

April 2010

# Iron Times

The Official Publication of the Carleton Student Engineering Society

## BRIEFS

### Six Of the Best

I know a lot of people think it's impossible; it's an unfounded rumour, or a cruel joke, perhaps. A mistake's been made. Somebody pressed the wrong key at the Registrar's Office, or a computer glitch mixed me up with a real student who's toiled endlessly, completed their work, and actually passed their classes.

- Page 2

### Silver Bullets That Miss Their Mark

One of the most common myths among people interested in development, especially engineers living in the North, is that there is a "silver bullet" solution to address each development hurdle.

- Page 4

### The Hallways Are Not For Studying

While waiting for classes, there's always a mass of students continually crowding the hallways of the Mackenzie Building. This annoyance has continued for several years, ever since centralized scheduling of engineering classes began.

- Page 8

### The History Of The X-69 Maglev Aircraft

The early Cold War was a heady time for aerospace technology. With nuclear brinkmanship pushing the superpowers to develop ever more advanced technology in a bid to outdo each other, this was a time when anything seemed possible.

- Page 10

## INDEX

EDITORIALS	2
NEW EXECUTIVE	3
NEWS	4
ENTERTAINMENT	5
GALLERY	6-7
LAST WORDS	12

# We're Finally Rid Of Those Pesky Grads



**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

## Six Of The Best

Ian "Lasso" Ewing  
- AERO VI -

I know a lot of people think it's impossible; it's an unfounded rumour, or a cruel joke, perhaps. A mistake's been made. Somebody pressed the wrong key at the Registrar's Office, or a computer glitch mixed me up with a real student who's toiled endlessly, completed their work, and actually passed their classes.

Nope. It's really happening. I'm graduating. After six years, \$44,641.75 in tuition and other assorted fees, 9 courses set aside (that's failed and/or forfeited), and a cumulative CGPA of 6.23, they've given me my Iron Ring and accepted my application to graduate.

Don't worry, I can barely believe it either. It doesn't seem so long ago, you know, that I was a fresh-faced young frosh, equally nervous and excited, promising myself to make the most of...oh, who am I kidding. I feel old as shit. I can barely remember fourth year, let alone first year. I felt old when I realized that 90s babies were coming to university. This year, some were born in 1992. That's after the first Gulf War. I distinctly recall watching tanks roll across the desert during television coverage of the first Gulf War, and they weren't even born yet. Yeah, I feel old.

Most of the people I came to school with, the people on my floor in residence, the awesome guys and girls in my frosh group, and most of my longest-standing friends will never read this. Because they graduated already. Hell, some of them switched programs half-way through and still beat me to it. But that's okay.

Sure, they've had jobs for a year or two now, and sure, they all have nice new cars and ever-fattening savings accounts. It's okay, because I have something better. I've had six of the best years of my life.

### By The Numbers

6: Number of years it took Ian to graduate with a Bachelor of Engineering in Aerospace.

2: Number of courses Ian passed, re-took to improve his mark during a slow semester, and promptly failed, ultimately requiring him to take a third time.

98: Ian's average, in percent, in grade 12 when he applied to Carleton University.

5000: Amount of money, in dollars, that Ian's entrance scholarship was worth every year he maintained a 10.0 CGPA.

0: Number of years Ian maintained a 10.0 CGPA.

6.23: The surprising CGPA Ian has managed to achieve.

10.5: The surprisingly excellent CGPA Ian achieved in his Political Science electives.

58:10: Ian's personal best time in the 100m freestyle, achieved at 2005-2006 OUA Championships at Laurentian when he swam for Carleton in second year.

60: Number, in approximate percent, of class assignments Ian ignored entirely.

50: Number, in approximate percent, of classes Ian at-

tended overall.

95: Number, in approximate percent, of people who are at least a little suspicious that this whole "Ian's graduating" thing might be a hoax.

2: Number of times Ian won Sleeper of the Month. So far.

3: Number of times Ian tried to attend the Troitsky Bridge Building Competition before he finally succeeded.

25: Minutes Ian remembers of the Concordia Bridge Building Competition.

08: The year Ian was supposed to graduate.

09: The year on Ian's engineering jacket.

10: The year Ian is actually graduating.

0: Number of things awesome enough for Ian to trade his time and experiences here.



## The End Has Come!

John "Lazers" Koh  
- SYSC IV -

At least, I really hope so.

Five years. Actually, it's only four and a half. I started engineering in Winter 2006 so it wasn't even that far off centre. Still, it feels like I've been here forever. I can't wait to just graduate and get out. My hat's off to those of you who've stayed longer to graduate (especially those of you who are in the legendary seven years tier). I would have just given up if I knew I had to stay any longer.

Speaking of five years and seeing the end of things, I would like to say that I was amazed that the

Iron Times has lasted the year without destroying itself and is now printing monthly on a regular basis but that would be a complete lie. Sure, the Iron Times definitely had a shaky start. We only had one issue in the first term and it looked very grim for the next term (turns out that classes and exams actually require time commitments. Five courses + 4th year project + Iron Times = Totally doable, right? Wrong! [/lexluthor]) However, in that failed first term, I neglected my editors and just told them to edit submitted articles. I was going to deal with the layout and printing, all by myself. Turns out my team of editors are actually very competent at what they do and they can actually help me do things faster. Once I realized this and just how helpful they could be, I wasn't surprised that we were back on a regular schedule. I should have just asked my editors to help out earlier. Oh well. I'm just thankful that my editors are very good at what they do and that I tricked got Nolan to become an editor-in-chief alongside me to pump

those issues out. Thanks, I appreciate it.

While I'm already kissing a ton of ass, I'd also like to thank our writers and contributors. Despite popular belief, all writers and contributors are not created equal. However, your submissions keep the Iron Times going and I'm definitely thankful for that. Please remember that the Iron Times is entirely submission based and without you, it would not be here. Thanks, I appreciate it (but not as much as the editors).

My reign of terror as the editor-in-chief of the Iron Times has ended. I'm actually a little bit sad that I'll be letting it go. I've had a lot of stress fun working on the Iron Times and I hope you've had a lot of fun reading. It's been fun writing, drawing and editing for the Iron Times over the last four years and I just hope that it shows with this issue, if not all of them. See you on the other side.

### From: The Editors <[irontimes@cses.carleton.ca](mailto: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 opinions,

and everything in between. Anyone can send their submissions, complaints, questions and concerns to [irontimes@cses.carleton.ca](mailto:irontimes@cses.carleton.ca)

### EDITORS-IN-CHIEF

John Koh  
Nolan Hunder

Thanks to all the writers that contributed.

EDITORS  
Ian Ewing  
Iwona Lazur  
Rumbi Muvingi  
Meghan Sali  
Adam O'Brien

© 2009 Carleton Student Engineering



# NEW EXECUTIVE



## President

**Suzanne "Ducktub" Swaine**  
- AERO III -

Hi C-Eng! My name is Suzanne "Ducktub" Swaine and I'm your CSES President for the 2010-2011 year. I think we've got a really great Council this year and I'm excited to work with everyone to help CSES grow. I've got a few specific initiatives this year I'd like to focus on. This year I'd like to focus more on reaching out to international students and making our services more relevant to a wider range of students. I will also be evaluating all of our events for accessibility. I'd like to have our presence around C-Eng felt a little more so I will be encouraging all of our council members to make themselves more visible to members.

On a lighter note, a group of students in Ottawa for the summer will be redesigning and building Lady Godiva's Horse (a BIG wooden horse) so that in the Fall we can send it off to another engineering school as a show of friendship. If you're in town and want to get involved, keep your eyes peeled for signs and posters! Do you have ideas for our society? Please come talk to me or any of the council members! Whether it's an idea for how we can improve a service, an event you'd like to see, or even a t-shirt or clothing design you'd like to see sold in Leo's, come talk to us! The CSES office is 2090 MC and you're also more than welcome to email me (after May 1st) at [President@cses.carleton.ca](mailto:President@cses.carleton.ca). But for now it's back to studying, good luck on exams everyone and I'll see you in the fall!



## VP External

**Kevin "Assbeard" Atkins**  
- AERO I -

Hey, I'm Kevin Atkins and I am the 2010-2011 Carleton Student Engineering Society VP External. As VP-External, I liaise with external organizations such as Professional Engineers Canada, Engineering Student Society Council of Ontario (ESSCO) and many other student engineering societies in Canada. For my term this year, I plan on continuing the strong, respectable Carleton Engineering conference presence. Additionally, charity initiatives which occurred this year will continue such a Movember and the LAN parties, but be on the lookout for possible console gaming! If you have any further questions or suggestions for me, feel free to e-mail me at [external@cses.carleton.ca](mailto:external@cses.carleton.ca).



## VP Services

**Chris "Pretty Boy" Nicol**  
- AERO III -

Hello everyone, I am Chris Nicol and I am happy to be your VP Services Elect for the upcoming school year. In the upcoming year I hope to improve upon the relationship that our Student Groups have with CSES. This can be done best by coordinating with them to ensure that our services are most effectively being utilized. This starts with the Student Group Resource Center and ensuring that it is able to accommodate all groups that wish to use the space. It also means advertising the Equipment Loan Program and looking into any request for new equipment made by any students group. I also plan on continuing renovations to Leo's Lounge so that it can better suit the increasing number of costumers using Leo's daily. Lastly, I will be working on keeping the office's professional image as the Carleton Student Engineering Society's headquarters. I hope everyone has a great summer and look forward to serving you guys next school year.



## VP Finance

**Jordan "Crack" Briggs**  
- AERO III -

Hey C-Eng, how are ya? I'm Jordan Briggs, your incoming VP Finance for the 2010-11 Academic Year. As VP Finance, it will be my responsibility to be over see and control all financial matters pertaining to CSES. I am currently in transition with the outgoing VP Finance, and as Treasury Director I will be signing off on their budget at the end of this fiscal year. I'm really looking forward to my new position and the challenges and rewards it offers, especially the opportunity to get even more involved in CSES and really contribute to the society. Besides taking care of the basic accounting of CSES, I will also be over seeing Student Group Funding. As only about half of the funds allocated for student groups were distributed this past year, I'd like to see more of this used next year, so the plan is to have the first round of SGF earlier with the intention of having three SGF rounds instead of two. I also plan to continue with the outgoing VP Finance's efforts to organize financial documents and streamline book-keeping by using Simply Accounting. With the end of this year (and EXAMS) just around the corner, I wish the best of luck to everyone and congratulations to the lucky bunch who now sport iron rings. To everyone at C-Eng have a great summer and I'll see ya next fall!



## VP Pubs

**Kaitlyn "Topless" Stockermans**  
- CIVE III -

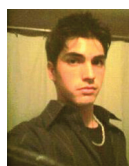
I'm Kaitlyn Stockermans, your incoming VP Publications. As the new VP Pubs, I am responsible for the lovely publication you are reading at the moment, the engineering handbooks, passports, and the CSES website. For the coming year I plan on putting out an Iron Times each month with the help of our wonderful writing staff: you. This means you should SUBMIT ARTICLES. I am currently working on the handbooks and passports. If you'd like to be involved next year, fire me an email at [publications@cses.carleton.ca](mailto:publications@cses.carleton.ca).



## VP Social

**Andrew "Rocksteady" Campbell**  
- MECH III -

Hello my name is Andrew Campbell and I will be your VP Social next year. I took over the VP Social position for winter term after Christian Keller graduated. I'm in charge of formal events, comedy nights, athletics and adult fun events. Next year I plan on working closer with the first year reps and trying to include more varied events to include a broader range of people.



## VP Internal

**Jamie "Invisible Man" Baressi**  
- AERO III -

Hey there C-Eng! I'm Jamie Barresi and I will be your VP Internal next year. Let me start this off by telling you that you should walk up and thank this year's exec for the amazing job they did. If you were in attendance at the AGM you'll most likely remember what this is going to say, if not here is what I mainly want to focus on as your VP Internal next year. The first thing I would really like to do for you guys and gals is to get the CSES Announce emails out before the beginning of the week so you guys will know what's going on for that week. This means it will most likely hit your inbox some time on Sunday. On the topic of

the Announce emails, I would like to advertise it more and make it more appealing for those of you who don't subscribe and for the incoming first years next year. It's an easy way to know what is going on with your Carleton Engineering community. That leads into the third of my major plans for next year; giving you, the members, better/earlier notice of GMs, your input is important for CSES to provide services for you that you want so let your voice be heard. The last of my major plans for next year is to review and change (if necessary) the CSES postering policy to make it more politically and religiously neutral so that we avoid any "unpleasantries" between member/student groups. As an unwritten plan for next year, that I'm sure the rest of incoming exec shares, I want to get as many of YOU involved as possible. We all need directors and you should apply for directorships at <http://getinvolved.engsoc.org/>. Good luck with exams and enjoy your summer holidays!



## VP Academic

**Josh "Canadian Pie" Coulbeck**  
- ELEC III -

Hi everyone. I will be your VP Academic next year. I have big plans for next year; I will be focusing mostly on getting Interface up and running, and run-

ning National Engineering Week (NEW). For those of you who do not know what Interface is, it is pretty much an engineering career fair, where engineers will come in and talk about their jobs. A few people have already shown interest in helping me with these events, but I could always use more help. If you would like to help with either of these events or apply to be a director, please send an email to [academic@cses.carleton.ca](mailto:academic@cses.carleton.ca). I look forward to working with you all next year.



## Farewell Last Year's Executive

Let's just pretend that Andrew isn't photoshopped in.





# NEWS

## Silver Bullets That Miss The Mark

Rob Sparrow

Over the last month I've been working with Engineers Without Borders Canada (EWB) in Lilongwe, Malawi. I've been continuing with my work from last summer, which I also spent working for EWB in Malawi. This time, I'm placed with the local non-governmental organization (NGO) Basic Services Development Agency (BASEDA) looking into issues surrounding water point functionality, and the systems that have developed in an attempt to tackle them. Something that I've been running into over the last month is the huge number of well-intentioned Northerners in Malawi (or back in their own countries) attempting to design solutions to the complex problems faced in rural sub-Saharan Africa.

One of the most common myths among people interested in development, especially engineers living in the North, is that there is a "silver bullet" solution to address each development hurdle. For engineers, this silver bullet usually takes the form of some technical innovation that, at first glance, appears to be a solution that perfectly addresses the problem. However, the issue of human development is incredibly complex, and for most problems no widely replicable one-time interventions exist.

Take, for example, the Play Pump, a technology that gained enormous publicity (and funding) in recent years. Basically, the Play Pump is a merry-go-round that raises water from aquifers in the ground as children expend energy spinning around. The water is piped to an above-ground tank which has advertising placed on it in order to raise funds for maintaining the pump, and water is readily available whenever it is needed. The Play Pump satisfies a large number of criteria for an appropriate development intervention: a

one-time installation of infrastructure, its use of children is innovative and marketable, it was developed in South Africa (homegrown solutions tend to equate to appropriate solutions in the minds of many people), and the use of advertising on the storage tank gives the impression of sustainability. Like most technical silver bullets, however, the Play Pump misses the mark.

The first assumption that the inventors of the Play Pump made was that the issue with water access in sub-Saharan Africa is one of effort – that if it weren't so much work to use a traditional hand pump, access to potable water wouldn't be an issue. The reality, however, is that the twenty minutes of work required to raise a family's daily water using a traditional pump is rarely even an issue. More important are the economies of scale to support private sector repair services and spare parts supply chains for when pumps break down, inequitable placement of infrastructure, and the prescription of inappropriate technologies. The list of missteps made in the development of the Play Pump goes on: prescription of a complex technology that requires specialist maintenance, a design that satisfies the desire of donors to provide toys for children but overlooks whether or not children are even interested, and an estimate of a community's water access needs that is wildly out of whack with reality.

The Play Pump, though one of the most visible and talked-about failures of the appropriate technology movement, is by no means the worst or the last. Northern donors and the public at large (not just engineers!) love the silver bullet technical solution. These are easy to understand, as they appear to address a problem at the surface while ignoring the complexity that lies be-

neath. A one-time installation of infrastructure is also easy to fundraise for, as there appears to be a direct impact and the cost can reasonably be covered by an individual or a small group. Most importantly, it satisfies the need of people living in the North to apply their technical expertise to the problems of those less fortunate, inevitably resulting in a technical solution to an economic, social, or cultural problem.

The tragedy of the application of technical fixes to non-technical problems is that failure is often ignored, or if recognized, is often seen as being "good enough". People believe that the Canadian engineer developing an improved cooking stove, though misguided, has his or her heart in the right place, and so should be commended for trying to make a difference. However, try relating this attitude to your last co-op job. Imagine if you had decided to design a groundbreaking new product that takes advantage of all the latest breakthroughs in your particular field. However, the product is too expensive for anyone to purchase, attempts to replace already established and effective technologies, and requires inputs that are impossible or infeasible for people to acquire. You'd be out on your ass pretty quick!

In Canada, we recognize that technical silver bullets don't exist for the problems we are trying to grapple with. In developing countries, we tend to believe that because the problems seem very basic to us (like getting people access to potable drinking water), our immense technical expertise can obviously mend the situation. This is not the case. It is our responsibility as Canadians, and as global engineers, to apply the same rigor and analysis to understanding and helping to address the issues being faced in the South.

## Reflections: When Engineers Look Their Best

Anali "Mimosa" Stewart  
- AERO IV -

It's spring at Carleton, and that means two things: exams are looming, and it's time to suit up for Reflections. This year's event was very successful; the food was great, the MCs were funny, and my favourite part of any formal: everyone was dressed up. As one might have realised in reading my last article about fashion, I am not the biggest fan of casual wear, which means that I delight in events such as Reflections. I can put on my heels and be as fancy as I like, without having to answer questions as to why I am so dressed up. This year there were several trends that were quite popular amongst the engineers, and I'm not sure if it was because they are in style this year or because smart people make similar stylish choices.

Women's Fashion:

**Black and White:** Normally when a formal event rolls around, it is the men who look like penguins; however, this year it was a very popular colour combination with the ladies. A little black dress is a staple of every woman's wardrobe, and a safe bet with the task of eating a meal involving gravy, but this year's engineers threw in a splash of white to liven things up. The contrasting look was done very well by several people in a variety of different ways so that Reflections was practically a black and white ball.

**Open backs:** I have always loved showing off a little bit of my back; it's a good way to show skin without look skanky. The back is an underrated body part on both men and women, and this year there were

many dresses that showed it off. Dresses varied from halter dresses to backless dresses, low-cut criss-crossing straps and a few low scoop necks. It might not yet be warm enough to sunbath, but there was plenty of glowing skin to light up the room.

Jaws dropped when Jennifer Lopez wore her flowing green Versace to the Grammys back in 2000, and the women of Carleton Engineering definitely deserved the same reaction that night. And also the lesson that double-sided tape can be a woman's best friend.

Men's Looks:

**The three piece suit:** When it comes to formal wear, there aren't as many options for the gentlemen. It was great to see the gents mixing it up with a variety of vests this year. The boys looked quite smart with both with the jacket buttoned up having pre-dinner cocktails, and loosened up and jacketless on the dance floor. One would have thought they had just gotten back from Savile Row.

**Colours, Purple and Red:** The black and white look may have been popular with the women; the boys of C-Eng were rocking out bright colours. There were several nice shades of purple in shirts, ties, and the occasional pocket square. Red will always stand out as an impressive colour, and maybe a touch manlier than purple; it was present in varieties ranging from deep blood shades to a bright cherry colour.

As much as it was amusing to watch the boys strip down during a sexy dance-off, I will always enjoy a well-dressed man. T-shirts and jeans are great on a day-to-day basis, but eng-boys definitely suit up well.

There were many things that made Reflections a hit, but I will always be someone who checks out what everyone is wearing, and this year was definitely a success style-wise. Congratulations to our graduating engineers, and they need not worry about going out into the workplace, as they can dress well enough to fit in normal society. And for the rest of us, we can look forward to dressing up again next year!

## WiSE/OCEPP Policy Conference Awards

Catherine Shearer-Kudel

Women students enrolled in an undergraduate or graduate engineering program at an Ontario university are invited to apply for a WiSE/OCEPP policy conference award. A number of awards are available and each covers the registration fee for OCEPP's 2010 Public Policy Conference on May 7, as well as accommodation at the Hilton Toronto on May 6 and a special networking dinner/event. Award details are available at: [http://members.peo.on.ca/index.cfm/document/1/ci\\_id/41056/la\\_id/1](http://members.peo.on.ca/index.cfm/document/1/ci_id/41056/la_id/1).

I can safely say that I was looking anything but my best at Reflections.





# ENTERTAINMENT

## Top Things I Learned From...

Nolan "Pi" Hunder  
- AERO III -

### Mythbusters

Mythbusters is a show that has taught us all many things over the years. Other than clarifying various myths and questions we've wondered about over the years, it has also revealed many insights as to how the world around us really works.

10. Failure is Always an Option.
9. Dignity Is Overrated.
8. Hollywood failed high school physics.
7. Nothing ordered off the internet ever works.
6. Everything creates shrapnel.
5. All cooking lessons require firesuits and safety masks.
4. The best way to understand how something works is to first break it trying to use it for something else.
3. The uses of ballistics gel, duct tape, shock pads, and lube are endless.
2. Pain is your friend.
1. When In Doubt, Use More Explosives.

### Video Games

Despite what many people say about video games, I have to wonder just where I'd be without them. Video games have taught me many of the life skills that help me through both daily life and my degree.

10. Timing (Super Smash Brothers): I'd hate to see someone without a sense of timing try to merge onto a busy highway.
9. Driving (Mario Kart and other Racing Games): Don't get me wrong, I learned to drive from Young Drivers of Canada, but I can honestly say that my history of racing games certainly helped me.
8. Game Theory (007 Goldeneye and other FPS): This really comes down to knowing your opponent and the mental game of how to beat them.
7. Map Reading (Legend Of Zelda): Arguably the best introduction of how to use a map.
6. Teamwork (Halo and any Game with Co-op): Teamwork can't be taught, it can only be developed through experience
5. Resource Management (Sim City): The first true introduction to how to manage resources.
4. Time Management (Super Mario Bros): Don't finish on time and you have to start over again.
3. Focus, Practice and Determination (Guitar Hero): The first example of having hard work pay off was finally beating that one level in almost any game.
2. Hand-Eye Coordination (All): This is what video games teach and develop best.
1. Tetris: It pretty much explains itself.

### AERO 3841 Spacecraft Design

Most people are probably wondering why I'd be listing the most important things learned in a class as the whole reason to go to class is to learn. Well, this list while on the subject of a particular class, is not about its curriculum, but more about the unexpected lessons all those who took the class walked away with.

10. We're all gonna die.
9. Shorts are recommended lab attire.
8. Don't buy anything from Boeing.
7. We've only covered half the prerequisite topics required for this course.
6. It's not a good idea to stick a soldering iron up your ass.
5. You do not play with \$12 000 toys, you academically study them.
4. If no one says anything, the prof won't notice that the answers are posted.
3. Canadians don't like radiation.
2. Agencies are useless, and CSA is the most useless.
1. TA's do not mispronounce or misread your name, they simply give you a new one.

### Iron Times Editor

I started as an editor this year around October, and then got asked to be Co-Editor-In-Chief over Christmas. Since then I've learned many new interesting lessons about how the Iron Times gets made, how it almost doesn't get made.

10. Deadlines are just guidelines.
9. Everyone's a critic, not an editor.
8. Choosing which photos to put in the gallery can often be more entertaining than the event they took place during.
7. There is no such thing as too many reminders for your fellow editors.
6. There is no such thing as too much encouragement for writers.
5. There is no such thing as too much advertisement for potential writers.
4. Remember to edit the crosswords.
3. All feedback is given to you the day you were hoping to print.
2. Editing your own work is a lost art.
1. Taking a break to sleep for one hour will delay the issue one week.

### Firefly

Firefly to this day still remains as one of my all time favourite shows even though it lasted only 14 episodes. It is unofficially the most undeservingly cancelled show in history since sparking a devoted cult following, being voted on New Scientist Magazine's website as the World's Best Sci-Fi ever, and a mass movement to pressure Fox into bringing it back. This movement was partially successful with the creation of the movie Serenity, sequel to the show. This list is not about the sad story of its cancellation, but of what can be learned from the show itself.

20. When you and your crew arrive just in the nick of time it makes you big damn heros.
19. Sometimes the only way to get out with honor and dignity is ritual suicide.
18. Do something nice for a town and you just might get your very own riot.
17. Never try to save your sister's life when there's a dinner party at risk.
16. Work may be illegal; that doesn't mean it's dishonest.
15. If you're flying a ship, crash it, and kill everyone on board, make sure to let the captain know afterwards.
14. Sometimes the best way for a captain to settle a dispute with the pilot is to try and sleep with his wife.
13. Everyone else always makes a fuss if someone shoots you.
12. When you kiss someone, take a moment to check to see if you're going to pass out.
11. Dress yourself up and you get taken somewhere fun.
10. Trying to get yourself lit on fire can sometimes cause you to neglect your duties.
9. If you have a hole clean through your shoulder, it makes for a good spot for a spare tissue.
8. The human body can be drained of blood in 8.6 seconds given adequate vacuuming systems.
7. There is a special level of hell reserved for child molesters and those who talk at the theatre.
6. The work never ends, as at the end of the day after saving the entire crew, your wife still expects you to go tear off all her clothes.
5. When your sister's a ship, your childhood is complicated.
4. Some people look better in red.
3. If someone ever tries to kill you, you try to kill 'em right back!
2. The chain of command is the chain I go get and beat you with 'til you understand who's in ruttin' command here!
1. The bible is somewhat fuzzy on the nature of knee caps.

Video Games are also arguably the world's best babysitters, followed by TV and movies.





# GALLERY



It's a colour issue, I might as well have fun with the photos.





We should have dance competitions at every engineering event.



# The Hallways Are Not For Studying

Nicole "Knickers" Waldrum  
- SOFT III -

While waiting for classes, students continually crowd the hallways of the Mackenzie Building. This annoyance has continued for several years, ever since centralized scheduling of engineering classes began. There have been plots for revenge; ideas such as mopping the floor in Leo's then "accidentally" spilling it in the hallway to 3380 ME, or having a snowball fight and "accidentally" hitting arts students.

In addition to this, these students are incredibly loud. There is a study lounge in 3390 ME that the students waiting for 3380 ME continually disrupt. There are several locations around the university for students

to study and socialize. As a student that has been here for many years, I can tell you this study space has increased 150%! Seriously, all the spaces that there are tables in various spots around campus, they were not there before. The library itself has increased its study space for students exponentially. There is no reason that students should be sitting in the hallways outside of classrooms.

These students are a fire hazard, an emergency hazard, and a walking hazard; essentially, these students sitting and crowding hallways are just problem-

atic. However, no one is willing to fix this problem. If other students request that they disperse they're ignored, while if Campus Safety is phoned, they say either there is nothing to be done or they are too busy.

Students are continually inconvenienced by these students sitting in hallways. It seems as if consideration for their fellow students never entered into their minds. It is very aggravating to continually have to fight through hallways in order to get to class in a timely manner. Any students not willing to pull in their legs or stand out of the way should realize that they just continually inconvenience the others around them.

## English For Engineers Volume II

Gilles "Nightstalker" Messier  
- AERO III -

Last month's English for Engineers tackled similar-sounding words often confused and abused by inexperienced writers. With vocabulary now out of the way, English for Engineers now turns its attention to the vital glue that holds a sentence together: punctuation. Poor punctuation can ruin a sentence or an entire written work no matter how carefully chosen its diction. Despite this, punctuation is often – in this author's experience, at least – the most neglected aspect of students' written work. In response to this, I now present a brief overview of some common punctuation rules. As with any aspect of language, there will always be exceptions to these rules; the following is just a general guide.

### The Period:

The period needs no introduction. Period. As almost nobody misuses the period, the opportunity will be taken to discuss the issue of sentence length. Many writers have a bad habit of writing long, run-on sentences in order to cover as many ideas as possible at once. This can lead to great confusion on the reader's part. There is nothing wrong with breaking up an idea into shorter sentences: in fact, doing so often results in superior narrative flow. If two or more ideas absolutely must share the same sentence, however, the careful use of semicolons, colons, hyphens and parentheses (see below) can help improve clarity.

### The Comma:

After the semicolon, this is the second most oft-abused and misused punctuation mark. As a rule of thumb, the comma is used to indicate a pause or to separate ideas. If you are the comma-happy type, read your sentences aloud and imagine each comma as a pause. If, you, sound, like, William, Shatner, you're, doing, something, wrong. Sometimes a comma is technically appropriate but can actually be discarded. For example, in the following statement:

I used to think UFOs weren't real. Thus, when I first saw one, I thought I was hallucinating.

The comma following "thus" can be eliminated.

### Quotation Marks:

There seems to be great confusion as to when double (") and single (') quotation marks are to be used. Double quotation marks are used for direct, word-for-word quotation. Single quotation marks are used for paraphrasing (ie. not the original words). They are also used for quotations within quotations:

"And then the alien spoke to me," he said. "And said 'take me to your leader.'"

Also, when separating or ending a quotation, the comma or period is placed inside the quotation marks. If using a 'he/she said' statement, that statement is ended with a period. The rest of the quotation then begins with a capital letter (see above example).

### Hyphens, Parentheses and Brackets

Firstly, brackets are [] and parentheses are (). Brackets are used mainly for citing references ([1]) or for filling in missing or condensed sections of quotations:

"And [the alien spacecraft] came down, its lights glowing brightly"

Parentheses are used insert information tangential or supplemental to the current sentence. They work best if this information would not flow well in a spoken sentence. If an actual aside (the kind you would make while speaking) is needed, hyphen separation is actually preferable. For example:

As I didn't want to start a war (and was actually quite curious), I let them abduct me.

...can be better written as:

As I didn't want to start a war - and was actually quite curious - I let them abduct me.

### The Apostrophe:

The apostrophe is the subject of a frustratingly common mistake: plural and possessive confusion. If a word can be pluralized with an "s", no apostrophe is necessary. An apostrophe implies possession. Thus, "boys" means "more than one boy" and "boy's/boys'" means "that which belongs to (a) boy(s)". When using a possessive apostrophe-s combination on a word that already ends in "s," the apostrophe is simply placed after the original "s" (ie. "The Aliens' spacecraft").

The apostrophe's other function – to replace missing letters in a contraction – can override the plural-possessive rule. For example, the apostrophe in "it's" replaces the "i" in "it is". Thus, "its" means "that which belongs to it" and "it's" means "it is."

### The Colon

The colon is straightforward punctuation mark: it introduces a list or an important idea (unless you are a doctor or biologist...but let's not go there).

### The Ellipsis

This is the formal name of the triple period ('dot-dot-

dot' in spoken conversation). The ellipsis indicates an omitted word or phrase, a pause or the trailing of a sentence into silence. For example:

"And then the aliens..." He paused and swallowed hard. "...probed me up the..."

The ellipsis can also be used to excise undesired segments of a quotation:

"Never...was so much owed by so many to so few."

(The actual quotation by Winston Churchill is "Never in the field of human conflict was so much owed by so many to so few.")

And finally...

### The Semicolon

This is quite possibly the most misunderstood and misused punctuation mark of them all (except by programmers). Simply put, the semicolon connects two sentences that would otherwise have to be separated. For example:

Some of the experiments were quite pleasurable; the probing, however, I could have done without.

Thus, before using a semicolon, read the sentences you are trying to connect; if they can be separated by a period without modification, then the semicolon applies. Semicolons can also be used to un-clutter a list, as described in the commas section.

### Bonus: Sarcasm

One problem commonly cited with text messaging and email is the inability to reliably convey inflections and emotions such as sarcasm. Traditionally, sarcasm has been denoted by the bracketed exclamation mark [!] or an inverted question mark known as an irony mark, though neither are commonly used anymore. Recently, a new punctuation mark known as sarcmark (see image on this page) has been invented to convey sarcasm. This hasn't quite caught on yet, so avoid using it in professional papers (in any case, why would an engineering paper contain sarcasm in the first place?)





# Oliver's

Ian "Lasso" Ewing  
- AERO VI -

I spend a fairly impressive (depressing?) amount of time in bars. I enjoy them. I understand them. Simple, short patterns of conversation and action lead to simple, predictable outcomes, and the patterns are, for the most part, common across most varieties of bar. In fact, I can't think of any public place I feel more comfortable than a bar. Walk into virtually any bar, anywhere, and flagging down a waitress to ask for a drink or request a different game on TV should be simple and stress-free. Low lighting, non-offensive music, and other customers who understand the same patterns make a good bar nothing less than poetry in motion. Soothing, thirst-quenching poetry. This simplicity and commonality is why I find it confusing that I don't like Oliver's.

I should like Oliver's. For one, they have really cheap beer. Any place I can get \$12 pitchers is a place I should be happy to call home. For another, there are regularly multitudes of nubile undergrads populating the establishment. For aesthetics alone, I should appreciate the place. Thirdly, the food is of substantially better quality than the microwaved "cultural" cuisine of Mike's Place, and is on par with most pubs that aren't outright restaurants. The space has the capability to be tailored for various purposes. The bar itself is large and inviting, with enough room behind it to accommodate as many servers as they'd ever need. Finally, the large bouncers do a pretty good job of ensuring that the loudest, drunkest idiots don't overstay their welcome.

But in spite of these seemingly stellar attributes, I just can't enjoy myself there. Every time I walk in, I think to myself, Okay. Open mind – I should like it here. They have beer. They have pretty girls. What more can I want? I really do – I try to like Oliver's. And yet, every time, I end up walking out in disgust minutes later.

To begin with, it's too bright. The lighting is too bright. The paint scheme is too bright. In the words of someone involved in a recent discussion on the matter, it looks "like a middle school cafeteria." Now, there are bars that can get away with bright colours. Avant Garde is a terrific example. I can't quite put my finger on why, but Oliver's just should not be that kind of bar. It just isn't that kind of bar. Perhaps the reason is that the patrons of Oliver's look like they should be in a middle school cafeteria, whereas the patrons of Avant Garde still bear the tired eyes of survivors of whatever war-torn Eastern Bloc nation they hail from. Those guys have earned their right to bright colours and stylish European décor. Say what you will about my lengthy tenure at this university, but no wonder they ID everyone in Ollie's. I feel dirty drinking alcohol and ogling people in the place. It feels like a daycare.

There's another problem with the customers of Ollie's. They're snide. I don't know why, because they have nothing to be uppity about, but it's a feeling I get every time I catch a sidelong glance. Sometimes, I'll admit, it's to be expected. If I'm in an engineering jacket, or my flightsuit, or if I'm dyed purple, I can pretty much count on attitudes like that – judgemental eye-rolls following the brief and incredulous stares. But even when I walk in with a plain black jacket, a collared shirt or a hoodie and jeans, like every other guy in the place, I still get a feeling that somebody nearby is wondering, *What is he doing here?* It's like I'm in the wrong clique in high school all over again. It's the only bar I've ever walked into that I've been made instantly to feel like I had a massive snot bubble hanging from my nose.

Now's the point where I'd typically complain about the three-person-to-a-pitcher rule. But everybody already knows that's a ridiculous rule that does absolutely nothing to curb drunkenness and serves only to frustrate people who walk in in pairs. I'm not going to

bother with that any further. Instead, I'm going to use this space to complain about the inability of the establishment to maintain their beverages in suitable condition. On top of their poor draught selection, the bar seems incapable of achieving proper pressurization in their kegs, which results in the pitiful scene I've most often encountered, where they have, literally, up to half a dozen pitchers full of foam - scraped off the tops of other pitchers - sitting beside the taps. Even more appallingly, their tall cans, which come from a fridge with an adjustable thermostat, have ice chunks in them! And to top it off, if you decide that the hit-or-miss experiences with their beer aren't worth the trouble, don't bother asking for a gin and tonic. Because they don't carry that. Neither the gin, nor, apparently, the tonic. Skip straight to the vodka-Red Bull, because apparently that's all anyone under the age of 25 drinks.

The seating...oh, the seating. How do I even describe this? Crowding most of the tables right in front of the bar – where everyone has to go to order, since Oliver's doesn't believe in employing waitresses – is a recipe for unwanted jostling, table-bumping, beer-spilling, and angry look-making. Leaving open space for a "dance floor" makes sense if you've got a house band or even a DJ, but at two o'clock on a Tuesday afternoon, it's just wasted space. And since we're on the topic, I am simply unable to fathom what possible purpose may have been in mind during the planning of those ridiculous "booths". If they were curtained off from each other, a raised stage built in the empty middle area, and a brass pole installed in the centre of that stage with mirrors on the ceiling, it would all become clear. However, there is no pole. There is no stage. There are no curtains, no disco balls, mirrors, nor shiny sequins of any kind. And so what Oliver's has created is an uncomfortably large space, devoid of any hard, flat surface on which to place a beverage or meal, separated too far across to hold conversation, and yet too close to comfortably contain multiple separate groups. Those booths are, without a doubt, the most poorly conceived use of space ever implemented. And the bench seats aren't even comfortable.

But really, all of the things that I've complained about so far are forgivable. I'll overlook the idiocy of the interior planning, because there's usually enough space to get a table in the back if I want one. And I'll ignore the décor and atmosphere problems, because the aesthetics of the human element typically make up for it. The juvenile judgements made by other patrons can be brushed aside, since, after all, I'm not there to be approved of by a former prom queen or her new BFFs from SOCI 1001. I can even – honestly! – get over poorly-kept beer, given its happily low price. The thing that really irks me, the thing that makes me say, over and again, "Fuck this. Let's just go up to Mike's," is always the service.

As I stated previously, I spend a lot of time in bars. A lot of different kinds of bars. It's taken me a few years, but it's with some modicum of pride that I say I can probably get a drink, at pretty much any bar, faster than you. There's no real magic to it, but there is a certain code. It's in the smile and eye contact, a head tilt and chin raise, and maybe a slight hand wave – just a couple fingers straightened briefly to catch their eye. It's in where you place yourself, both relative to the bar, the taps, maybe the cash register, and with respect to other people. You're more likely to get noticed between two girls in low-cut tops (after they're served, of course) than you are amongst the crowd of half a dozen frat guys four feet away. You want your entire upper body to be visible, straight on to the bar, taking up as much of the visual field as possible. You want to be calm and patient, giving the bar staff a chance to get to you, without giving them reason to avoid you. Just little things, practiced regularly, and it's easy to get a drink before a dozen people who were standing at the bar long before you.

But at Oliver's, I seem incapable of getting a drink. I'd say they just don't like me, and I could accept that, but the thing is, it's not just me that gets singled out to be ignored. I've been in a group of 8 or so people who strategically separated themselves to stand variously around the Oliver's bar, who made up fully two thirds of the patrons at the bar, and we managed to get one order taken between all of us after nearly 15 minutes. There were two bartenders working the whole time. This wasn't amidst a busy Thursday night; this was a very quiet Wednesday afternoon. It's mindboggling how poor the service is.

I can break it down, too. One aspect is that they're slow. The depth of the behind-bar area is somewhat larger than typical, but it's still only maybe 8 feet across. To watch them try to traverse that distance, though, from the bar rail to the cash register and back again, one would imagine they're trying to cross the Australian Outback on foot. With a broken leg. Waiting for them to punch in an order and figure out the change due is worse. They just beg me to yell across the chasm, "It was 13.75. I gave you a twenty. I want a five dollar bill, a loonie, and a quarter – that's the one with the big deer on it!"

Another part of the problem is their complete lack of situational awareness. They seem to have no motivation to even try remembering who's next in line. Watching a barmaid move from one customer to the next is like watching a gaggle of 5-year-olds chase a soccer ball – no idea where it's going to go next, no idea how to direct it, and really no strong understanding of what to do with the ball if they ever did corral it. And like small children playing soccer, it's amusing only after you have a cold beer in your hand, which, in this case, you're incapable of obtaining. Even ten minutes after having finally received an acknowledgement from one barmaid that, yes, I would like to order a drink, she's bypassed me a half dozen times pouring shots for some Hannah Montana-lookalikes to my left and dropped and dented a pair of tall cans destined for white hat-wearing douches further to my right.

Meanwhile, the other bartender on duty has apparently been curing Ebola in the kitchen, because whatever he's been doing is significantly more important than serving drinks. When the aspiring immunologist returns to his paid duties, he wanders the cavernous space behind the bar, reluctantly meandering back and forth like the ball in a game of Pong, staring somewhere over the heads of the long-suffering and still-thirsty clientele. Ordinarily, one might presume the young man to be under the influence of a particular illicit narcotic, but one suspects the condition may be permanent in this individual. After fifteen minutes of futilely holding up large bills and vainly trying to get the attention of the staff, I turn to my comrade and say, as ever, "Fuck this. Let's just go up to Mike's." We do this, and are rewarded with a perfectly-poured pitcher of cold, delicious beer before the electronic confirmation of the debit transaction has even been received.

I won't feign knowing the internal workings of Oliver's. What I do know is that any business forced to turn a profit would be equally forced to boast significantly better service than Oliver's currently does. Whether it's a mistake in not having an experienced manager on at all times, a pervasive attitude of indifference throughout the employment hierarchy, or simply a lack of negative consequences for poor performance, I couldn't begin to tell you. But there is not a bar I've encountered, anywhere, that so easily and consistently manages to drive away my (somewhat substantial) business. And I know I'm not alone in that. In fact, sometimes I think the only way Oliver's gets any business at all is a result of significant on-campus promotion directed at impressionable 19-year-olds who have literally never been to another bar.

So that's where Ian spent the last 6 years.



# The Secret History Of The X-69 Maglev Aircraft

Gilles "Nightstalker" Messier  
- AERO III -

The early Cold War was a heady time for aerospace technology. With nuclear brinkmanship pushing the superpowers to develop ever more advanced – and sometimes outlandish – technologies, anything seemed possible. Yet among the fantastic menagerie of nuclear-powered, supersonic and space-faring vehicles developed during this optimistic period, one largely forgotten and mystery-shrouded craft stands alone as a truly astonishing attempt to shatter the boundaries of engineering. This project – designated "Supersonic Orbital Oersted Propulsion Project" or SOOPP –, was a top-secret program to create a magnetically-driven aircraft capable of attaining near-light speeds.

SOOPP had its origins in two late 1950's projects: PLUTO, a nuclear-powered cruise missile; and the X-20 Dyna-Soar, a U.S. Air Force spaceplane. In 1962, a project called PEGASUS under the direction of Dr. Miles Giessler was founded to combine these two technologies into a nuclear ramjet-powered single-stage-to-orbit (SSO) space shuttle. When the 1963 Partial Test Ban Treaty put an end to atmospheric nuclear experiments, however, PEGASUS faced cancellation. Desperate to keep the project alive, Giessler turned to former A.V. Roe engineer Benjamin Farrow. While at Avro, Farrow had developed an extraordinary idea: rather than carrying energy (ie. fuel) aboard an aircraft, why not provide this energy via external means? In Farrow's scheme, a constellation of satellites equipped with powerful electromagnets would generate rapidly rotating magnetic fields around the earth capable of carrying and accelerating specially-built aircraft to tremendous speeds as in a particle accelerator. Farrow called his system "Oersted Propulsion" after Hans Christian Oersted, discoverer of electromagnetism.

To Dr. Giessler, it seemed like the ultimate solution: a phenomenal vehicle that would simultaneously appeal to the military and double as an SSO spacecraft. With trademark salesmanship, Ben Farrow convinced the U.S. Army to fund the endeavour and the Air Force to install prototype magnetic generators on two Corona surveillance satellites. SOOPP set up operations at Groom Lake, Nevada, and on March 14, 1964 launched a subscale prototype of the magnetically-driven aircraft, dubbed the X-69. The prototype surpassed all expectations, accelerating to Mach 6 at 100,000 feet. Firmly convinced of the project's potential, the Air Force launched ten more magnetic satellites over the next two years while the SOOPP team readied a manned X-69 prototype. At the suggestion of Lockheed Skunk Works director Kelly Johnson, a scrapped Lockheed YF-12 interceptor airframe was converted by installing a small nuclear reactor and superconducting magnet array.

One major problem still plagued the project, however: at speeds above Mach 7 at 100,000 feet, atmospheric frictional heating would generate temperatures beyond the capabilities of any contemporary engineering materials. On the advice of Ben Farrow, SOOPP consulted Canadian artillery genius Gerald Bull. Bull designed an ingenious system whereby the air surrounding the X-69 was ionized and repelled using magnetic fields, encasing the vehicle in a frictionless vacuum bubble. Bull's infamous disdain for red tape and military secrecy led to a minor security breach, but as all research was conducted at Bull's artillery range in Valcartier, Quebec – far away from the SOOPP project's Nevada headquarters – the Soviets never learned of the X-69 project itself. Though Russian attempts to reproduce the magnetic cavity technology ultimately failed, their attempts eventually produced a silent magnetohydrodynamic drive for submarines. A single example of this system was installed on a Typhoon class submarine which mysteriously sank off the coast of Newfoundland in 1990.

With the magnetic cavity device installed, the X-69 was now ready for its first manned flight. On May 4, 1966, the X-69 roared off its launching rail with test

pilot Steve Rogers at the controls. Once captured by the satellite-emitted magnetic field system, the aircraft accelerated past Mach 25 at 150,000 feet, smashing the contemporary X-15's record. One hour later, Rogers has successfully circumnavigated the globe, the only non-astronaut on record to do so as quickly. The mission, however, almost ended in disaster when one of the propelling satellites failed, causing the X-69 to plummet to earth from 100,000 feet. Miraculously, as Rogers neared the ground, the X-69's onboard magnetic field generator repelled the earth's surface and slowed his descent. Rogers impacted in a cornfield in Iowa, his aircraft bouncing several times on its magnetic field before coming to a halt. Thinking quickly, Rogers manipulated the aircraft's newly-discovered Maglev abilities to lift off vertically and recapture another satellite. He landed back at Groom Lake several minutes later, demonstrating his discovery by landing vertically on the runway. Though nobody witnessed Rogers' actual crash, the X-69's magnetic field left telltale circular impressions in the cornfield that remained unexplained until recently.

Following Rogers' historic flight, the SOOPP team modified the X-69's magnetic generator and control system to allow fully controlled Maglev vertical takeoffs and landings. Tethered test flights revealed, however, that the original YF-12 airframe was unsuited to stable magnetic levitation. Ben Farrow, who had worked on the ill-fated Avrocar VTOL project, suggested a circular disk shape. The redesigned X-69B was completed in early 1967.

1967 saw another major breakthrough in the project. Project physicist Masado Banzai – inspired by the work of Nikola Tesla – realized that if the rotation and strength of the earth's magnetic field could be boosted, the X-69 could be propelled without the use of capture satellites. This approach had a definite tactical advantage, as a boosting station could be more readily guarded than orbiting satellites. Banzai established an experimental transmitter facility at Gakona, Alaska, where he successfully demonstrated geomagnetic field and ionosphere boosting. Back at Groom Lake, SOOPP further proved the concept by flying a small remote-controlled X-69B model using Banzai's weak magnetic fields. Following this demonstration, the SOOPP team received funding to expand the Gakona site to propel the full-scale X-69B. By March 1967, the new 180-antenna, 500 MW transmitter station and a sister transmitter at Tromso, Norway were ready for testing.

The X-69B first lifted off the tarmac at Groom Lake on March 15, 1967 with Capt. Benjamin Grimm at the controls. The Maglev takeoff system worked perfectly and Grimm was easily able to capture Banzai's boosted magnetic field. Suddenly, however, tragedy struck. A power surge in Alaska caused Grimm to accelerate to 60% the speed of light in under two seconds, killing him instantly. The aircraft was guided back to Groom Lake via remote control, where it was discovered that Grimm had been liquefied by the massive acceleration. Parts of Grimm's body had so thoroughly infiltrated the aircraft's systems that the vehicle had to be written off and scrapped. Such acceleration accidents became known among project members as "Mop and Bucket" incidents or "Soup(s) of the Day."

Despite this major setback, SOOPP continued its work – albeit under closer scrutiny by the Army. By January 1968 the team had completed the upgraded X-69C, which they hoped would be able to reach 80% of the speed of light. The magnetic air-deflection system would have been unable to handle frictional heating at these speeds, so the testing would have to be conducted in orbit. This presented a major problem: in the early 1960's, the Army had lost the right to conduct orbital launches to the Air Force and NASA. Consequently, upon the completion of the X-69C, the Army imposed a complete intelligence blackout on SOOPP in order to conceal their illegal orbital experiments from other

government departments. All communication within the project was by word of mouth: no phone calls, memos, photographs or copies of technical documents were allowed. All that remains from the 1968-1975 period are telemetry printouts from tests flights. One such printout dated July 19, 1969 – three days after the launch of Apollo 11 – indicates that the X-69C reached 90% the speed of light before telemetry suddenly stopped. A note scrawled at the bottom of the printout reads "lost." Though the pilot of this flight is unknown, it is suspected to be Maj. Adam Cook, the only SOOPP test pilot unaccounted for in later records, and presumed dead.

The SOOPP project appears to have been cancelled in February 1975, shortly after internal records indicate the destruction of one of the original propulsion satellites. It was later revealed that the Soviet Salyut 3 (Almaz 2) space station had test-fired an onboard anti-satellite gun at around this time. The fate of the X-69 prototypes and other SOOPP hardware remains unknown, although the Gakona and Tromso transmitter sites were later repurposed as the atmospheric research projects HAARP and EISCAT, respectively.

Despite SOOPP having been officially cancelled, it is suspected by some that the project has been secretly revived. On February 10, 2009, the defunct Russian Kosmos 2251 satellite collided with and destroyed a U.S. Iridium telecommunications satellite. In the aftermath of this incident, Russian Defense Minister Dmitri Mishkin commented that the Iridium constellation was "not what it seemed" and that the collision was "a fortunate accident." China had made similar comments following their demonstration of anti-satellite missiles in 2007. Shortly thereafter, the U.S. Government released official statements denying the existence of the widely-rumoured Lockheed Aurora hypersonic stealth reconnaissance aircraft. Many sightings continued to be reported in following years, however. Then, on December 9, 2009, mysterious glowing spirals were observed in the sky above northern Russia and Norway. Though later explained as the result of fuel leaking from a faulty Russian ballistic missile tests, the spirals have been described by a former SOOPP engineer as being identical to phenomena produced by the Tromso transmitting booster station.

Whatever the project's current status, however, SOOPP remains the single most impressive engineering feat in history, yielding breakthroughs thought nearly impossible. Had the project's hyper-advanced technology ever been released publicly, it can only be speculated how different the world would be today.

## WTF Of The Month

This month we'd like to recognize the crossword (answers online at our website) from last issue. This crossword apparently skipped editing from the original author, all junior editors, all senior editors, and everyone else on the Iron Times Staff. Thanks to this we'd like to apologize for the following mistakes:

Spelling Mistakes in the clues for 39 across, 59 across, 61 across, 111 across, 62 down, and the missing symbols in 91 across.

Spelling Mistakes in the answers for 1 down, 29 down, and 74 down.

The fact that the 44 across clue was meant to be 48 across, as there is in fact no 44 across.

There was no clue for 12 across, 64 across, or 72 down

The 10 across clue was meant for 12 across with no corresponding 10 across clue.

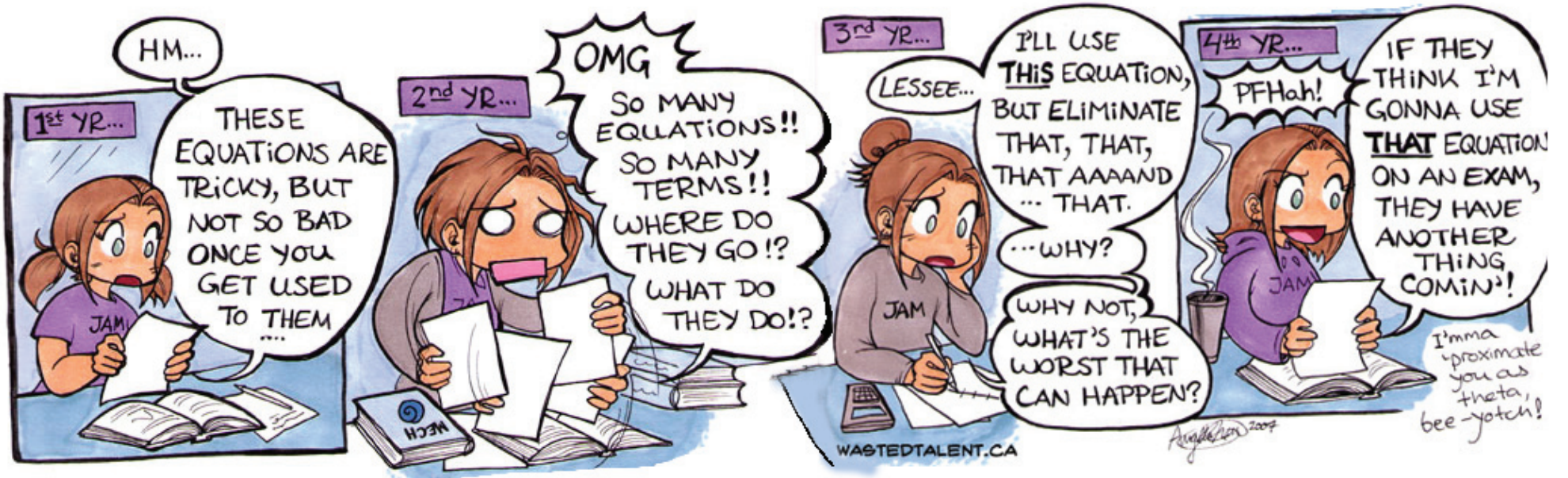
If you believe that, then I have a bridge to sell you in New York.



# COMICS & ART

## Wasted Talent

[www.wastedtalent.ca](http://www.wastedtalent.ca)



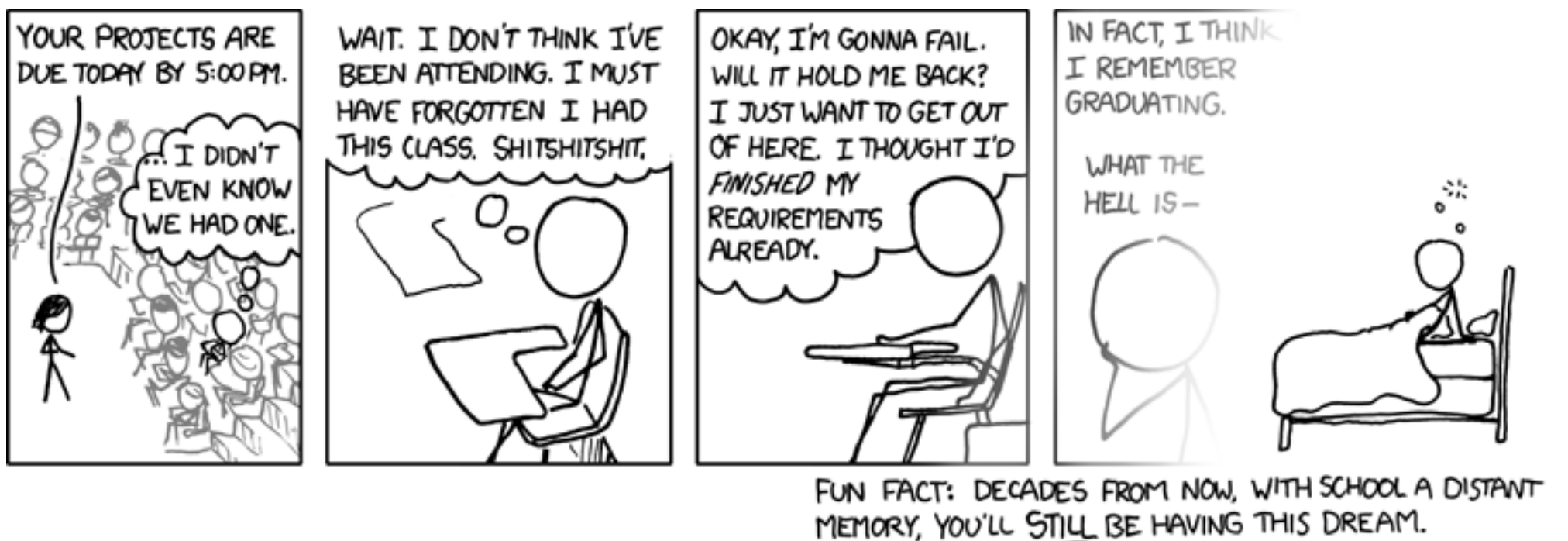
## Mac Hall

[www.machall.com](http://www.machall.com)



## xkcd

[www.xkcd.com](http://www.xkcd.com)



If Ian's gone, who's going to do all the last minute editing at 2:00 in the morning next year?



# LAST WORDS

## Uses For The Charlatan

- Use it as an adjustable and disposable stand to angle your catapult.
- A substitute for Ian's hat used to cover your eyes when you fall asleep in public.
- A substitute main ingredient in Power Bars.
- After shredding it, you can make a soft landing for the inevitable next time Andrew Campbell slides down a snowy bank.
- Compare it to the Iron Times for a fine example of how quantity will never beat quality.
- Use it to catch sawdust to help keep the classrooms clean.
- Have stacks of them set outside Leo's next to the Iron Times to make us look better.
- Make party hats to be ready for the invasion.
- You can read it.
- Read Adam Cook's obituary

## Sleepers of the Month



This month's Sleepers are none other than Ms. Max Turcotte-Novosedlik, and Mr. Ian Ewing. Both can regularly be found in the CMAS office either on the computer finishing up that last-minute assignment, or starting up a new CMAS poll while waiting for their next class to begin. Both have at least been nominated for Sleeper several times, and on this tiresome they finally claim the title. Congratulations once again to this month's sleepers of the month.

### FEEDBACK LOOP

for statement = 1 to n

Webct discussion is the new facebook

next statement

In regards to the dance competition, I just wanna say that Jordon, Quinn, Chris, Max, and Kevin, I was thinking of you that night.

next statement

She's an arts student, she should know how to spell poor.

next statement

The editors had better remember to include remembrance day this time

next statement

Shotgun Horse Director

next statement

Reflections was supposed to go till 2, not 1. That was not cool

next statement

No pain, no Vout/Vin!

next statement

I tried some of the uses for the Charlatan, it seems it's not even good enough for use as pykrete.

next statement

Thank goodness for mending kits

next statement

Swear to God, I'm done finding last-second mistakes.  
end

Want to say something? Post to the loop at:  
[irontimes.engsoc.org](http://irontimes.engsoc.org)

\* 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.

## Upcoming Events - April

			1	2	3	4
		Facil Pub	Winter VAP	Good Friday		Easter Sunday
5	6	7	8	9	10	11
Easter Monday	Tartan Day	World Health Day	Draw a Bird Day (DABDay)	Vimy Ridge Day		Moonbuggy Race
12	13	14	15	16	17	18
Yuri's Night	Lao, Cambodian, and Thai New Year		Jackie Robinson Day		World Hemophilia Day	
19	20	21	22	23	24	25
Bicycle Day	4/20	Founding Of Rome	Secretary's Day/Earth Day	Canada Book Day		DNA Day
26	27	28	29	30		
World Intellectual Property Day	World Graphic Design Day	Workers Memorial Day	International Dance Day	Bealtaine Eve		

Watch out for the next



September