



Iron Times

March 2010

The Official Publication of the Carleton Student Engineering Society

BRIEFS

The U-Pass
 During the week student voters elected our new CUSA government, they also voted in what has more commonly been referred to as 'Referendum Question 1': the U-Pass. Still unsure what this is? That's not surprising.
 - Page 2

You Call That Fashion
 In the past issues of the Iron Times, Ian Ewing has been advising woman on the topic of their wardrobe, analysing in the way that made most sense to him, from an engineering standpoint. Now it may not be his fault that as "a man of science" he hasn't had much experience in the field of woman's clothing.
 - Page 5

English For Engineers
 Engineers are widely considered (and often consider themselves) to be poor writers and to possess inferior language skills overall. In fact, this assumption has become something of an in-joke, with many a grammatical mistake being waved away with the excuse "I'm an engineer. I don't need to have good [sic] grammar."
 - Page 8

Dissolving The Boundaries Of Science Fiction
 The attraction of science fiction television series, movies and books has hardly come from award winning drama or acting performances, but rather the creative conception of futuristic societies, high-tech weaponry and raging battles against far superior alien species.
 - Page 7

INDEX

EDITORIAL	2
EXEC REPORTS	3
NEWS	4-5
GALLERY	6-7
ENTERTAINMENT	8-11
LAST WORDS	12

3 Issues In 3 Months, Wow We're Awesome



Warning: This newspaper may contain offensive material and should not be read by people who are easily offended. All opinions expressed within The Iron Times are solely those of the writers and contributors, and do not reflect the views of CSES unless indicated otherwise. This paper is jestful and satirical in nature and is not intended to be malicious in any manner.



EDITORIALS

The U-Pass

Curtis Lambert
- CIVE II -

Well, it looks like CUSA managed to do it again (that's two years in a row for anyone who's counting). Don't know what I'm talking about? During the week student voters elected our new CUSA government, they also voted in what has more commonly been referred to as 'Referendum Question 1': the U-Pass. Still unsure what this is? That's not surprising, despite those pesky CUSA representatives (cornering you in the tunnels, yelling out to vote yes for no reason in particular) and a select few brave students trying get the true facts out, I was surprised at how many fellow students had never even heard of it, let alone voted.

The U-Pass (which ironically stands for 'Universal') is essentially a mandatory OC Transpo bus pass that will be forced on all students starting next year at \$145 a semester, or \$290 a year, whether you use public transportation or not. Unlike the health plan, at the moment there is no opt-out. For those of you who thought that your tuition was high enough as it is, that's equivalent to at least a 4% hike in your yearly tuition! Don't get me wrong, I'm not against a bus pass in any way (I don't want to get on anybody's bad side for writing this). I'm all for the idea of public transit, in fact I think that the U-Pass is a great idea for those students who rely on public transit daily (they'll save a significant amount of money compared to the current bus pass fare, which is probably why this went through). What I'm not for is students paying for it who do not/can not make use of OC Transpo!

Personally, I don't like OC Transpo. I find them extremely poorly managed (I'm looking at you, Mr. Cornellier), hardly ever punctual, and the last thing I want to do after eight hours of calculus is pile into a tin can with 40 other people who reek of human waste. However, that's just my opinion. More to the point, I can't actually take OC Transpo even if I wanted to. I, like many other students, live far outside the bounds of the city, so that pass might as well be an arts degree diploma. This means I already pay ridiculous car insurance, gas rates, and parking passes to get to campus every day. But I don't complain, because that's my choice. A mandatory U-Pass is not. Nobody helps pay for my transportation, so why should I pay for theirs? If half the students lived in the Glebe, would we all pitch in for their rent too? Of course, we already pay for many things we don't need, but that certainly does not mean that we should add to that list! There is no reason they can't add an opt-out to this, just like with the health plan. We're all students, we're all strapped for cash as it is. Adding \$290 is going to make it harder for everyone: that's like buying another 2 textbooks a year. For those of you in favour, you're essentially making your friends pay more money so you can pay a little less; not exactly the "Carleton Advantage" they're always advertising.

I'm against the pass because I drive, and I have to. There are lots of you that walk to school every day, or bike in the summer, or rollerblade, or teleport for all I know (I'm onto you physics guys). So yes, there is a significant portion of the student body who will never make use of the U-Pass. Not to mention, walking and biking is significantly more environmentally friendly than buses, and this will not reduce the num-

ber of those who drive; they love their vehicles way too much, so this will not reduce environmental impact in any way. There seems to be a negative connotation attached to the drivers, people seem to think they're rich for some reason, but they're just as cash strapped as anybody else, if not more so. I should also mention several of those that I spoke with who actually used the bus regularly and would benefit from this, but were still against it, stating that that they felt it was wrong to force others to pay for their transportation on principle. Finally, for those of you that will make use of this, you're still getting a terrible deal. Of all the university transit deals in Canada, Carleton has one significantly more expensive than anyone else. In addition, in order to actually save money you would have to take the bus at least 16 times a month. Less than that and it would be cheaper to buy just regular tickets. Surely CUSA can get a better deal than that.

Yes, this motion already passed through; there is nothing I can do about that. However, now you all know what is at stake here! Those of you who don't use OC Transpo will be forced to at a ridiculous mandatory rate, and those of you who do are not even close to getting the great deal that you deserve. No final details have been established yet though, so now is the time to go to your CUSA representatives and demand a fairer price, and more importantly, an opt-out option. Then everybody would be happy. Of the only 4987 voters who voted on this issue, 1319 voted against it (26%). That's a very significant number, and I can't help but feel that it would have been higher had more people known. So now is the time for action: demand an opt-out option, because I'm getting sick of CUSA dipping their hands into my wallet.

Slates

Ian Ewing
- AERO VI -

Slates should not be permitted in university politics. For starters, consider it as a matter of logic. The reason that political parties form at higher levels of government is that candidates from different electoral jurisdictions have shared philosophies which can be accepted or rejected by their respective communities. In university elections, there are no geographic jurisdictions. All voters vote for a candidate for each office (Finance, Academic, Social, etc.) equally. Candidates should be running on a platform based on their ability to perform, not on a manufactured allegiance. At this level of government, the individual qualifications

of a candidate, based on their experience, enthusiasm, and trustworthiness, should take precedence. The main consideration should be dedication to the job. This qualification is not in any way demonstrated by having a half dozen friends also running for office.

There is no reason why candidates for different offices should be banding together. There exist very few overarching plans or policies that require the combined efforts of multiple offices of student government. Any implied cooperation between members of a given slate is a moot issue, since each office at this level of government operates more or less on an independent basis. The only time the support of other members of council is typically required is in matters of budgets and motions. In both these matters, the desires of the student population should be taken as priority over the desires of the councillor.

For further evidence as to the uselessness of slates, consider municipal politics. City councillors do not run under the banner of a particular party. They may lean in a more liberal or more conservative direction, but they recognize that even at their level, these ideological differences play only a very small role in the decisions they must make. They should be a vessel for their constituents, not an activist. It's only at the provincial level of government that political ideologies and inter-ministerial cooperation become important to accomplish larger policy goals. In short, at the level of university politics, whether it be CUSA, CSES, CMAS, or any of the other alphabet soup student groups, slate politics is at best pointless, and at worst, detrimental to the election of the most qualified and dedicated candidates. Slates should be banned in university elections, and candidates should be forced to run on their own qualifications and under their name solely.

From: The Editors <irontimes@cses.carleton.ca>

"An editorial is a piece of writing intended to promote an opinion or perspective." We would like to seriously emphasize this definition (pulled straight from Wikipedia) and reiterate that these opinions belong to their respective author and do not necessarily reflect the opinions of CSES as a whole.

These editorials are meant to voice an opinion and not with malicious intent. In extension, none of the articles presented in the issue or this publication as a whole is not intended to be malicious in any manner.



The Iron Times is a free publication of the Carleton Student Engineering Society.

Submissions are welcome from articles to photos, from news to entertainment to opin-

ions, and everything in between. Anyone may send their submissions, complaints, questions and concerns to irontimes@cses.carleton.ca

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Thanks to all the writers that contributed.

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EXEC REPORTS



President

Rob "Merlin" Stalker
- AERO III -

My term is now coming to a close. Sadly, I soon will be replaced. I'd like to thank the greater C-Eng community for all the work they've done to make this year a success. To my executive, council and all the directors, CSES would be a burning hole in the ground were it not for all your effort and enthusiasm. In other news, my term is rapidly coming to a close. Happily, I soon will be replaced. I'd like to take this opportunity to congratulate the incoming council and extend best wishes for the coming year. I'd also like to encourage everyone to volunteer for directorships, in Leo's and for the remaining council positions. As a warning: CSES will be a burning hole in the ground without your tireless effort and enthusiasm.

As for the going-ons of the President for the last month, it's been a bit light. Aside from working with the Electoral Committee to ensure proper elections, very little else has popped up on the radar. This month however is CSES' Annual General Meeting (Mar 24th) which is essentially the summation of our year. I'd like to invite everyone to attend as this is where Executive and Council will be reporting on their activities throughout the year and giving and receiving feedback for the future. CSES AGM is also an excellent opportunity to meet the new council and pose questions and ideas to them. AGM, combined with the other activities of CSES like Reflections, will hopefully fill everyone up with enough cheer to last them through exams.



VP Services

Adrian "Dog Pile" Bongers
- ELEC IV -

Hope all is well. In EngWear, the competition was a great success with over twenty submissions (Woo!). Unfortunately we couldn't pick all of them (Awww!) but keep up the great work (Woo!). I would encourage you to continue to submit ideas and designs to our EngWear director at engwear@cses.carleton.ca. Coming out or already out will be two new EngWear shirts (YAY!), one for males and for females, and along with that are some yoga pants (Hurrah!). Just a reminder to everyone who is holding on to SGRC access cards, if you would like to obtain your deposit back (DRINKING MONEY!), just return the card back to CSES Office and collect \$10 when you pass Go. Also did you know that CSES has an equipment loan program? We do! If you need a projector, laptop or other various technical and/or logistical equipment, come by the CSES office and we may be able to help you. You can check it all out at cses.carleton.ca. That's all, now signing off for the last time.



VP Academic

Chris "Pretty Boy" Nicol
- AERO III -

Hello Everyone. For those of you who don't know me I am your newly elected V.P. Academic. Over the past month I have been working ensuring that events for National Engineering Week happened. As many of you saw elementary school children around our campus, you know that this event was a success. The book trade this semester was also a success with approximately 50 books sold. Over the next month I will be working on ensuring McCoy's is up to standard as well as continue to improve the Textbook and Exam Libraries. Thank you, that's all for now.



VP Internal

Luke "High Roller" Siemens
- AERO III -

First off, congratulations to those elected to CSES council for 2010-2011. Currently in the works is planning for the Iron Ring Reception. After the ceremony graduates and guests are invited downtown to the Honest Lawyer. More specifics to follow, so continue to check out the CSES announce emails. Recently I attended the Charity Magic/LAN event, which was fairly successful, and a great time had by all. This semester the event grew, and I hope that next year it will continue the upward trend.

The CSES AGM is upcoming: Wednesday March 24th in Azrieli 302. The AGM is the chance for you as members to give your input into the direction of CSES. It will also be your chance to ask questions of current council and exec, as well as meet the incoming council and exec. Due to no one running for the position of DOE or SCE councilor these positions will also be filled at the AGM. If you are interested in running for these then it's best to attend. As for other duties of the VP Internal I am currently maintaining the day to day necessities such as office hours, maintaining emails lists, etc. As well pewter mugs have been ordered for those graduates who applied online and brought in deposits. These can be picked up at Reflections, or anytime after that until the end of exam period.



VP External

Hillary "Dirty Bird" Flesher
- CIVE II -

Over the past two months there has been a lot going on in the External Portfolio. And so without further ado I shall share it all with you. Over reading week I attended the PEO Ottawa Chapter AGM. This was a very nice event put on by our chapter and has allowed us further communication. I look forward to having a student rep attend more of their meetings so that we can build a strong relationship with them. If you haven't already done so, visit the PEO website at www.peo.on.ca to sign up for FREE as a student member. The charity aspect of my portfolio has blossomed recently and I am very excited about it. Currently, we are collecting donations for the food bank. This has been really well accepted among members and the amount raised has shown it. Also, we ran a Magic and LAN tournament in the beginning of March. With the combined raised from November we can put forth a great donation to CHEO.

During the first weekend of February, three first years and I attended FYIC. The First Year Integration Conference was held in Thunder Bay and consisted of a wide variety of activities. It was here that the students learned all about ESSCO and different engsoc structures and how they can be involved in their own engineering society. I am very happy to say that two of these students are now part of your council and exec elect. The weekend's events yielded many different experiences and by far my most memorable part was the dog sledding. ESSCO's math and physics day at Wonderland is held during the first week of May. If you are a positive person who enjoys doing high school outreach this is definitely something that you should check out. I will have much more information for you in the coming month. In the next little while keep your eyes and ears open for information about our Panel Discussion. The Panel Discussion will take place near the end of March at Ottawa U and will feature some very fascinating speakers.



VP Pubs

Luke "Senator" Russell
- BIOM IV -

This month, I've been working on getting the Composites account settled. As you might have been aware, CSES was on the hook for nearly \$3000 for class composites from previous years. I spoke to Portraits Now over a couple instances, and got them to do a lot for Engineering Students for very little. Basically, I got them to charge us the outstanding composites at cost. This is in the ballpark of \$500, a approximate settlement of 80% less than we owed. I also arranged to have them still do a composite for us this year for FREE. Instead of CSES paying for the composites and reselling them, the members will get a composite for free if they order a portrait package, and for a pay-per-use fee if that's all they're ordering. The fee, set by Portraits now, will likely be \$40. This will get us a free composite organized for the graduating class, and set a precedent to allow this free method in the future.

I also have prepared a "Guide to Graduating" to remind Grads the 5 steps of graduation: 1) Apply to Graduate, 2) Apply for the Iron Ring, 3) Apply for the Pewter Mug, and 4) Get Grad Photo Taken for Composite, and 5) Buy a Reflections Ticket. This was made into a poster and put around Minto and Mackenzie buildings, as well as made into a handout. That's it from VP Pubs. If you have any questions, email me at publications@cses.carleton.ca



VP Social

Andrew "Rocksteady" Campbell
- MECH III -

IT'S ALMOST THE END!!! This semester has been insane for me as VP Social and I have been having a blast. Yuk Yuk's II went superbly with 54 people showing up and laughing their asses off. From this event we raised \$32 and received about a dozen non-perishable food items for the Food Bank.

Ladies and gentlemen, the moment you have all been waiting for is now. REFLECTIONS TICKETS ARE ON SALE!!! You can go to Leonardo's Lounge get them, but hurry, dinner tickets are already sold out and dance tickets are going fast. This year's Reflections will be held at The Westin Ottawa on March 27th from 6:00pm-2:00am. Tickets are \$57 for dinner/dance and \$27 for just dance. If you were to bring in a non-perishable food item \$2 will be knocked off your price.

Also thank you to all for voting for me to stay as VP Social and I hope to make next year even better.



VP Finance

Cindy "Cindy Bear" Coleman
- ELEC IV -

Hi CEng, I am Cindy Coleman, the Vice President Finance. Last semester CSES granted about \$6000 to student groups. This semester, we hope to grant an additional \$7000. For those who received funding approval last semester, please endeavour to submit receipts with information requested in emails sent to your respective groups. I will be contacting the groups that applied this semester very soon. Hope to see you all at AGM and other upcoming events. If you have any financial concerns regarding events or student group funding, give me a shout at finance@cses.carleton.ca.



NEWS

From Russia with Death: In Soviet Russia, Weapon Owns You!

Gilles "Nightstalker" Messier
- AERO III -

When it comes to producing effective weapons, it is hard to beat the Russians: after all, their T-34 and T-55 tanks, AK-47 Assault Rifle and RPG-7 rocket launcher are the most produced and successful weapons of their kind. Yet while Russian military designers have long been lauded for the utility and reliability of their products, they should also be commended for their ingenuity: Russia has produced some of the most innovative military hardware in history. To prove this point, here is a list of the coolest, scariest, and most ingenious weapons to ever leave Russian drawing boards.

By Land

PSS Pistol: Silent but Deadly

The traditional technique for muffling a gunshot has been to fit a weapon with a tubular suppressor (silencer), a device which slows down the bullet (eliminating its sonic boom), slows the sudden expansion of propellant gas and, like a car muffler, uses interference to cancel out any remaining noise. Contrary to Hollywood, however, silencers are bulky and rather ineffective, mostly useful for disguising – not eliminating – gunshots. In the mid-1980's, however, the Russian TsNIITochMash design bureau developed the 7.62 mm PSS pistol, which fires ingenious silent sealed-cartridge ammunition. Inside each cartridge, the propellant charge and bullet are separated by a sliding piston which, when the pistol is fired, seals the cartridge and prevents any propellant gas, muzzle flash or noise from escaping. The firing pin striking the primer is the loudest noise produced. The PSS is still in use by the Spetznaz, the elite Russian special forces.

Think about it: not even James Bond has a weapon like this.

The Ballistic Knife: A Cut Above the Rest

Right next to their PPS pistol holster, many Spetznaz soldiers carry the Ostblok ballistic knife, intended for covert use when a firearm would be too noisy. The knife's handle contains a spring powerful enough to propel the blade at 63 km/hr up to 6 metres. Naturally, it is illegal almost everywhere.

Inflatable Armies

Are you a poor yet militaristic nation? Want to intimidate your neighbours and the UN but don't have the budget for expensive weapons? No problem! The Russian army actually sells inflatable copies of tanks, aircraft, ships and other military hardware, allowing even the most cash-strapped country to assemble a formidable army...as far as surveillance satellites can determine. Many of these facsimiles even contain heaters to simulate engine heat and fool thermal-imaging satellites! Never has it been easier to inflate (pun intended) one's ego.

By Air

Mi-12 Helicopter: VTOL Goliath

When it comes to engineering, there seems to exist a general rule: anything that can be built, the Russians can build...larger. The Antonov 225 is a prime example. The Mi-12 helicopter is another. The Mi-12 "Homer", the largest helicopter ever built, could carry a load of 40,000 kg vertically to an altitude of 12,000 metres, a standing record for helicopters. The aircraft was the

size of an Antonov An-22 heavy transport and indeed looked very much like an An-22 fitted with twin outrigger rotors. The four engines (two on each outrigger) were connected by a system of cross-shafts so that both rotors would continue to rotate even if two engines on one side failed. Despite its impressive performance, the Mi-12 was cancelled after only two prototypes had been built. The helicopter had been designed in 1968 to rapidly deploy strategic ballistic missiles, a military strategy whose subsequent abandonment doomed the Mi-12 project.

Yak-38 Forger: Harrier's Rival

Until the F-35 Joint Strike Fighter enters service, there will have been only two operational VSTOL military aircraft in history. The first was the famous Hawker Harrier. The second – less well known – was the Yakovlev Yak-38 Forger. Like the Sea Harrier, the Yak-38 was a subsonic carrier-based multi-role maritime strike aircraft. There the similarities ended, however. Unlike the Harrier, which used a single Rolls-Royce Pegasus engine with vectoring nozzles, the Yak-38 had three engines: one main engine with twin rear vectoring nozzles and a pair of small vertical lift engines just behind the cockpit, covered by a distinctive hinged hatch.

Perhaps the most unique feature of the Yak-38 was its hands-free landing system: once over an aircraft-carrier deck, the pilot could engage a telemetric uplink with a computer on the carrier which would automatically guide the aircraft in for landing without pilot input. To protect the pilot from landing accidents, the Yak-38 was also fitted with an automatic ejection seat that would fire if any of the three engines failed.

By Sea

Shkval Torpedo: Death from Below

While torpedoes have benefitted from endless advances in propulsion and guidance technology, their top speed has always been limited by hydrodynamic effects. In the early 1990's, however, US Naval intelligence learned of a new Russian torpedo called the VA-111 Shkval (Squall) which could reach an astounding 200 knots (360 km/hr)! The fastest American torpedo, the Mark 48, has a top speed of only 55 knots. The Shkval's incredible performance is due to supercavitation: at speed, the torpedo's specially-shaped nosecone vaporizes the surrounding water, forming a long bubble or cavity around the weapon. As little of the weapon touches the water, drag is greatly reduced. The speeds necessary for supercavitation are only attainable with rocket engines, so the Shkval is more of an underwater missile than a torpedo. Guidance is provided by small vanes that can extend out beyond the cavity. The Shkval carries a 210 kg conventional warhead, but this is actually unnecessary: the speeding torpedo carries enough kinetic energy to destroy a ship without explosives! And you thought fluid dynamics was boring...

Moskit Anti-Ship Missile: Mach 2 Death

Let us assume that the Shkval did not exist. Though safe from high-speed torpedo attack, any navy opposing Russia would still face death from above in the form of the P-270 Moskit (Mosquito). The Moskit, a ramjet-powered sea-skimming anti-ship missile, can travel at Mach 3 at high altitudes and Mach 2 at sea level, three times faster than the French Exocet and

American Harpoon missiles. Such speeds give an opposing force little time – 30 seconds at most – to react and deploy countermeasures. The Moskit can be fired from land, sea and air and, like the Shkval, is capable of destroying its targets using kinetic energy alone (its 300 kg warhead just adds insult to injury).

It's a Plane! It's a Ship! It's...an Ekranoplan

In the mid-1960's, US spy planes and satellites photographed an unusual aircraft being built on the Caspian sea shore: 100 metres long, the gigantic vehicle – dubbed the "Caspian Sea Monster" – was propelled by 8 canard-mounted jet engines forward of the cockpit and had wings far too short and fat to support flight. In the years that followed, it was revealed that the mysterious behemoth was neither a boat nor a seaplane. It was an ekranoplan, a vehicle that rides on a cushion of air trapped below its short wings (the ground effect), allowing it to cruise at high speeds only a few metres above the water. As ekranoplans cannot generate enough lift to take off beyond ground effect, they are usually classified as high-speed boats, not aircraft. Russia developed an entire family of ekranoplans for use as amphibious landing craft, mobile field hospitals and maritime patrol craft. One variant, the jet-powered Lun (Loon) Class, was fitted with launch tubes for the Moskit supersonic anti-ship missile, creating the most frightening-looking naval weapon ever developed!

Underwater Firearms: Best of Both Worlds

Navy Frogmen (assault divers) require not only conventional land weapons but underwater weapons (ie. spearguns) for use against sharks and other frogmen. Neither weapon type works well outside its intended environment and carrying both is cumbersome and inconvenient. Consequently, the Russian Navy developed the APS assault rifle, an AK-47 modified for underwater use. As regular rifled bullets are ineffective underwater, the APS fires long, dart-like drag-stabilized projectiles from a smoothbore barrel. A four-barrel pistol firing similar ammunition, the SPP-1, was also developed. The APS was rather inaccurate when used out of water, however, so it was eventually replaced by the more advanced ASM-DT rifle, which can fire both conventional AK-47 ammunition and underwater darts. A pressure-activated system automatically converts the ASD-DT between both modes and the rifle can accept the same accessories as the AK (bayonet, grenade launcher etc.). Once again: James Bond never had such weaponry

From...Space?

Salyut 3: Guuuuuuu in Spaaaaaa

To the likely dismay of any would-be Space-Napoleons and Space-Hitlers, Russia would have been able to fight a "shooting war" in space. The Salyut 3 (Almaz) military space station, launched in 1974, carried a 23mm Nudelmann "self-defence" cannon with which to destroy enemy spacecraft and satellites. As the weapon was fixed in place, the entire station had to be rotated to aim it. Though no shots were ever fired in anger, Salyut 3 did conduct a test-firing on January 24, 1975, successfully destroying a target satellite at a range of 3 kilometres.

So remember: whatever you do, DON'T INVADE RUSSIA!

You Call That Fashion

Anali "Mimosa" C. Stewart
- AERO IV -

In the past issues of the Iron Times, Ian Ewing has been advising woman on the topic of their wardrobe, analysing the subject in the way that made the most sense to him, from an engineering standpoint. Now it may not be his fault that, as "a man of science," he hasn't had much experience in the field of woman's clothing, (and probably hasn't had many opportunities to study this by removing said clothing from a woman for further analysis) but any woman would be foolish to take his studies seriously. It is my opinion that the perfect wardrobe for a woman should be engineered to achieve optimum performance in feeling confident, turning heads and getting drinks bought at bars.

Now I may agree with Ian that the skinny jeans is not for everyone, as it can be quite unflattering on certain body types. However this by no means suggests that yoga pants are the ideal choice. The problem of over-accentuating the posterior cannot be solved by thinking stretchy pants make everyone's ass look good. My disagreement on the topic of yoga pants is not based on their tightness: it is the perversion of their purpose. These pants were made to do yoga in, as their name suggests. They are not "go to class" pants, or even "shopping at the mall" pants. They fall under the same category of clothing as gym wear, pyjama pants and sweats: very comfortable and practical for those situations but not in the least bit fashionable. In the current era of equality between men and women, we are no longer required to distort our bodies in whale bone corsets and giant hoop skirts to look pleasing, there are many options to choose from to complement each woman's unique body type. That does not mean, however, that we must forsake comfort in order to make us feel equally powerful as our male counterparts. We can find a perfect pair of denims that complement our leg shape and allow us to walk tall. Leggings, though

often misused like yoga pants, can be paired with a cute dress allow us to be feminine and practical as we keep our legs warm in the winter. A pair of yoga pants may make a woman feel calm and serene, but she should still leave them in the yoga studio.

Mr. Ewing delves into the time honoured search for the ideal undergarments, in both the panty and bra categories. He goes into the history of lace, suggesting the benefits of the boy short, but completely neglects the fact that one can have lace made into any shape of underwear! He describes their superior support to weight ratio, but forgets the sex appeal. I'm sure if one day he takes his research to the level of viewing an actual woman in her underthings, he would agree with me. Now the thong is more of a practical option, as it removes the chances of the dreaded VPL (visible panty line). Some people may not find them as comfortable, as they can floss, but they do have their place and are also available in lace. Bras can be a lady's best friend or her worst enemy, and unfortunately for everyone, the science of finding the right bra size remains a difficult subject. Brassieres can be uncomfortable and unflattering if they do not fit well, but if one goes through the trouble of finding the perfect bra the results can be amazing. I don't believe in categorizing bras as a lot of it depends on personal taste and comfort, I do however think that every woman should own at least 5 bras, one of each of these specifications: white, black, strapless, sport and something fun. They can be underwire, lace, cotton, or whatever suits the lady, but if one owns each of those 5 types of bras, it can be made to suit any outfit with comfort and cleavage.

Footwear is an essential component of every outfit. Shoes can be considered an accessory to a previously-assembled outfit, or can form the basis for the outfit itself. Although as an eng boy Ian may find

that one pair of shoes suits everything in his wardrobe (running shoes) a woman knows that there is a purpose and a complimentary look for each type of footwear. As most Canadian girls know, every winter needs a good pair of boots. Ugg boots are comfortable, but as I've already expressed my opinion on outfits solely based on comfort needs I'll simply ignore their existence. Currently very popular with the ladies is the motorcycle style boot. The black leather doesn't get tarnished by salt as easily as suede boots might, and the higher cut keeps snow from getting the bottom of pants wet. All of this is very practical while at the same time looking very sexy. They can be worn with different styles of outfits, more casual with a t-shirt while on campus, or vamped up for a night on the town. Not all girls enjoy wearing heels, as they can be uncomfortable after a while, but I will always be a fan of pumps. These can be worn with jeans or with a sexy dress, all the while making any lady's legs look long and sleek. For the more casual of girls there are many cute options of sneakers out there these days. Adidas and Nike sneak in a bit of pink and purple, adding a flair of femininity to relaxed footwear, although I have to admit my purple kicks came from the men's section. We can pretend to be Cinderella all we want, waiting for a gorgeous man to show up and slip on the perfect fitting shoe, but akin to bra shopping, getting a good fitting shoe takes work.

Everyone has a different style (and what is considered in style can change quickly) but it is still important to find quality staples that fit properly. Simple can go a long way with the right accessories or even a fierce attitude. You might not agree with my fashion advice, but I'd like to think it beats Ian telling girls what he thinks they'd look hot in and using engineering terms to justify it. Either way, all a woman needs to do to look sexy or powerful is feel comfortable in her own skin.

OCEPP Junior Fellow

If you completed all the requirements for your PhD within the past five years and have a keen interest in engineering and public policy issues, you could be a prime candidate for the Ontario Centre for Engineering and Public Policy's (OCEPP) 2010-11 junior fellowship position. The centre welcomes applications from postdoctoral scholars for its second junior fellowship, which begins July 1, 2010.

"It is an amazing opportunity to serve in this role," notes Jana Levison, the centre's 2009-10 junior fellow. "I've conducted independent research on environmental issues, spoken at a number of conferences and events such as the Queen's Civil Engineering Forum, had articles published in the centre's Journal of Policy Engagement, and collaborated on a wide range of OCEPP projects including a high-profile study to create a national framework for engineering licensure." The centre's uniqueness in Canada and its strong ties to PEO and the academic community were among the many factors that attracted Levison to the fellowship. Levison completed her PhD in civil engineering from Queen's University in 2009.

To be considered for the junior fellowship position, candidates must have completed a successful thesis defense. Priority will be given to Canadians or candidates from Canadian universities. Applications must be submitted to info@ocepp.ca by 5 p.m., April 30, 2010. Candidates are to include a curriculum vitae, a summary (no longer than 500 words) of the pertinence of previous research for the centre's programs, and a research proposal (no longer than 1,000 words) addressing the role of engineering in public policy development in Canada and Ontario. Three letters of reference should be submitted directly by referees, also to info@ocepp.ca. More information about the centre can be found at www.ocepp.ca.

First Year Event - You Missed It!!!

Caleigh "Paperbag Princess" Rutledge
- ENVE I -

&

Kelly "Tongue Master" Barker
- BIOM I -

Hey CEEng! So to keep you updated, we are your first year reps Kelly and Caleigh. On Friday the 26th (night after Yuk Yuks II), we ran the annual First Year Event and for those of you who don't know, we had a record low of 12 people show up (including ourselves). The actual plan? To have 100+ engineers invade the Kanata Wave Pool and make it be a BLAST.

Now even with 12 people, however, we still made quite the splash: we swam, played in the shallow waves, went down slides, played Red Rover, made a whirlpool, sat in the hot tub and sauna and then watched curling and hockey at a pub. It was a pretty awesome night and we had a lot of fun. Next year, you should go. We'll try and plan it for first semester in order to encourage everyone to be there. If you're not into open participation, you can be a rebel and crash the event. Just saying. There's always a way to get involved.

Anyway, we just wanted to tell you how fun our event was, and tell you all that you should get involved and try to come out to all the rest of the events that VP Social is running this semester!

(We'll definitely see you there!!)

Kiss-in: Smoochin' For Social Justice

Ottawa, ON – March 8, 2010 – Concerns about the marginalization, which stems from stereotypes, biases, and heteronormative assumptions about sexual and gender identity have saturated public discourse and mind share. This has prompted a group of Women's and Gender Studies students to organize a number of events around campus in conjunction with International Women's Week (which began March 8).

On March 9, activists from the Anti-Homophobia Alliance set up a "Kissin' Booth" in the University Atrium, as part of a campaign to educate the campus community about sexuality issues and reclaim Carleton for everyone. On March 10th, the community also staged a Kiss-In in order to spread their message in fun, spontaneous, and informative way:

"While some have been under the assumption that our country, our community, and our campus are bastions of tolerance and acceptance, biases and bigotries can be just as dehumanizing here as they are anywhere. Even places that have begun to transcend the most overt forms of discrimination and marginalization lack a space that can be truly called safe. It is why we are here and what we are fighting for," says Josh Frappie, an undergraduate Political Science student.

The aim of these events was to reclaim safe spaces throughout Carleton, wherein attention can be drawn to issues concerning gender and sexuality and their implications for the GLBTQ community. The group also hopes to overturn many misconceptions about the correlation between sex, sexuality, gender identity, and gender expression.

Dear Mimosa, would you be willing to lend Ian some of your female clothes to allow him to further his analyses?

GALLERY





I'm gonna be lazy this time.



ENTERTAINMENT

English For Engineers

Gilles "Nightstalker" Messier
- AERO III -

Engineers are widely considered (and often consider themselves) to be poor writers and to possess inferior language skills overall. In fact, this assumption has become something of an in-joke, with many a grammatical mistake being waved away with the excuse "I'm an engineer. I don't need to have good [sic] grammar." Not only is this gross generalization likely untrue (just read the Iron Times if you doubt the writing abilities of engineers), but the cold hard truth is that engineers do require excellent language skills. The engineering profession involves a great deal of report writing, and many reports will be written for individuals who may not understand technical jargon or who may not have the patience to read endless calculations and graphs. Thus, clarity and succinctness are essential.

Even if it is true that engineers are inferior writers, this is nothing to be ashamed of. Everyone has skills they need to improve. And ignorance is not the same as stupidity: ignorance is easily cured (through education), while stupidity...not so much (at least, not without a baseball bat). As a rare sort of engineer who comes from a slightly more artistic background and who has been writing for quite some time, I have decided to share with my fellow engineers the language tips, tricks and techniques I have acquired over the years. Every article in this series will cover a different writing-related topic. Enjoy!

Volume I: Similar But Different

Many pairs of similar-sounding words are often used interchangeably, even though they have very different meanings. Knowing how to discern between such words can make a great difference in how one's writing is perceived. Here are a few common examples.

Centre/Center:

Though this may seem like a British/American (eg. grey/gray) spelling distinction, these words actually mean slightly different things. Centre refers to the middle of something (ie. a craftsman's centre punch). Center is a building or other location eg. a shopping center.

Metre/Meter:

Again, more of a difference than you might think: a metre is the SI unit of measurement whereas a meter is a device for measuring (eg. a parking meter) or

the rhythm of verse (eg. iambic pentameter).

*Bonus: the old term for Potassium Nitrate is Saltpetre, not Saltpeter. The name comes from the Latin sal petra, or "salt from the rocks".

Further/Farther:

These two words are commonly used interchangeably, but there is a subtle difference between them. Farther refers to actual, physical distance (eg. "I ran farther than you"). Further, however, refers to metaphorical distance (eg. "I advanced further in my studies").

Immoral/Amoral:

Yes, there is a difference. One who is Immoral knows right from wrong but chooses to commit wrongdoing anyways; an Amoral person doesn't know the difference to begin with.

Affect/Effect:

The distinction here is one of action and consequence (to use "cause and effect" would be circular). You affect something to produce an effect. There are two major exceptions to this rule, however. The first is that you can indeed effect a change. The second is that in psychology, an apathetic, catatonic patient displays a "flat affect."

Story/Storey:

The word confusion that provoked this article: a story is a tale while a storey is a floor on a building.

Quote/Quotation:

What a person said is a quotation. When you retell that person's quotation, you quote them.

Who/Whom:

This distinction is a source of much grief amongst those who wish to sound educated. Let it be known that whom is not simply a fancier version of who. Whom refers to the object of a sentence while who refers to the subject (as a refresher: the subject is what is performing an action. The object is what an action is being performed on). Thus you would ask "to whom were you speaking?" and "who do you think you

are?"

Less/Fewer:

This is a similar distinction to further/farther. Fewer refers to a specific quantity (something that can be counted) while less refers to a general quantity (something that cannot). Thus, you wish for less rain but fewer exams.

On To/Onto:

This one is sometimes contested: 1984 author George Orwell (real name Eric Arthur Blair, by the way) insisted on making the distinction even though his editors disagreed. Via Orwell's reasoning, on to implies movement (eg. "he had moved on to other subjects"). Onto, on the other hand, implies placement (eg. "he climbed onto the ladder"). A similar distinction applies to into/ in to.

Loose/Lose:

This shouldn't require an explanation, but I see this mistake all too often. You don't loose a game, you lose it.

Breathe/Breath:

Breath, as in "to take a breath" is a noun. Breathe, as in "to breathe", is a verb.

Stationary/Stationery:

Stationery is paper. Stationary means that something is standing still.

Illusion/ Allusion:

An illusion is something that is not what it appears to be. An allusion is an indirect reference to something (eg. "chasing his white whale" is an allusion to Moby Dick).

Flammable / Inflammable: Strangely enough, these are synonyms, not antonyms. The antonym of flammable is "non-flammable".

And finally...

IRREGARDLESS IS NOT A WORD! The term "regardless" is perfectly valid and has one less syllable... so use it.

Ask Mimosa

Anali "Mimosa" C. Stewart
- AERO IV -

Dear Mimosa,

I'm getting my Iron Ring this year and just told my girlfriend who's an arts student that she can't go to the ceremony. We have been dating for almost a year so she's heard me talk about it for months. She doesn't understand why she can't go and is upset about it. -Not Wanting to be Single Again Elec Guy

Dear Elec Guy,

As someone who is about to watch a lot of her friends get their rings and leave me behind to complete year 5, I want to be in that room too. Arts students don't

understand a lot of the things we do: has she ever questioned your being purple? Or singing dirty songs in public places? Depending on her level of enthusiasm towards other strange engineering activities, I would suggest telling her the more meaningful reason engineers wear the ring (not just to open beer bottles and feel smug towards people not graduating). Hopefully explaining the humility it is meant to give people in the face of the responsibility they are being entrusted with will bore her so much that she doesn't want to go. If that doesn't work, just remind her that she is invited to the big party afterwards at the Honest Lawyer. Mimosa

Help me Mimosa!!!!

Someone keeps sitting near me in my Solids class that really needs to shower more often. I like sitting near the back because I tend to fall asleep, and he always sneaks in late. He obviously isn't taking the ex-

tra time to put on deodorant! Do I say something? -Can't Hold My Breath Mech

Dear Mech,

This has probably happened to most of us over the years. There are way too many people in their early 20's that have yet to master the lather and rinse technique. As I am assuming you aren't currently acquaintances, there would be no way to say something to him while remaining polite. I would recommend sitting a little closer to the front, between some crowded rows to prevent him from being in your immediate vicinity. Don't worry, there are probably people falling asleep in the front row that the prof has a better view of. Mimosa

If you need advice on anything in your daily eng lives ask Mimosa! She may not know everything, but she probably has an opinion about it.

Porch Crawler

Greg Harrington
- CIVE II -

Here is a great recipe for all of you thirsty engineers: it guarantees a great party. This recipe is a country sort of thing, which I learned about from my brother. It is usually drunk in the summer, however my roommates and I have made it twice now in the winter and it works just as well. In fact it is easier to do in the winter because you can put the container out in the snow to keep it cool. It is called Porch Crawler.

Apparatus:

Large cooler or Rubbermaid container
Something to stir with

Materials:

24 cans or bottles of beer (get buck-a-beer, don't waste money on the expensive stuff)
26oz of Triple Sec
26oz of gin
2L of ginger ale
2L of lemonade

Optional materials:

Bottle of Nos
3 Packets of purple Kool-Aid

Yield:

From my experience, this makes enough for 4 to 5 high tolerance people to enjoy

Procedure:

- 1) Mix it all together in the cooler or container, and stir it a bit. (I have heard of people mixing it together in the bath tub, but that's just gross.)
- 2) Drink it. (Tastes like a citrus drink)
- 3) Party Starts.

Bathroom Reviews

Greg Harrington
- CIVE II -

Note: I got the idea for this from U of T's Toike Oike, their version of the Iron Times. That paper is hilarious; pick up a copy if you ever get a chance.

Bathroom #1:

Location: Mackenzie third floor, second block

This bathroom features 3 urinals, 3 stalls, and 3 sinks. It is in a great spot, just down the hall from Leo's. This however, can pose a problem, as during the ten minutes between class there is a high volume of people going to Leo's, and they often stop to take a leak or drop a deuce on the way, so during these times it is often crowded in there. Also, there is only one soapdispenser, and it is located in the corner, between the right most sink and the hand dryer. This is a stupid location because there is usually someone washing their hands there, and another person drying their hands, so you have to ask them to move to get at your soap. There usually isn't a terrible smell coming out of this bathroom, but it's never that pleasant either. Overall, I give it a rating of 6 urinal cakes out of 10.

Bathroom #2

Location: Minto Foyer, beside the civil labs

This bathroom has two urinals, one stall, and two sinks. It is very crowded, so for you claustrophobic pee-ers: stay away. Also the stench is awful: it place smells like piss every time I'm in there. However, what this bathroom lacks in cleanliness and space, it makes up for in graffiti. One mentionable piece that makes me laugh every time is: "Don't look here, the joke is in your hand". It is for that reason I keep using this bathroom. Rating: 7 urinal cakes out of 10.

Bathroom #3

Location: Ottawa VIA Rail station

This salle de bain was clean from what I remember. However, you know those dividers they put between the urinals? Some idiot didn't plan that very well, because I couldn't even fit between them to take a leak, (and I'm not fat by the way; I'm Johnny Textbook - 6 foot, 190 pounds). I consider that to be a major design flaw. If you want to use those urinals, you will either take a step back and arch your stream, or turn sideways and point it to the left or right. Overall rating: 5 urinal cakes out of 10.

Bathroom #4

Location: Tory Building, fourth floor

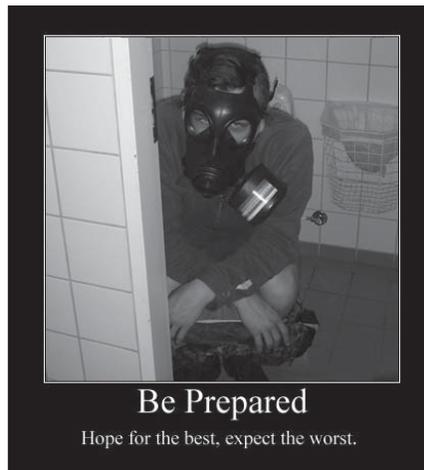
If you want a clean bathroom, Tory is your best bet. Every bathroom I have been to in Tory is always clean and usually spacious as well. This particular example on fourth floor stands out because it is big, clean,

often deserted, and you can look out the window as you're draining the main vein. Also, this is one of the few bathrooms that still have paper towels instead of those stupid hand dryers. Rating: 8 urinal cakes out of 10.

Bathroom #5

Location: Residence Commons, second floor

This bathroom has too many urinals to count, which is amazing. So unless some jerk has forgotten his urinal etiquette, you will never have to urinate beside anyone. One of the cons of this bathroom is that it never smells that great. However, what I love most about it is the hand dryers. Now, I'm no aerospace engineer, but I'm pretty sure this thing is powered by a jet turbine. You can actually see your skin deform in the airflow hitting your hands (check out that LINEAR MOMENTUM!). Rating: 7 jet-turbine-powered hand dryers out of 10.



Bathroom #6

Location: Glengarry, fourth floor (communal)

Having lived in Glengarry last year, I am quite familiar with this bathroom. It has 3 urinals, 4 stalls, 3 shower stalls, 1 bath/shower, and 2 sinks. Unfortunately, the leftmost sink is behind what looks like an unused garbage chute, so if someone is using the right sink you will not be able to reach the left one. Other than that, this is your typical rez communal bathroom: not particularly dirty until the weekend, when there is usually puke in several toilets. My rating: 7 urinal cakes out of 10.

Bathroom #7

Location: Robertson Hall

This review has a bit of a story behind it. Back in the summer before I came to Carleton, the school emailed me and said I should attend one of several Summer Orientation days offered throughout the summer. I booked one, but a few days before I was supposed to go, the school phoned me and said they were cancelling that particular orientation day. The only other one I could attend, however, was sandwiched between two days that I had to work (mind you I live five hours away, so I would normally go to Ottawa, stay overnight, and then come back. Also at that point I thought that attending this orientation session was vital. Oh how naive I was. But I digress...). So my dad said no problem: we'd leave early in the morning, attend the orientation, then head back at night. So we did. Now mind you, we left at 3am and didn't make a pit stop. So when we got to Carleton, I really needed to have my morning constitutional. So I go into Robertson Hall, because I think that's where we were supposed to register or something. Once there, I go into the first bathroom I see, which turned out to be very spacious and clean. Well, after finishing my "business", I turned to flush the toilet and encountered a problem: there is no handle. I search everywhere in that stall and cannot for the life of me find a handle. Feeling somewhat guilty, I decide to just leave yesterday's food floating in that bowl, for some poor unsuspecting soul to discover later. So I open the stall door to leave, and guess what? THE TOILET AUTOMATICALLY FLUSHES WHEN YOU OPEN THE DOOR! Isn't that crazy?! Now I it's probably because I'm from a small town and have never seen these new-fangled contraptions, but it blew my freaking mind. To this day I have yet to find another bathroom that automatically flushes when you open the door. My rating for this bathroom is 9 automatically-flushing-toilets out of 10 (because nothing is perfect).

Bathroom #8

Location: Steacie Building

During this year's frosh week, after crashing at a friend's house that particular night, I woke up the next morning and had to bus straight back to campus to make it to boat building on time. So after I get off the bus, I'm not really feeling that great so I begin my search for the first available bathroom, when I think to myself "I'm going back to that amazing bathroom in Robertson". So I make the trek over to Robertson from the Minto Bus stop, which is surprisingly longer than you might think, especially when you have to go. But when I get there, the door is locked. So are all the other ones around the outside of that building. Greatly saddened, I go to Steacie Building. I find a bathroom in there. It sucked. I could barely fit into that stall. I give this bathroom a dismal 4 urinal cakes out of 10.

Editor's Note: Some of the Graffiti in the bathroom in Minto by the Civil Labs has been painted over.

Dissolving the Boundaries of Science Fiction: Figments of Imagination Engineered Into Reality

Adam O'Brien
- AERO II -

Science fiction, the brand of literature built on imaginative technological speculation, is one (and possibly the only) form of fictional literature familiar to most engineers. The allure of science fiction television series, movies and books is rarely derived from, award-winning drama or acting performances, but rather from creative visions of futuristic societies, high-tech weaponry and raging battles against superior alien species. If you've ever day dreamed about what it would be like to actually exist in the world of your favorite science fiction franchise, than you'll likely find the content of this article a source of great intrigue. In the hopes of dissolving the boundaries imposed by the term "science fiction", I present the once distant figments of imagination, conceived in science fiction works, which now exist in the modern world - ranging from high tech thrust systems to achievements in biological engineering.

Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) Scanning:

The science fiction series that postulated medical devices similar to magnetic resonance imaging would likely be better remembered by our parents. 1966 saw the debut of Star Trek, perhaps the most prominent science fiction franchise of our time. In this series, Dr. Leonard "Bones" McCoy had only to wave his tri-corder sensor over a patient to generate images of their internal anatomy and make a diagnosis. While x-ray machines of the day were capable of generating relatively crude images of broken bones, the creators of Star Trek correctly predicted that someday in the future it would also be possible to view other tissues and organs in great detail using a scanning device. Eventually, medicine would boldly go where Star Trek had already gone before, and bring about medical technologies such as MRI and CT scanning. Many of us have likely already been diagnosed with the aid of such machines following periods of unfortunate illness or exceptionally poor judgement.

The Atomic Bomb:

The term "Atomic Bomb" existed long before its dramatic debut in 1945. H.G. Wells - widely considered the father of science fiction - first coined the term in his 1914 novel *The World Set Free*. At this time, scientists had just begun to estimate the enormous quantities of energy which could be released from radioactive substances. Wells' idea of an atomic bomb was only slightly more powerful than conventional explosives, but would continue to explode for days on end, bringing untold amounts of terror to innocent civilians for prolonged periods of time. The idea was considered to be about as plausible back then as the ion canon in Star Wars is today. A few decades later, Cleve Cartmill conceived a chain reaction type atomic weapon capable of releasing all its energy at once in his 1944 story *Deadline*. At the time, the Manhattan Project to build the first real atomic bomb was well underway. So believable was his notion of how such a weapon might be built, the FBI actually launched an investigation against him, suspecting a breach in the highly classified Manhattan Project.

Ion Thrusters (Magnetoplasmadynamic Thrusters):

Spacecraft powered by high-tech, brilliantly glowing ion thrusters (as opposed to crude contemporary liquid-fuelled rockets) have been used so frequently in science fiction works that the exact origin of the idea is hard to pin down. Myriad famous spacecraft such as the Millennium Falcon and the Starship Enterprise feature thrusters glowing the distinct bluish-green colour of plasma. Well, fortunately for those like us who have been consistently disappointed with the inability of current spacecraft to approach light speed,

ion thrusters are now a reality, and will likely usher in a new era of deep space travel. NASA terms the technology "Magnetoplasmadynamic" or "MPD" ion thrust. This form of propulsion works by accelerating ionized gas out of a nozzle using a magnetic or electric field, producing the strangely-coloured glowing exhaust we are already accustomed to seeing in movies. These thrusters are currently capable of generating six times the specific impulse of modern rockets, but the thrust itself is only equivalent to the weight of a piece of paper. Consequently, it takes a long time for an ion-powered spacecraft to accelerate to maximum speed. Currently, the thrusters are only used on satellites and deep-space probes. It's not exactly the technology that allows Han Solo to evade the Empire, but at least it's a start.

Combat Robots:

Being a Terminator fan, I had to investigate if anything resembling a Schwarzenegger-like, humanoid robot had ever been employed - or even considered - for combat operations. Well, I didn't quite find a terminator, but I did find the recent 25 pound, 9 inch tall VI-PeR ("Versatile Intelligent Portable Robot", apparently the "e" is necessary to make the acronym sound cool). Developed by the Israeli defence contractor Eltide Systems Ltd, this seemingly tiny robot is capable of carrying several types of firearms and light weapons, including submachine guns and grenades. Its purpose is to carry out combat operations too dangerous for human soldiers, and it's capable of operating in almost any environment. Much to the dismay of insurgents, it is even capable of climbing stairs, making it much greater of a threat than it may appear. Fortunately for the survival of our species, it is operated only by remote, and contains no artificial intelligence whatsoever.

Genomic Resurrection:

Arguably the single plot device that solidified Jurassic Park's place amongst great science fiction stories was the idea that an extinct animal could potentially be brought back to life, if a sufficient sample of its DNA could be extracted from a bloodgorged mosquito fossilized in sap. The release of the novel, authored by Michael Crichton, actually sparked significant scientific debate over whether such resurrection was actually possible. As it turns out, a similar feat has already been performed by the US Agricultural Research Service. Using stored genetic material, they were successful in resurrecting several different varieties of extinct carrots. (Here is something I bet you didn't know - different species of carrots actually use to exist in many different colors, including yellow, red, blue, deep orange and even purple. As societies evolved, the market place favoured the orange species of carrots we are familiar with today, for reasons unfathomable. The other kinds were simply phased out and driven to extinction, despite containing skin pigments which provide great health benefit). Although it is unlikely that genetically resurrected carrots will capture the public imagination for generations to come like Jurassic Park's dinosaurs, this feat nonetheless increases the plausibility of bringing other prehistoric organisms back from extinction.

Iris Recognition:

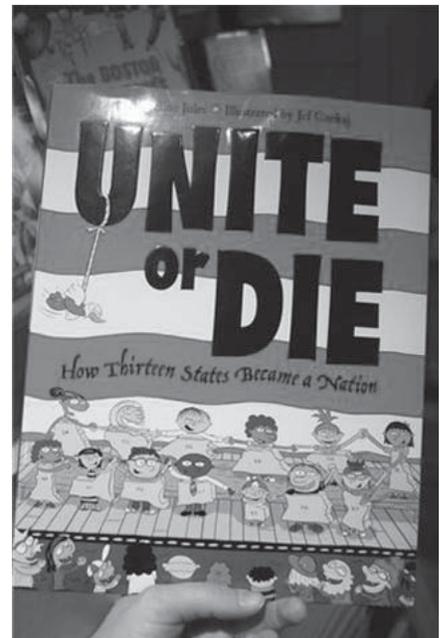
Devices that can scan fingerprints and eyes to identify the individual to whom they belong are common in science fiction, and fingerprint scanners have already become common in modern personal computers. Iris recognition is currently the most advanced form of identification technology, which can photograph a human eye from several feet away, and identify the individual by comparing blood vessel patterns within the iris of the eye. The accuracy of this technology is remarkable, with false identifications occurring

approximately once per billion scans, which is far more accurate than comparing finger print patterns.

The idea that every individual had a distinct iris was originally proposed by an ophthalmologist named Frank Burch in 1936, but the idea was hardly useful at a time when comparison had to be conducted by hand with drafting instruments. The idea was primarily kept alive through science fiction works, most notably the 1980's James Bond movies, until crude iris recognition devices appeared in the modern world around 1994. The latest models can scan an eye from several feet away, through glasses and contacts, and can make the identification from a high resolution photograph. This can be done without any consent from the person in question. Eye replacement procedures demonstrated by Tom Cruise in *Minority Report* remain the only known method of reliably foiling the iris scanner (without drawing suspicion, of course).

The writers of science fiction have always been inspired by the work of engineers and scientists, taking real technology to impossible levels, all for great entertainment value. Occasionally, however, the process is reversed, and a great engineering idea is born in a science fiction story. Technological advancement may be structured on the purely academic subjects of mathematics, physics and chemistry - but its driving force still consists of creativity and imagination. Colonizing other planets, generating energy through nuclear fusion, travelling through hyperspace... even becoming the subjects of transhumanism may not be so far-fetched after all.

WTF Of The Month



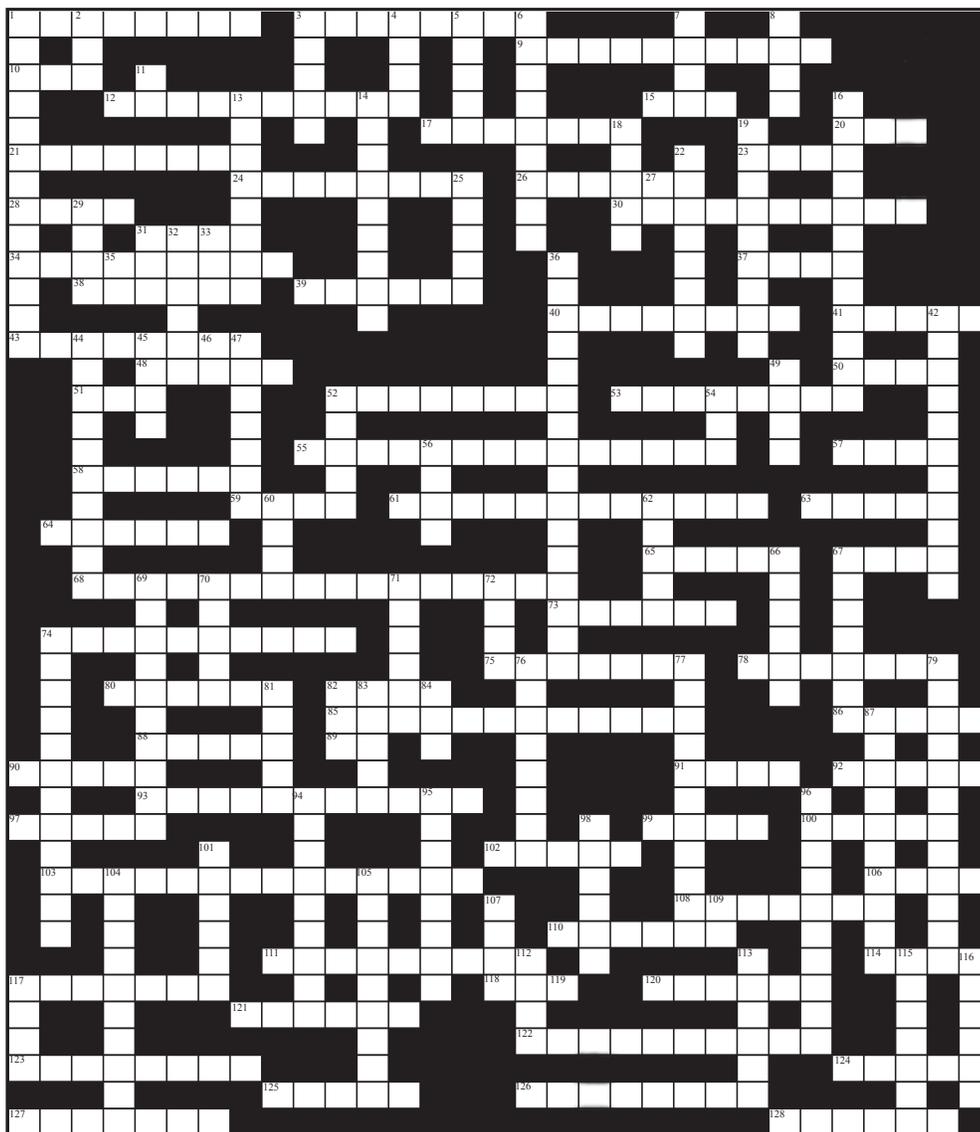
That's right, we never forgot about it. This little children's "education" gem was found in a gift shop in Boston. Apparently kids these days aren't chanting "America *%&# yeah" or "Vote or Die" at an early enough age yet.

WTF of the month is purely submission based so remember if you notice something that just doesn't seem right, or can be simply described as fubared, send it in.

I'm waiting for the holodeck to be invented.

Crossword

Nicole "Nickers" Waldrum
- SOFT III -



DOWN

1. They know the principles and practice of telecommunications
2. Start of the wk.
3. Make bridges
4. Computer-Assisted Learning Language Abbr.
5. Morning classes
6. Arts courses
7. Civil class
8. Assignments, projects and midterms all due the same week
11. March 14th
13. You're going to be an _____
14. They make planes
16. Like the ring ceremony
18. Alumni group
19. What a system is made of
22. A mid-term report
25. Dark drink
27. You spell it YOUR!!
29. Please bathe
31. Disco _____
32. It's a calling
33. Personnel branch of the Canadian Forces
35. Silence, drunk, maybe and not right now mean it
36. They make so many neat things
42. the use of machines, tools and labor to make things for use or sale
44. Pour it the right size before building
45. Electricals need to measure it
46. Artificial Language by Edward Foster
47. An abbr. stream
49. Promoting women on campus
52. Biomed research and develop them
54. Excavate
56. An Alumni
60. _____ fail!
62. What Environmental study
66. FSAE needs 4 of them
67. Complete it to graduate
69. They make cars
70. Not urban
71. Computer group
74. They take waste management
76. Periodic table contents
77. Unsuccessful
79. Suggest your own elective
81. You twirl it
82. Morning work
83. Build
84. Engineers around women
87. It has a deadline
94. Nameless author
95. 1004, 1005 or 2004
96. Igor and Alan motion
98. Number generation
101. It moves about things
104. Conduct a test run
105. I come from the net, through systems and places to this place _____
107. Many of these in a program
112. Grammar software with Lex
113. Not liquids or gases
115. Duplicate one system using another
116. It's all about it
117. You need them to complete your project
119. A special trip to Montreal

ACROSS

- | | | |
|---|--------------------------------------|--|
| 1. Electronic device for classes | 52. Castle defense | crafts |
| 3. Better pour it before it dries | 53. A date | 97. A floor of a building or a mine |
| 9. They're not real engineers | 55. March 5th | 99. 1010, 1101, 3800 or 4995 |
| 10. They're not engineers, yet | 57. 1 X w | 100. Symbol of sqrt(Var(X)) |
| 15. Out of the ordinary | 58. Won't desert you | 102. 48 hours to write it |
| 17. Computer _____ Engineer | 59. Synonym for Oceans | 103. The second law is an expression of the universal principle of entropy |
| 20. Cold | 61. An amateur certification | 106. Can take (int argc, char *argv[]) |
| 21. Graduating Item | 63. Not an int or a Double | 108. Automobile |
| 23. Convert | 65. Contract for Professor again | 110. Dam it |
| 24. Biomed deal with them | 67. _____ house | 111. Alabma race |
| 26. It's gaseous | 68. _____ with MatLab | 114. Write it 4 times a semester |
| 28. Small item | 73. MC 2000 | 117. A file that stores metadata |
| 30. Jet _____ | 74. IEEE E? | 118. Un dépôt de Québec |
| 31. The newest stream | 75. SCE RT? | 120. Final project stage |
| 34. Original questionable content item | 78. Linear _____ | 121. Should have protected the horse better |
| 37. It's a _____! | 80. Solves equations | 122. Not insulting material |
| 38. Relays the internet | 82. Food and drink place | 123. Kaeli |
| 39. Aeross like it lots | 85. Hardest workers of all | 124. To protect wood |
| 40. Software Algorithm | 86. Hmmm, good | 125. A good idea in class |
| 41. They're in Apil | 88. Data entry | 126. Signals and _____ |
| 43. They're like a computer science student | 89. Let it _____ | 127. A special group |
| 44. Without a partner | 90. Project choice | 128. Everyone is worried about them |
| 50. Measures the ability of a circuit | 91. ∫ A _e E·dA | |
| 51. Like RPV or UAS? | 92. Work on comptuer systems | |
| | 93. The techniques of operating air- | |

The singular form of alumni is alumnus.

LAST WORDS

Uses For The Charlatan

- Make Pykrete out of it to build an aircraft carrier to take over the world.
- Use it to clean up energy drink spills.
- Give it to your American friends to dry their tears after losing the hockey game.
- After shredding it, use it as packing foam for the items to be sent home that cost less than styrofoam.
- Lining you hamster cage, dog house, or little brother's room.
- Make costumes if your bridge team or facial interview group doesn't have a theme.
- Get your picture on the front cover to discover just how few people read it and notice.
- Learn about everyone's opinion on pot by noticing just how many of said articles have been published.
- Make party hats to be ready for the invasion.
- You can read it.

Sleeper of the Month



Sleeper of the month this time round goes to all participants of the 26th Troitsky Bridge Building competition. Virtually all members fell asleep on the bus ride out to Montreal after a long night of last minute final touches perfecting their bridges. Representing them is Nigel Nobel-Hearle who was seen fast asleep on someone's lap, on several separate occasions during the daylight hours of the trip. A fine example of one who sleeps when there is time to sleep to be well rested for the competition at hand.

* Sleeper of the month is entirely consensual and submission based. All people appearing in this section have given prior consent and have been informed in advance that their picture will appear here.

FEEDBACK LOOP

for statement = 1 to n

Depressed. Drink beer. Get fatter. Depressed.
Drink beer. Get fatter...

next statement

Chris would tap that

next statement

When guys don't shave, it means either two things. 1) They are too busy to care 2) They're trying to be manly.

next statement

One day when I'm a rich engineer, I'm going to buy the Edmonton Oilers and rename them the Edmonton Eulers.

next statement

LuonGOLD!!!!!!

next statement

Fluids is full of sexual innuendo.

next statement

birthday sex

next statement

School: Average <5 hours sleep.
Winter Break: Average 12+ hours sleep.
Guess when Engineers are more productive?

next statement

Put power drill to head. Feel IQ decreasing. Relief from Fourth Year Project.

end

Want to say something? Post to the loop at:
irontimes.engsoc.org

Upcoming Events - March

	1	2	3	4	5	6
					Troitsky 26	Magic Tournament/Lan Party
7	8	9	10	11	12	13
				Remembrance Day		
14	15	16	17	18	19	20
Pi Day						
21	22	23	24	25	26	27
			AGM		Ring Day Winter VAP	Reflections
28	29	30	31			

Watch out for the next



April