "This project addresses a huge need here as Waterloo has the biggest source of information technology and environmental science graduates in Canada.

"The new centre provides urgently needed space for many kinds of environ-



From left to right: Bob Harding (Chair, University of Waterloo Board of Governors), Ted Arnott (MPP Waterloo-Wellington), John Milloy (MPP Kitchener Centre), Elizabeth Witmer (MPP Kitchener-Waterloo), David Johnston (President, University of Waterloo), David Caplan (Minister of Public Infrastructure Renewal)

mental and information-technology teaching and research, and encourages inter-disciplinary interaction among faculty, students and staff," he added. "It reinforces some of Waterloo's strengths and concentrates more expertise in these areas of study than anywhere else in the country."

David Caplan stated that this building was an example of the province's major investment to strengthen universities.

"This commitment is a key component of the Ontario government's comprehensive plan to prepare and expand post-secondary institutions so that we meet today's needs and build for tomorrow," he added.

A heat recovery system, improved insulation, and window glass that reduces heat gain from the sun were cited as examples of the environmental responsibility built into the design of the centre.

Engineering Society Executive Reports

Important: Course Critiques and Debt Load Surveys

Jonathan Fishbein

Vice President,
Education



With only three weeks left in the term it's time for those one and only course critiques. Your professors should all have received their critique packages by now and should be talking to your class reps about setting up a time to fill the critiques out. Course critiques are your opportunity to tell the engineering faculty and your professor how you think the course has gone throughout the term. The faculty takes these critiques very seri-

ously when assigning tenure and salaries to professors so use this opportunity to have your voice heard. There will be a course critique reading party in the last week of classes. Everyone is invited to stop by and filter out some of the more "humorous" critiques while enjoying pizza provided by the Dean's office. Watch for more information about when this will be happening or e-mail the course critique director, Robin Wilson, at r2wilson@engmail

On another course critique note, the dean is looking into the possibility of having the results of the course critiques put online. Currently, the results of the bubble-in question of the course critique are only available for viewing in a binder in the orifice. The dean wants to raise the

issue at the next University Academic Policy Committee meeting to see whether the idea is feasible within the University's policies.

Since today should be Friday, March 12, all of the debt load surveys should be in and up for processing in the Dean's office. If for some reason this is not the case, I encourage every class who has not filled in their debt load surveys to do so immediately and return them to the Orifice. In a recent meeting that the executive had with the dean, he explained to us that he is a member of the new university wide task force on tuition. One of his goals on this committee is to try and reclaim most of the money that engineering students pay towards the university's financial aid programs as scholarships for

engineering students. Currently, 30% of every cumulative tuition increase since engineering tuition was deregulated gets placed in a university wide financial aid pot and distributed out as necessary to faculties. The dean feels that this system should be decentralized, so that if engineering students pay more into this pot they should get more opportunity for university financial aid, and is looking to the debt load surveys for backup. This is just one example of how the Dean's office uses debt load survey results to our advantage so I strongly urge any class that has not filled them in to do so immediately.

Well, that's all for me this week. Tune in 2 weeks from now; same bat time, same bat channel.

External Event Wrap-up

Nick Lawler

Vice President,
External



Well March 7th marked the end to National Engineering Week, and Waterloo Engineering came out in force to help promote the profession and our faculty. At Conestoga Mall student projects were on display, an article about this event can be read elsewhere in this edition of the IW.

As well, the Bridging the Gap lecture had Professor Roydon Fraser give a talk on the PEO's roles and regulations for engineering in Ontario. An article about that can also be found elsewhere in this issue.

The 28th Annual Bus Push was another great success. We raised a great deal of money for a great cause, the Super Cities Walk for MS. Mike Henheffer has written an article about the event.

A new event, The Engineering Choir, also made an appearance on campus along with a 60' pipe wrench. The Choir travelled to math to sing the Engineering Hymn. Again, an article about this event can also be found in this edition of the IW.

Many great things are just ahead. Explorations runs the night of Monday, March 15. This event sees grade 6 to 8 students come during their March Break to discover the wonders of engineering, with students and faculty setting up demonstrations. More information about the event can be seen in yet another article in this edition of the IW.

The day after Explorations is Campus Day, where older high-school aged prospective students will come and check out the Waterloo Campus. Various engineering departments will have booths set up in the CPH Foyer, and you will notice many tours going through the halls. Feel free to help out anyone who looks lost or confused, as you all know what it's like to find your way around the halls of the engineering buildings.

Crazy? Don't Mind If I Do!

Laura Mooney

President



Another two weeks closer to the end of term, and another report down. Congratulations to our four teams who went to CEC! You all represented us well against some very difficult competition.

Now that midterms are over, it's time to catch up on all the activities that were put on hold. We had a great National Engineering Week thanks to Marc Joyce and Andrew Kowpak. There are also many events coming in these last few weeks that are worth taking note of. Explorations and Campus Day are coming this week, and student volunteers from all departments are needed. Keep your eyes open for information about special events happening on Campus Day if you're looking for a fun and easy way to get involved! Also to look forward to are the upcoming athletic and special events - 3-on-3 basketball, wheelchair basketball, and the ski trip to Blue

Mountain. If you feel like you've been cooped up in the lab for way too long (I know I do!) then here's another opportunity to get out there and rediscover those muscles you used to have.

Last but not least, the Waterloo Area Chapter (WAC) of Engineering alumni will be hosting a motorcycle display with a number of speakers ranging from how to choose the right bike for you to insurance and safety. There will be five bikes on display in DC on April 15 from 6pm to 10pm. This is a great opportunity to learn more about these amazing machines and to do some networking - especially since free admission is offered to UW engineering students who preregister for the event. More info will be posted for registration and anything else you'll need to know.

Also, as the term draws to a close the directorship applications for next term are open - they'll be posted on the EngSoc website shortly since they're due on March 19.

That wraps it up for this week. As always, if you have any questions, comments or suggestions for improvements then drop by the EngSoc office or e-mail me at asoc_prez@engmail.uwaterloo.ca.

Plummer's Pledge is Good

Michael Henheffer

WEEF Director



I'd like to start things off by reminding the graduating students that your Plummer's Pledge forms are due on March 15th. The cards can be submitted in the Orifice. This is a really great opportunity for all of you to give back to the school after you graduate. By donating to WEEF, you truly will be giving the give that keeps

on giving. The past 15 graduating classes have all felt that it is important to support those who are going through engineering after them and have set a great example for us through their support of the Plummer's Pledge. I hope that all of you do the same thing for the students who are going through engineering after you.

In other WEEF news, the proposal presentations were given on Tuesday. The funding council will be meeting on Tuesday, March 16 to determine the allocation of funds. Look for a funding update in the next issue of the Iron Warrior. You can also expect to finally see the WEEF participation statistics in the next issue.

Getting Money From Me

Rajat Suri

Vice President,
Finance



Well, once again, there is not much happening in the world of the VP Finance. Donations cheques have been done, so please come and pick them up! If

you are a directors, just let me know when you need your money.

I have one request before I bid all of you goodbye. Do any of you have VHS copies of "Super Troopers" or "Old School?" I think Robin will flay and crucify me if I don't watch them by the next meeting... (yes I did just watch "The Passion of the Christ").

Anyways that's all for me! Any question, feel free to email me at asoc_vpfin@engmail.uwaterloo.ca

Vice President Internal Super Fun Time Report



- Winter Leader Retreat - March 13
- Basic Car Care Workshop - March 13
- D.V.S.T.E.D. - March 13
- St. Patrick's Day - March 17
- 3-on-3 B.Ball - March 19
- Wheelchair B.Ball - March 21
- Blue Mountain ski trip - March 21
- ... Fall 2004 Directorship Apps are due March 19 - get yours in today! ...

Getting Your P.Eng



After twice having to cancel the Bridging the Gap lecture due to the lack of having a speaker, we finally managed to arrange a talk. We had scheduled Noreen Calderbank from the PEO to come in and give a talk on getting your P.Eng and the services that the PEO provides to professional engineers and students. Unfortunately Ms. Calderbank was very sick and could not make it into Waterloo to give the lecture. Fortunately Professor Roydon Fraser from the Mechanical Engineering Department was able to step in and give the talk in Ms. Calderbank's place. Professor Fraser is the PEO liaison at Waterloo, and is also on the PEO council. His extensive knowledge of the organisation and engineering in Canada provided an excellent base for the talk, and allowed him to go beyond the usual presentation and give a personal touch to the lecture.

The lecture covered some of the history of the PEO and engineering in Canada. A significant part of the lecture was dedicated to talking about the experience requirements that the PEO requires for obtaining your P.Eng. Starting in your 2B work term students at Waterloo can start counting their work terms as experience. The PEO credits up to a year for work terms. They also give



a year credit for any graduate engineering degree at an accredited institution. With an engineering bachelors degree, four total years of work experience are required before application of the P.Eng licence can begin. With all of your post-2B work terms counting and a grad degree you would only need another two years in the work force. The applications for getting your work terms to count for experience are available on the PEO's website (www.peo.on.ca).

The lecture was well attended, and special thanks go to Professor Fraser for stepping up to the plate to help out when it looked like the lecture might have been cancelled. If you attended to lecture, or just enjoy the Bridging the Gap lectures, I'm looking for a director for next term. This director would be responsible for finding speakers for three lectures held during the fall term. Send me an email, asoc_vpext@engmail.uwaterloo.ca if you're interested.

Career and Mentorship in Engineering Brought to you by Women in Engineering?



A couple of weeks ago, posters went up and emails were sent out about a "Career & Mentorship in Engineering" event. It caught people's eyes and they seemed really interested. Then, they continued reading the posters and/or the email. When they got to the part where it said that the event was sponsored by the Dean of Engineering and Women in Engineering, they were confused. "How could something that sounds so great be put together by the Engineering Society Women in Engineering Directors?", they thought to themselves.

Unfortunately, despite the efforts of the Women in Engineering Directors, past and present, people don't seem to understand that Women in Engineering events are fun, interesting, and, most importantly, useful! Those who attended the reception on March 3rd heard from Tracy Versteeg, a recruiting office from the Canadian navy, who spoke about different career opportunities in the Canadian Armed Forces. Those in attendance learned about the \$40,000 signing bonus for students who sign-up in their 4th year of study. If you weren't there, you probably don't know that if you sign up with the armed forces before your last year of school, the armed forces will subsidize your schooling (provided, of course, that you agree to a short-term commitment after finishing school).

You also missed out on the presentation about different mentorship opportunities offered in Engineering, through the admin-

istration and through the Engineering Society. We had a discussion on the importance of mentors and what is the role of a mentor. Near the end of the evening, students were advised on to whom they should talk and to where should they go to seek advice about academic and career interests and goals.

It's too bad that you couldn't be there. You also missed out on free food and beverages, courtesy of Dean Sedra, who was present early in the evening and provided moral support until he had to leave for a prior engagement. Maria and I would like to thank everyone who came out to the reception. We would also like to thank EngSoc President Laura Mooney for putting us in contact with our guest speaker. Maybe next time you see a poster advertising a "Women in Engineering" event, you will take a chance and come out. I would hate to see you miss out again!

Engineering Choir Performance in MC



So it's a Friday afternoon, you're bored and don't really want to start on that lab that's due at 5:30 that day. What to do? Well going to Math and singing the Engineering Hymn is definitely the first thing that comes to mind. We started a new event, which I hope can turn into a tradition. In hopes of raising a little cash for the Super Cities Walk for MS, a group of crazy enthusiastic engineering students, and one giant pipe wrench walked over to Math to sing the world-renowned song that all engineers know at least a little of. It was hard at first to get the choir big enough, but after some convincing, we managed to put together a sizeable force to belt out the tune. Special thanks goes to the 3A and 1B Civil class who made up a significant amount of the choir.

When we got to the Math C&D and set up shop the mathies were more than glad to have us spread a little bit of spirit and



cross faculty rivalry with them. The presence of the TOOL and it's mysterious bearers helped greatly to get the mathies attention once again proving that we do indeed possess the best mascot on

campus. Through the generous donations of mathies the choir managed to raise almost \$20 in small change. Although the singing was bad, the spirit was high, and that's all that really counts.

Bus Push for Multiple Sclerosis Society

...continued from Page 1.

returning to campus, we went to POETS for prize draws and lunch.

All of this excitement was part of the 28th annual UW Engineering Bus Push. This year's push/pull supported the Multiple Sclerosis Society of Canada. The event was a success as over \$1400

was raised for the MS Society.

Of course, the event could not have been a success without the help of many people. First of all, I'd like to thank everyone who collected pledges and who helped pull the bus. This event could not have happened without all of you. Special thanks goes out to our major sponsors: Conestoga Rovers &

Associates, Grand River Transit, Mel's Diner, Subway and the University of Waterloo Engineering Dean's office. I would also like to thank all of the companies that donated prizes for the participants. These companies include East Side Mario's, Campus Pizza, Philthy McNasty's, Sun Life Financial and TCBY.

Upcoming Engineering Society and Other Events

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
14	15 Explorations	16 Campus Day	17 St. Patrick's Day	18	19 3 on 3 Basketball Tournament	20	Director's Applications are due Friday, March 19. They will be posted on the EngSoc website soon.
						Grad Ball	
21 Wheelchair Basketball	22	23	24 Director's Meeting EngSoc Potluck Meeting	25	26	27	
Ski Trip					EOT		

EngSoc

Charity Food Drive

Maria Simoes
4B Computer

With the numbers in, Dean Sedra and Sue Gooding are the lucky "winners" of a tour around campus dressed as leprechauns to promote the Super Cities Walk for Multiple Sclerosis on March 17.

Thanks to all who supported this drive. Your help is extremely appreciated, especially to all the people who benefit from the KW food bank each year.

For those of you who didn't participate, don't fret, you've still got a chance to donate to those in need. During finals, food drive boxes will be left throughout Engineering. Instead of throwing out those non-perishable food items you didn't get a chance to dig into, you can just bring them into school and leave them in the available food boxes.

Explorations Approaching

David Yip
2A Mechanical

Thanks to all the tour guides who signed for Explorations 2004. Without volunteers it would not be possible! Remember that it will take place on this coming Monday, March 15th. Please show up at DC fishbowl (First floor, across from library entrance) at the time for which you signed up to get your food, t-shirt, map, and tour group.

If you haven't signed up and you're free on Monday night, what's stopping you? About an hour's time is all that's needed, and of course your food and t-shirt are included. All you have to do is guide a group of children and parents around a set tour path. Of course, it will help to smile and be friendly, and ensure that their visit to UW Engineering is pleasant. They (and you!) will get a chance to check out the cool showcase projects from each department. Take some time away from the daily grind to see those nifty devices that drew you to engineering in the first place. The sign up sheet is available at the Orifice, or online at <http://engsoc.uwaterloo.ca/www/>

Blind(SYDE)ingly Good Coffee House in POETS

Rob Lovell
2A Systems

The 2nd annual BlindSYDEd (2A Systems) coffee house took place from 8:00-10:30 on Monday, March 1. Over 50 people piled into POETS to see a lineup of talent.

The night kicked off with FJ Sarmiento's amazing beat boxing as well as a couple of songs. Corey Tam was next, performing some alternative originals and covers.

Taking a break from live music, Eric kept the audience entertained with a mind-boggling juggling routine. Eric is a member of the UW Jugglers' Club and performed to the Britney Spears song Toxic.

A relaxing duet version of "What a Good Boy" was sung by Arthur Kong and Anne-Marie Allen, and Christ White (2A

National Engineering Week hits the mall

...continued from Page 1.

begin showcasing all the hard work our Engineers have been doing.

The team representatives were kept busy all day by a constant stream of interested people asking questions. Since the purpose of National Engineering Week is to raise awareness about Engineering with the general public, we were happy that so many people cared about what we were doing. There was even one interesting fellow who claimed he had actually used a wrench bigger than the TOOL.

Overall the event was very successful. Andrew and I personally learned a lot about all the projects involved thanks to the awesome volunteers from each team. We would like to thank everyone involved for helping things run so smoothly. I am looking forward to seeing something like this done by the NEW directors on B-soc next year.



Walking for Someone Who Can't The Super Cities Walk for Multiple Sclerosis

Christine McCullough
2N Chemical

I'll admit it; I can be pretty lazy at times. I have to walk from Parking Lot C (where I park) to MC and all the way back, every day. It's brutal. Come on, a little sympathy? No? Alright, well, what would if I couldn't walk at all? Or if I was in constant pain, had disabling fatigue, extreme weakness or loss of feeling in my hands. Would you have sympathy for me then? All of these symptoms can all be the result of Multiple Sclerosis and chances are, I wouldn't be looking for sympathy, I would be looking for a cure.

Multiple Sclerosis is a neurological disease that attacks the protective coating that surrounds the actual nerves of the central nervous system. The symptoms and areas of the body affected vary person-to-person depending on where the MS has "scarred" the central nervous system. While it is not fatal, it can definitely be debilitating physically, emotionally and financially. Many of those affected require specialized equipment to function in their everyday lives. For example, those whose mobility has been affected may need a



manual wheelchair, which costs approximately \$800. For those with more severe symptoms, an electric wheelchair may be their best option, and a battery for an electric wheelchair alone costs \$500.

Canada has one of the highest rates of Multiple Sclerosis in the world, and it is the most common neurological disease in young adults in Canada. In response to these numbers, the Multiple Sclerosis Society of Canada was formed and is currently the only national voluntary organization in Canada that supports both MS research and services for people with MS and their families. So when a person is diagnosed with MS and can't get around without the help of a specialized device, such as a wheelchair, the MS Society can help pay for it. And if that person is having problems understanding this disease, there is counseling available. The MS Society organizes special recreational programs such as swimming, yoga and tai chi that are modified to allow for those affected to participate. As well the MS Society funds important, groundbreaking research

into the cause of MS, treatments and possible cures.

Of course, these projects don't fund themselves. It takes volunteers and fundraising. Here is where you come in. This year there will be a Team UW Engineering entering the Super Cities Walk for MS. It's a 5km walk (walk, not run!) that starts at Fed Hall on April 18th at 10:00am. There is a continental breakfast before the walk and a bar-b-que lunch after. Everyone and anyone is welcome to join our team; students, friends, faculty, staff, the more the merrier. Each team member is encouraged to do individual fundraising, but we also have fundraisers planned to boost your totals. There are prizes awarded based on individual fundraising and we will be raffling off the team prizes between the team members. It's a very minor time commitment; ask your family and friends for pledges (they can pledge on-line), join the team the day of the walk and have a great time doing it.

For more information about the walk go to www.supercitieswalk.com; to pledge money to Team UW Engineering go the Orifice (CPH 1323B) and for more information about joining the team e-mail Chris at cdmccull@gmail.com

Mech), a renowned Silver Spur Karaoke finalist, got the crowd singing along to 4AM by Our Lady Peace. Chris was among the minority of non-SyDers to witness the perplexing act that followed. Sara Raichyk, Anne-Marie, and Arthur performed a choreographed interpretative dance - of physics! The group has been building the dance since 1A and this year's version explained MODS concepts such as hoop and shear stress.

Some audience members might have been disturbed by the adult content portrayed in the shear stress moves- where two ladies rub their bodies up and down against a man. Devin Koopmans and Rishi Lukka maintained the X-rated atmosphere by ending their set with Adam Sandler song "Medium Pace" (thankfully no children were at the event).

Glory Fades, the up and coming local band, rocked the house with four originals from their CD. Zubin Thakkar (2A SyDe)

is the lead singer and was seen signing autographs after the event.

Mike Schnurr started his set with a comedic skit starring Jason Jo, who was cast as a struggling song writer, and Mike playing himself (Lucifer). In the skit, Jason sells his soul to Mike in exchange for some No. 1 Billboard hits - only to discover that the devil's taste in music can't cut the Top 100. Mike went on to play "Wheat Kings" "Miss You" and "Pardon Me".

The night was capped off with Pete Lloyd's outstanding talent as a human spring. Pete sprang from the floor on to a cabinet five feet above the ground.

The stage was left open and a small



crowd stayed to watch impromptu performances from Jeff (2A comp), Ryan Harris (2A Chem), Corey, Devin, and Chris.

Overall BlindSYDEd CoffeeHouse was a huge success. Make sure to come out next year for CoffeeHouse 2004 - Part II (fall term).

John Kerry to face Bush for United States Presidency

Andre Beltempo



3A Mechanical

Well, the votes have been tallied, and John Kerry will be running against President Bush for the top job in the U.S. and arguably, the world. How did it all come to pass? Who is John Kerry? Should we care? The answers are fairly complex, but let's go through a rundown. The Democrats have been conducting their nomination process, which, as opposed to the civilized Canadian system of choosing the leader by single convention, has each potential candidate put through a grueling, cross country marathon lasting almost 9 months, before delegates can be chosen for the single convention. Realistically, the same actions are being performed in both systems: delegates from each riding/state are selected to support Candidate X, and these are then sent to a caucus to decide the leader. The thing is, that in the U.S., each State of the Union has their own unique rules and regulations regarding the democratic nomination process. Some states use the caucus system internally, and then select delegates to go to the national caucus. Other states use direct ballot voting for the candidate of choice, and then divvy up the delegates that way. Since the voting dates are set apart from one another, the candidates travel from one state to the other, trying to drum up support, constantly pressing the flesh and kissing babies, while simultaneously building momentum for a potential Presidential election. As this process continues, candidates who receive very low percentages of the vote in each primary begin to realize that they cannot receive enough delegates with what's left, and

drop out, usually lending their support to another candidate. This process goes on for what seems like an endlessly repetitive cycle, as state by state, the remaining candidates are hammered down to a few lucky survivors.

The cycle actually starts in Iowa, and continues down the list, through mainly lightly populated states, and each candidate has a chance at this state to change the race. This time around, Howard Dean was seen as a front runner, but due to several early gaffes the momentum swing to John Kerry, a senator from Massachusetts, and the momentum never slowed down. March 2nd was what was known as "Super Tuesday" when 10 states cast their votes in primaries on the same day, and in this set are the most populous, including California, New York, Massachusetts and Ohio.

Traditionally, the candidate who pulls the most delegates out of the 10 states on "Super Tuesday" will garner enough support to win the Presidential nomination, and this year was no exception. John Kerry maintained a comfortable margin, pulling in enough delegates to ensure victory, and winning 9 of 10 states last Tuesday. From this point on, Kerry's nomination is all but assured, and he is already beginning to make his case against the present administration in the White House.

The showdown between Bush and Kerry is one of classic politics, with Bush calling for maintenance of the current U.S. foreign policy that he has championed in the last two years, and Kerry seeking a greater role for the U.S. in an 'alliance' system with strong U.S. support for the U.N. For the economy, Kerry wishes to repeal the present Bush tax cut for those earning over \$200,000, and claims it can be used to halve the record \$500 billion deficit that the U.S. is currently running.

For the Environment and Energy, Bush

pulled out of Kyoto, and also wishes to tap into the Alaskan National Wildlife Refuge for oil, while simultaneously giving market based incentives to lower air pollution to major offending companies. Kerry prefers having the U.S. join in an international effort to reduce emissions, although whether this means he intends to rejoin Kyoto is open to interpretation.

With regards to Iraq, Bush claims that the U.S. will continue to retain a presence there, while allowing the Iraqis self-determination. Kerry has been fairly quiet on this issue, since obviously his own thoughts are in a state of flux, having voted in favour of the original invasion, but against the \$87 billion to support the

continuing operation in Iraq. This is actually one of the biggest sticking points against Kerry, since he has been accused of being a hypocrite for flip-flopping on the issue.

Financially, Bush has a huge lead, with almost \$155 million raised for campaigning, and more financial support in the offing. The race will certainly heat up, and as of yet, the polls are calling it far closer than the Bush administration would like. Time will tell, but one thing is certain: The stakes for this Presidential race are far higher than those only 4 years ago. Only time will tell what the next President may have to face, and what decisions he may have to make.

Waterloo Victories at CEC

...continued from Page 1.

Smith and Jay Detsky (Systems Design Engineering) for their Corporate Design entry entitled "Adaptive Delay System (ADS) for Sound Reinforcement". The ADS is a new method for synchronizing sound throughout an audience during a concert, in order to compensate for electrical impulses that travel faster to the speak-

ers than the sound that travels from the stage. Their project was supervised by Prof. Stephen Birkett (Systems Design Engineering) and was sponsored by Straight Street Services (an audio technical service company based in Kitchener).

In the Parliamentary Debate category, a fourth place prize was earned by the team of Adam Kaufman and Melanie Blass (Systems Design Engineering).



Entrepreneurial Design winners Matthew Cheung, Robyn Paul, Ksenia Golod, and Jordanna Kwok

Commercializing the Bible

Dan Foong



4B Civil

The latest incarnation of the story of Christ hit theatres on February 25, 2004. Amidst the controversy behind it, the retelling of the remaining hours of the life of Jesus was quite true to the words of the New Testament; although it would seem that at times some embellishment of the details may have occurred. In other words, the movie became more Hollywood to make it more interesting to those of us not raised in a Catholic/Christian environment.

I happened to catch this movie with a good friend of mine, who is Jewish, and despite the fact that the movie was said to be anti-Semitic, neither of us found it to be so. If nothing else, it displayed the brutality of the Roman Empire and the drive of a people that wished to resist changes to their beliefs.

Presented in the believed language of Christ (Aramaic) and the language of the Roman Empire (Latin), the movie was subtitled in English from beginning to end. Like many other movies that are subtitled, more would be understood if one spoke the language used in the exposition. Despite not being able to under-

stand the words, the emotion that was conveyed behind each line was detectable.

Jim Caviezel, who played the part of Jesus, does an admirable job of showing the pain and suffering that Christ went through before he was crucified. This movie also marks another notch on the belt of Director Mel Gibson's epic movie tales. Why Gibson would choose to retell a story that has been told about thirty different ways continues to boggle my mind.

It's not like I would be giving away the ending if I told you that in the end Jesus dies, but it is how Gibson saw the death and how he decided to show it to audiences. It never occurred to me that the Romans were that cruel when they executed someone, nor did it ever occur to me that they never truly cared who Jesus was and what he stood for. Most of them were simply soldiers who were carrying out their orders.

That being said, the movie in itself is not all that bad. Although some may shy away from it, maybe because of the explicit violence depicted, or maybe because it may very well be a "conversion" tool for the sake of Christianity. Either way, I would recommend watching this movie if you are curious as to how true to the Bible Gibson is, but would not recommend it if you are out to be entertained. This movie is not for the faint of heart, nor is it a movie for the "kill'em-grill'em-massacre'em" movie enthusiast.



More Info: http://engsoc.uwaterloo.ca/www/evn_ctf.php



Friday, March 26, 2004
Meet in RCH-101 @ 7 PM

POINT VS. COUNTERPOINT

The Police Presence in Engineering during IRS was not justified

Eric Stephens
4B Mechanical

The police presence in engineering on Tuesday February 17 2004 was not justified. It had a negative impact on members of the graduating class, the undergraduate community as a whole and should not be repeated in the future.

For those of you unfamiliar with the sequence of events leading up to the police patrolling engineering on February 17, here is a quick recap. On the afternoon of Friday February 13, a number of student leaders were asked to meet with members of the administration to discuss student behaviour surrounding the Iron Ring Ceremony. At this meeting, the administration warned they were imposing a policy of "zero tolerance" towards public intoxication, harassment and vandalism. They also informed the students, "The Dean and campus police have agreed to have police patrolling the engineering buildings throughout the day." They then asked that this message be communicated to all graduating students before Tuesday February 17.

From a student's point of view there are a number of problems with this treatment:

1. It demonstrates a lack of trust and respect for the graduating students on the part of the administration
2. It is improper to intimidate / threaten an entire group of students with police action before any illegal activity has taken place
3. It is unreasonable to issue a statement to all graduating students and expect them to receive and abide by it, in one business day
4. These actions serve to intimidate future graduating classes by setting a new precedent of police supervision
5. These actions further strain relations between students and the administration by fostering a culture of mutual antagonism and distrust

It is my expectation that by the time engineering students reach their final year, they are well rounded, well adjusted members of the university community who know what types of behaviour are acceptable. As such, I do not expect them to engage in violence, harassment or vandalism. I am pragmatic enough to realize that public intoxication occurs daily among all segments of society, not just engineering students. Clearly this view of graduating engineers is not shared by the administration. If it were, the meeting of February 15 would never have taken place. By calling in the police to supervise their students, the administration demonstrated to everyone that their students could not be trusted to behave appropriately. As a graduating student I find this implication to be disrespectful to my peers and myself.

Some might argue that based on a few isolated events of the past, a police presence in engineering was justified. This is a dangerous stance to take because it opens the door to more pre-emptive actions and the abuse of student rights. The Canadian Charter of Rights and Freedoms states that everyone has the fundamental right to peaceful assembly. Graduating students rights to peaceful assembly were infringed upon when they were threatened with police action before assembling. Clearly

the statements made by the administration before February 17 were intended to evoke a response from students. In some cases, the response to these statements was not to participate. In other cases, students appeared on campus to assemble and left voluntarily not wishing to subject themselves to increased police scrutiny. For those students that chose to participate, there was a heightened sense of anxiety, especially among student leaders who worried they would be held responsible should something go wrong. Clearly it was inappropriate and unfair for these students, who had committed no crimes, to be intimidated in such a manner.

When communicating with others, we all know that it takes a certain amount of time for a message to reach its audience. The audience then needs time to interpret the message and form a response. Common courtesy dictates that important messages that require people to take action are sent more than one business day in advance. Clearly, given the nature of the message, the timing used by the administration was inappropriate. Therefore it was inappropriate for the police to expect all students to be aware of the "zero tolerance" policy.

By subjecting their graduating students to increased police scrutiny this year, the administration sends a clear signal to future generations that the celebrations surrounding the Iron Ring involve a police presence. As a result, some will choose not to participate and others will have to deal with the anxiety felt by this year's graduating class. Iron Ring has now been degraded from a celebration every frosh looks forward to, to a potential run in with the law. It is sad to see such a powerful engineering symbol diminished this way.

The decision to involve the police in the celebrations leading up to the Iron Ring Ceremony, further strains relations between the administration and the student body. It is another example (in a growing list) of actions taken by the engineering society and the administration to curb student expression. By acting unilaterally, instead of seeking solutions acceptable to all parties involved, the administration alienates those willing to compromise and frustrates the student body at large.

For the reasons above, the police presence in engineering on February 17 2004, was unjustified and counter-productive. No one can be expected to prevent all possible problems in life. Not the police, not the administration and not the student body. While it is worthwhile to make plans to minimize potential problems, threatening students with police action three days before an event is not.

When events of this type take place in the future, I hope that all parties involved will get together and have a genuine exchange of concerns. With a little bit of effort on the part of students and the administration, the Iron Ring can retain its powerful symbolism and all can enjoy its celebration. Especially if everyone remembers this section of the university policy on ethical behaviour: "That no member of the University community (faculty, staff, student) unduly interfere with the study, work or working environment of other members of the University or any aspect of another's University activity."

(Policy 33, emphasis mine)

Leanne Whiteley

4B Civil



So, you wake up early on a Tuesday morning and head to school. You are feeling down because it is Reading Week and all your friends from other faculties have the entire week off while you only get two stinking days. You are quietly sitting in class when all of a sudden, you hear this horrible noise coming from outside the classroom.

The next thing you know your class is being invaded by countless people dressed in outrageous clothes and you can detect the faint smell of alcohol. They are shouting and carrying on. Your professors sits back and watches them parade around the class. Finally, they leave and you are left wondering what the heck just happened. Welcome to the way that fourth year, graduating students at the University of Waterloo choose to celebrate getting their iron ring, the day of IRS.

It is not the way that the fourth year students at the University of Toronto or Queen's University celebrate the day that receive their getting their Iron Ring. So, why do we? Well, that's what the class before us did and the class before them did and so on. Is it necessary? Questionably. It is appropriate? Probably not. Is it necessary to have the campus police present during the day? Absolutely.

The fourth year students don't just simply disrupt the classrooms; they also disrupt faculty and staff, who are trying to do work. Not only are the students so loud that they pollute the hallways and classrooms with noise, but some of the students are also destructive. In the past, windows have been broken, students have been arrested, doors have been vandalized, and people have felt intimidated and harassed. How do we prevent this from happening? We need to police those students who don't know how to have a good time without getting 'out of control'.

Now, to be fair, many of fourth year students either don't participate in the IRS day activities or do not contribute to the excessive noise. Furthermore, the majority of the students do not act inappropriately. However, there is always someone who doesn't know how to act appropriately and it only takes one person acting inappropriately,

The purpose of the police presence is not to inhibit the fourth year students from having fun or celebrating their big day. The purpose is to ensure that students, faculty, staff, and school property is not harmed or damaged. Year after year, there are incidents of students vandalizing school property, creating too much noise pollution, and intimidating

other students, faculty, and staff. There needs to be something in place to prevent these things from happening. Sure, the Graduation Committee requests lower year students to act as security for the day, but that's not enough. These student volunteers cannot enforce the law and ensure public safety. Nor, should they have to. In fact, there shouldn't be a need for any policing of any type. However, some students let the fact that they are finally getting their ring go to their head and they think that they are invisible and are allowed to do whatever they please. Any reasonable, sober, mature person would realize that breaking things, harassing people, or causing a ruckus in a university environment is quite inappropriate.

Not only is police presence justified at IRS, but it is justified any given day of the year. In fact, I know that I would feel more secure working late at night in the lab, if I knew that campus police had a stronger presence on campus. Yes, I know where Police Services is located. And yes, I know that there are cameras located at various locations around campus and are linked to the Police Services main office.

What I couldn't tell you is how many officers work for Police Services on a given shift or how many times a night, if any, each of the buildings on campus is patrolled. Furthermore, if any alarm sounded, I could not predict how long it would take campus police to respond. I can tell you that the officers that I do know that work for Police Services work hard and do their job well. But, is there

enough of them? Is there enough police presence on campus on any given day, let alone the day of IRS. No. Why? The same reason there is limited resources in any department on campus: budget cuts. So, what can we do about it? As students, probably not a lot. Someone should be looking into this, though I'm just not sure who.

One last thing I want to say to the lower year students is that one day you will want to celebrate the day that you receive your iron ring, and rightly so. You should not be prevented from celebrating such an important day in your life. However, you should be aware that many faculty and staff do not appreciate being disrupted from their daily activities, the Dean of Engineering does not like receiving complaints from other faculties, and campus police will be present to make sure that everyone is keeping the peace. With that in mind, I wish you the best of luck and hope that you have a great day. I know I did.

Editor's Note: Point vs. Counterpoint is intended as a forum for objective and thought provoking debate on various issues. The views and opinions expressed here do not necessarily reflect those of the author(s), the Iron Warrior, or the Engineering Society.

Arts and Entertainment

Enginuity

Dan Foong
4B Civil

The first week of March marked another week of engineering tradition. Many events took place that helped to bolster engineering and its practices. Last week was National Engineering Week.

To try and increase spirit and knowledge, I put up a daily questionnaire on the whiteboard outside the Orifice. Some were quite easy while others required a little bit of thinking. Aside from funny quizzes and questionnaires keep an eye out for any other upcoming Enginuity events, as they will be happening around lunch time in CPH Foyer. But, to keep your minds going and with the possibility of winning a prize, here's another little questionnaire consisting of a mix of the questions that were up on the whiteboard. Please submit all answers to dwfoong@engmail. The winner will be chosen from a random selection of correct answers.

When was/is NEW?

How many disciplines of Engineering are there at Waterloo?

List three variables of STP (i.e. 293 K, no you can't use that one).

Name 3 UW Deans of Engineering.

What is Godiva's Hymn?

Where was the TOOL forged?

Is it the only TOOL in existence?

Name 4 Engineering School Mascots

What is the density of water at STP?

List the 7 "base" units (here's one, meter)

What is the base unit for a Newton?

Light behaves like $a(n)$ ___ and $a(n)$ ___

Who invented Calculus?

Where was the bridge that Iron Rings are commonly assumed to be "made" from?

How old is the "Ritual of the Calling of an Engineer" Ceremony?

List the emblems on the UW EngSoc Crest and what each logo represents

Who are we?

Mutant Dog Eats Breakfast



Ryan Bayne © 2004



New Exhibition Space in CEIT

Dallas Card

Engineering Society Arts Director

While navigating the labyrinthine hallways of the third floor of the new CEIT building, should you happen to stumble upon the ECE office, you may find yourself presented with a surprising sight: four small objects atop four black pedestals. Could it be? Art in an engineering building that doesn't date back to the 1970's?

The pieces are the work of Sarah Badran, a fourth year fine arts student and her exhibition is the first to be presented in this space. Each piece is a plaster cast of a common object, captured with remarkable expression. The original objects, a balloon, a teddy bear and two small pillows, one holding a light bulb and the other supporting two clothes pegs, all assume their own shape, creating a softness and fluidity that has amazingly transferred over to the medium of plaster. This contrast is heightened by the fine detail of the casting which has captured

the fine texture of the bear's felt and all the creases in the pillow. Only the pure white surface of the pieces betrays their true nature.

The small foyer outside the ECE office initially seems like a bit of an odd space for an exhibition. The bleached white of the walls, floor, ceiling and fluorescent lighting create a rather hard, sterile environment. Yet Sarah's work was a good choice for an initial exhibition. The whiteness of her pieces, which serves to reinforce their generality, reflects the intentional order of the surrounding space in a slightly subversive manner. Furthermore, the contrast between the soft and the hard in her work helps to reconcile the art with its surroundings and

the placing of art work in an engineering building.

The exhibition, and the creation of this space, is the initiative of Professor Rob Gorbet in the ECE department. Professor Gorbet, himself a collaborating artist, is also helping to develop ties between the departments of engineering and fine arts through the creation of a new collaborative studio course. This new exhibition space, which in the future will feature work by both engineering and fine arts students, is one of several ways in which Rob is helping to strengthen these connections, and create a symbiosis of art and engineering at the university.

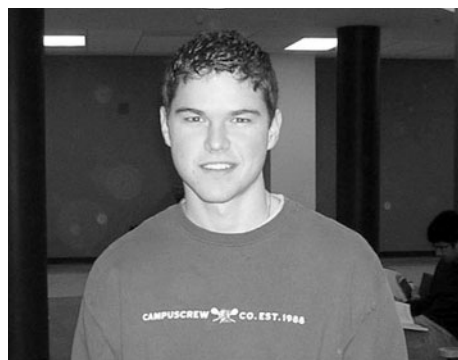
the Iron Inquisition

Tsu Chiang Chuang, 3A Computer

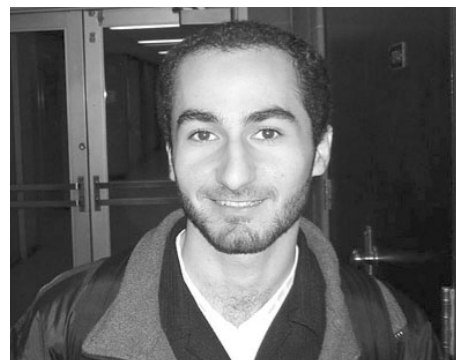
What's the first thing you'd do once you got your Iron Ring?



"Give everyone the finger."
Ismail Ozturk and Daniel Francisco
- 3B Computer



"Get out of here!"
Scott McLeod - 3A Computer



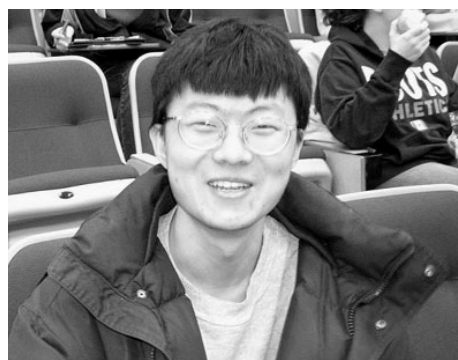
"Tap it on the blackboard."
Hisham Al-Shurafa - 3B Systems Design



"Try to read the elf writing on it."
Cary Fan and Kuo-Cheng Tong - 3B
Systems Design



"Put it on and make sure it fits."
Cindy Connolly and Zena Ng
- 3B Computer



"Five freaking years of school are over!
Time to sleep."
Kevin Mo - 3B Electrical



"One more year to think about that. Hey,
what are you doing? No pictures!"
Eric Liang - 3B Computer



"Box Man doesn't have a pinky, but he'd
still celebrate with a big bang."
Box Man - 4N Applied Box Studies