



↑
PROTESTOR



Prez Sez

Hello everyone and welcome to the Spring '99. I'm very hungry and have a lot of work to do right now but I'm also a bit of a masochist which is why I'm writing this thing instead of attending a tutorial I really should attend.

There's a lot of stuff going on this term. If all has gone well you would have just attended our first movie night (Ronin and Out of Sight). Movie-Gal Jovie is in the room and she promises more chick flicks in the future. These Movie people could make me *really* happy if we see The English Patient, Les Miserables and Grosse Pointe Blank (wink, wink, nudge, nudge).

Hawaiian Pub Night is tonight at the Bomber! You've never had so much fun and you're not going to Hawaii anytime soon so you might as well come out. More details on activiites will be given as they become available.

<We Interrupt This Article For Some Arrogant Hypocritical Preaching>

Oh yeah, one more thing. You people in Math? You're all bastards. All of you. I can say that now that elections are over. Bastards. You're a bunch of apathetic jerks and the only reason you read this article is because you somehow thought it was *prof*QUOTES. You all walk by each other everyday and nobody says hello to a stranger. What's wrong with you? Are we at war or somethin... oh... touchy subject, nevermind. I mean it's not like you're walking through a mall during the Winter Holiday season when all the other shoppers are willing to kill you for a noisy vibrating Elmo doll. You're wandering the halls past your fellow students. People who work, cry, bleed, just like you do. Some of them even shower (when I find out who they are I'll let you know although I'm sorry to say that odds are they aren't single) And if someone drops something on the floor, like all her pencils, the least you can do is help her pick them up instead of walking on them and stepping on her arms and neck. Bunch of savages in this faculty. All of you.

Don't believe what a bunch of barbarians you are? Wait till your prof hands back the last assignment at the end of a lecture. It's more obvious when they're left in one pile, but you can still see a bit of Lord of the Flies creeping out into the assignment-return system if they're spaced out.

So smarten up. Kiss each other. Hug. Be happy. Take up an office hour to better meet your fellow students and do something remotely nice for them (see below). Buy more food at the C&D. Give me all your money. Help the students who look like they're having trouble with their work, wherever they may be. And I don't just mean help them because they're cute and you desperately want to get laid. I mean help them because it's a nice thing to do, and then walk away with that warm fuzzy feeling inside instead of being the miserable bastard I happen to be.

<End Preaching>

My screen has just gone funny so I apologize if this looks like gibberish (well, like more gibberish than you'd expect from me), they probably won't publish this anyway and you won't care.

Our office requires more volunteers. Check out the schedule on the MathSoc office door (MC3038) and sign up. Also if you're interested in running Canada Day events on behalf of the Math Society (it's a big job, and apparently a lot of fun), contact your VP Activities and Services, Natalie Thompson. She can be reached at vpas@mathsoc.uwaterloo.ca.

You may have noticed that everything's new this spring. Well,

maybe you haven't noticed at all. And maybe "everything" really means "something". Screw it. There's a new Fed Exec (you can tell they're keeners because someone tricked them all into attending a Math Society Council meeting. They know better now). Investigations into Comfy Lounge changes are underway by the ever vigilant and always too damn busy for the rest of us VPA, Chris Brawn. If things go well expect some work being done (within our measly budget!) to fix up the lounge. Apologies for any inconvenience it might cause. Shouldn't be for awhile now anyway. We might trick Steve (you call him Snuggles, just like you say toe-mah-toe) such that renovations get done when he takes office. But don't tell him.

Most important: If you have any suggestions for improving student life, no matter how inane, remember: mathsoc@mathsoc.uwaterloo.ca

Bruce Lee-Shanok
President, Math Society

Guide to the BLACK BOX

A User's Manual

- The BLACK BOX is located in the 3rd floor hallway across from the Comfy Lounge.
- The BLACK BOX is meant for the submissions of articles, puzzle solutions, opinions, and bribes to the editors of *mathNEWS*.
- Any articles or opinions submitted to the BLACK BOX will be considered for inclusion in the next issue of *mathNEWS*. If you had no intention of seeing your submissions published, too bad.
- Any puzzle solutions submitted to the BLACK BOX will be forwarded to the respective puzzlemasters. Note that anyone submitting a puzzle solution is implicitly allowing themselves to be mocked in print by a puzzlemaster.
- Any bribes submitted to the BLACK BOX will be spent, inhaled, or otherwise consumed by the grateful editors. A running tally of bribes received will be kept and printed in each issue of *mathNEWS*.
- The BLACK BOX is **not** under any circumstances to be leaned upon by curious frosh leaders who have taken their nicknames from amphibious mammals.
- Please do not put letter bombs or other dangerous or explosive materials in the BLACK BOX. All you'll really accomplish is killing off some *mathNEWS* flunkey and pissing us off royally.

Thank you,

The Puppetmasters

What is up with MEF?

Hi everyone! This is just a quick hello from your Spring Term MEF director. I have a few important dates to share with you and a quick update on what MEF has been doing over the past term.

Important dates

The refund of the voluntary student contribution for MEF can be requested until Friday May 21st at 1:30 p.m. You must have your fee statement and your valid student card with you in order to obtain a refund. Come up to MC4046 during one of the posted times (see website) or arrange a time before the deadline by sending an e-mail to mefcom@undergrad.math.uwaterloo.ca with the required material and we can take care of the paperwork. If you do not request a refund before the deadline, you will not be able to get one, No Exceptions.

Anyone interested in being a member of the MEF funding council or the board of directors, nominations are open until June 25th. The nomination forms are available off the MEF website (<http://www.undergrad.math.uwaterloo.ca/~mefcom/>).

As well, MEF has \$18,000 to allocate this term for funding proposals. Again, all of the information and forms are on the website. All proposals are due no later than Friday June 25th at 4:00pm.

MEF Update

Last term MEF funded a variety of new proposals. Here is a

The FEDS Need a New Logo

The FEDS need a logo. The theme of the logo will be "Students Serving Students." "It is time to give the FEDS a facelift. Part of our plan is to increase awareness of the Federation," said Christine Cheng, President of the Federation of Students. "The logo change provides us with an excellent opportunity to involve students in promoting their student government."

As part of the search, students will be able to submit their design. The final decision will be made with student input.

In addition to the logo change, students may also alter the colloquial name if they so choose. It is the opinion of the FEDS Board of Directors that the acronym "FEDS" often has a negative connotation and some people even link the name to the Federal Government.

If you are interested in submitting a design, stop by the FEDS' office in the SLC, Room 1102, to pick up a short list of guidelines. Submissions are due on Monday, May 17th by 4:30 p.m. The designer of the winning selection will be awarded a prize which is yet to be determined. Questions can be directed to Chris Harold ext. 3780 or crharold@feds.uwaterloo.ca.

Chris Harold
Vice-President Internal, FEDS

brief outline of what was funded. If you would like more information about the proposals, please stop by the office and I will be happy to answer any questions that you have.

1. Linux at UW — This was funding for CD-ROMs so that Linux at UW could create a Linux library for CS students.
2. PMAMC&OC — This funding provided money for library additions such as *Real Analysis* and *Abstract Algebra*.
3. WIM — This funding was provided to help create a WIM website that will contain statistics about the Math Faculty and important event information.
4. Midnight Sun — This funding will sponsor a portion of the cost for encapsulating solar cells. With this funding MEF has become a bronze sponsor of Midnight Sun V and will have its name on the car when it races this season.
5. UW Library — This funding went to pay for a pilot of computer science abstracts. These abstracts are accessible from any computer on campus via UW library website. Please try it out and let the library know what you think.

Jennifer Cote
MEF Director S99

Top 10 Alternative Names For The Federation of Students

10. Bombshelter & Associated Businesses
9. Chris Buchanan's Neighbourhood
8. FED-X
7. Its name is: huh? Its name is: who?
6. We're Not The TurnKeys Dammit
5. Brave Supporter of the Still Profitable
4. The No-Robins Club
3. Two Out Of Ten Students Said Yes
2. Poorly Thought Out Venture Capital
1. I Can't Believe It's Not Government

gradNEWS

Hello '00 Grads!

On behalf of the Math Grad Committee for the class of 2000 I'd like to welcome all of you to what's going to be an awesome season. To ensure you're always up to date on the latest grad information, sign up for our mailing list. A mailing list and volunteer signup sheets can be found outside the MGC office door. Also located outside the MGC office door are signup sheets for grad pictures. This is your ONLY chance to have your gradua-

tion photos taken, there will be no photo sessions in the Winter.

You are a member of the graduating class of 2000 if your last academic term is in Fall 1999, Winter 2000 or Summer 2000.

Thanks,

Esther Small
The MGC Temp!

Wincentre: The Lowdown

Background

It should be pointed out that WinCentre is actually the name of the package by NCD which provides the NT session in x11 for an X desktop. The name WinCentre (or if you prefer WinCenter) became dominant because the term “wincenter” is used in the rsh command which calls upon the NT server to begin an x11 session. The system as a whole might be more accurately referred to as a Windows Terminal Server however the expression Terminal Server is already used for another MFCF service.

Microsoft Windows NT 4.0 Server — Terminal Server Edition is the base of the WinCentre system. The expression “Terminal Server Edition” distinguishes this operating system as a multi-user platform, as opposed to standard Windows NT 4.0 server. The problem with a bare Windows Terminal Server was that it communicated to clients using a new Microsoft protocol called RDP. RDP (Remote Display Protocol) is a GUI transmission protocol for thin-client to server communication. Unfortunately, it could not communicate with X terminals in x11.

In order to solve that problem two software packages are required to extend Terminal Server’s communication capabilities. Installed on top of Terminal Server is a package called MetaFrame by Citrix. This package provides a Citrix GUI protocol called ICA, and an X11 interface, but doesn’t provide some other tools needed to integrate into the local environment. For that, we resorted to a package called WinCenter Connect, for which MetaFrame is a prerequisite.

On top of MetaFrame is the package called WinCenter Connect made by NCD. This package supplies an improved x11 protocol implementation, load balancing, seat access restrictions (for licensing), NIS service for accounting, and can integrate the NT session with the X desktop.

Some History

Back in fall of 1997 MFCF began investigating the possibility of providing a multi-user NT environment for the undergrad community. The purpose was to provide access to PC (Microsoft) applications, with an emphasis on better word processing capabilities for students. At the time, the available software for this was stranded at NT version 3.51, with little hope of ever working with more modern versions of NT.

During the winter 1998 term it was learned that there would be a multi-user version of NT 4.0, produced by Microsoft, and therefore likely to have continued support. So an application was made to the Math Endowment Fund for some of the servers needed for the project (see <http://www.math.uwaterloo.ca/mfcf/mef-proposals/w98.html>). The application was granted. During the summer of 1998, MFCF experimented with a beta version of Windows Terminal Server and purchased four server computers.

The plan was (and still is) to operate four identical multi-user thin-client NT servers. All four servers would be equipped with the same software. All servers would be load balanced. All servers would be integrated into the undergrad password database using NIS. All servers would connect users to their network disk space on the undergrad file server (called hooke).

Load balancing and redundancy would ensure that even if a server went down, a user could seamlessly login to one of the remaining three and never need to know which server he was using.

A user could start a session from an any X desktop and automatically log into the least busy NT server. The user would use the same id and password as on other undergrad systems. The user would run Windows applications in a true Windows environment on an X terminal — WinCentre is not an emulator. His work would be accessible and transferable to the other UNIX systems.

First Trial

The first trial began in mid January. Actually we found students using WinCentre prior to the official start of the trial. A user’s account is automatically created from the NIS database on undergrad.math. All a user has to do is start a session and make one login attempt in order to gain access.

Application software was provided by Microsoft. Microsoft provided Office 97 for word processing. As well, Microsoft asked us to showcase Visual Studio 6. Microsoft has been extremely generous in the donation of software and licenses for this project. Microsoft has provided software free of charge and is providing licenses for all seats available to math undergrad students in the MC building. Providing WinCentre becomes preeminent.

The MetaFrame and WinCentre software however would not be donated and would cost well above \$30 000 in total. This would be a heavy investment for MFCF, perhaps the most expensive single software purchase MFCF has ever considered. With that in mind we have to be certain that WinCentre is worth it.

From the trial we needed to be able to answer the following questions. How well will this service be received by the students? How easy is this service to maintain? How easily can accounts be created and maintained? How well will load balancing work? How well will license pooling work? Can we restrict access to certain subnets and terminals if licensing requires it? How difficult will it be to integrate WinCentre into the undergrad environment — printing, user disk space, user ids and passwords?

Why two trial periods?

Originally there was only to be one trial which was to run for two weeks in late January. We were to let the undergrad students play with the system and see what happens to it. When the first trial concluded MFCF was to determine if the WinCentre package was to be purchased.

WinCentre was working well with respect to its primary purpose of providing Windows NT environment to the Math X terminals. However there were still many technical problems to work out. User profile information was not being copied in full to the users disk space. There was no automounting of user disk space on hooke. Some X terminals would not start a WinCentre session due to authorization restrictions. Some X terminals would simply crash while starting a WinCentre session. Internet Explorer had a tendency to gobble up user disk space with temporary files loaded from the internet.

It took us a while to learn how to install Visual Studio “correctly”. Most Windows software is written for single user PC use. Having said that, most packages do function well in the multi-user environment. Visual Studio however had a tendency to overwrite some multi-user versions of system libraries with single user versions — which would cause permission and

Continued from page 4

access errors and sometimes crash a session. We developed a special procedure for installing Visual Studio. You have to be careful about what and how you install on a multi-user system like Terminal Server — at least for now.

In addition there had been some question over which WinCentre version NCD was going to release for x11 service — we were testing an alpha version. We later learned that ongoing availability of this version was dependent upon uncompleted negotiations with Citrix. MFCF was unwilling to commit to WinCentre until these discussions were completed. As a result, Geac (our software supplier) gave us another two week trial period.

This was a break for us because we had developed some fixes for problems caused by Visual Studio. Also Microsoft had come out with their own variety of load balancing which promised to be more versatile than the WinCentre load balancing.. We also had a chance to correct or at least reduce the occurrences of panic failures on the older X terminals.

User Feedback?

In spite of the inherent faults that made the WinCentre system cumbersome, user feedback has been largely favourable. We have counted over 700 undergrad users that have actually tried WinCentre. I have received about 70 e-mails from students concerning WinCentre. Most people really like the WinCentre service and want it to stay.

At the same time many do complain about problems. The one that immediately comes to mind is the personal disk quota problem — understandable. This is a problem with three contributing factors. Windows applications can be disk hogs. Software is often configured to write temp or cached files to directories in the users personal disk space. Local disk quotas were not established with Terminal Server in mind. For the time being we will be striving to reduce the presence of temp and cached files in the users work space.

What's Next?

The version of WinCentre which was tested in the two trials was an alpha version which NCD provided to special customers for evaluation. NCD has, unfortunately, decided not to proceed with production of that particular version of WinCentre. This means we will need to test a current version of WinCentre if the project is to proceed. This will require applying a stand alone NIS service from NCD which we do not have yet. Probably a third trial will be required before MFCF can safely commit to WinCentre.

Actually these separate trials work to our advantage. After a trial ends we get a chance to evaluate the problems which WinCentre experienced. We can go in and re-work the entire system without causing a disruption to service. For example, since the second trial NCD has provided a new NIS patch to eliminate the need for a second password entry during login. Now user disk space will mount automatically. With each trial period the WinCentre system goes through a new incarnation which works better than the last.

Clayton Tucker, MFCF

Pete & Damian say: Come to Pub Night tonight!

*prof*QUOTES

“Did you hear that word, ‘converge’? That may be the last time you hear that word in this course. We don’t speak that language here.”

Cunningham, MATH 239

“Isaac (the course tutor) is actually just a machine that does balanced parentheses checking. We spent a lot of NSERC funding on him.”

Vasiga, CS 241

“Enjoy the sunshine ‘cause you’re not gonna see much of it this term.”

Vasiga, CS 241

“I’ve never been a professional wrestler.”

Vasiga, CS 241

“What course is this, anyway?”

Brown, STAT 230

And a few from last term...

“They called ‘mutex’, ‘synchronized’ in Java but it isn’t quite the same. I explained it to them. They didn’t quite understand.”

Buhr, CS 342

“Java was not designed to run concurrency. It was designed to run toasters.”

Buhr, CS 342

“This is the way you’d do it in a system... um... NT, I think it’s called.”

Buhr, CS342

*Has your prof said anything funny lately? Scribble it down and submit it to the **BLACK BOX**, so that we’ll know too and print it here.*

The Right Angle Café Proudly Presents...

Barbeques!

Every Tuesday and Thursday

11:30 a.m. to 1:30 p.m.

Cheapest Prices on Campus!

Come find us!

First floor courtyard, SW corner of the MC

(Near the big ugly blue CS sculpture)

Letters to mathNEWS

The Joys of Internet Publishing

The mathNEWS mailbox has a way of accumulating things. People read back-issues of mathNEWS on-line, and decide to send us commentary about it. Unfortunately, most of them never bother to tell us what they're talking about, and so we end up with a lot of incoherent messages concerning articles which were written when we weren't around. We thought that we'd share some of these with you.

For example, in Volume 74, Issue 5 (that's two years ago), a satirical "letter to the editor" piece was published concerning the toplessness law. It came with a little disclaimer at the top, to make sure that everyone knew that it was satire. Everyone, that is, but Thomas Moore (owlsnest@ciris.net), who wrote to us last month:

You must be some kind of Bible thumper or you must think all womens bodies are disgraceful. I, for one, believe that womens bodies are beautiful and very attractive to look at. Why don't you just close your eyes or leave the premises where women want to expose themselves.

At least, we assume that he was talking about that article. We're honestly not sure. Similarly, while we're not positive, we've got a pretty good guess that the following opinions (as expressed by netvista@kss.sd73.bc.ca at Kamloops Secondary School) concern an article called, "What to Do when the Sky is All Blue", from Volume 76, Issue 4... it was about the Canadian snowboarder who had done marijuana.

You are a fucking loser!!!! There is no reason that the medal should have been returned. Who cares if he had marajana in his system. It's because of fags like you that pot is not legalized. Have you ever tried it? I think you should get a life. Snowboarding and the gold metal winner Ross.R kick ass. Weed in his system just shows he normal and not afraid to give things a try, unlike pussy's like you!! WEED RULES!! JUST FUCKIN

DO IT!!!!!!!

Not only is it incoherent, with atrocious spelling, it doesn't seem like the author actually read the article in question. Upon receiving this choice bit of feedback, we approached Pete Lizak, author of the original piece. His comments:

"You are as nice as my little garden in my closet. Weed grows over 7 feet, so it's not going to be a good crop. Kind of like your parent's crop of kids."

Isn't that sweet. Of course, the crown has to be taken by the following e-mail, received two weeks ago in response to an article published four years ago (Volume 68, Issue 2) and written by none other than Sarah Kamal, by title, "Tall Skinny Chicken Boys Suck". The response:

You are a poor excuse for a human being! You talk of how superior your gender is, but you talk like a narrow minded hate monger. Human beings were created in God's image. Tall,short,fat,and of both genders. They are all beautiful creations regardless of their outer apperance. Yes there is a number of people who are childish and petty,and by your dictation you seem to be what you despise! One day when you grow up hopefully you will see the true beauty of people rather than their faults. Try loving someone and you may find that someone will love you back. From the inferior gender!

So Sarah, wherever you are in Western Canada right now, know that Stephen Maier (LAUDNUIM@webtv.net) disagrees with your humour piece. You know, at some point people on the web are going to figure out that we're not a serious journalistic endeavour.

Next issue: strange questions from clueless people.

Matt "So-Krates" Walsh
Sub-Editor in Charge of Correspondence

Everything One Needs To Know In Life Can be Learned by Reading mathNEWS

Yes, it's time once again to break out those issues from last term and discover all the sensational, thought-provoking articles that you missed the first time! (And after that you can check back over the other 59 pages.) Who knows, maybe you'll discover something so inspiring that it results in the discovery of a truth so profound that it will change the face of civilization as we know it! (Or at least you'll be entertained for a while.) But seriously, along with the continuing discussion on bell curves and course averages early last term, see if you can pick out some other useful odds and ends; for example:

1. Non-CS majors face a 9% tuition increase and CS majors face a 19% increase. [6]
2. Too much Freecell and Solitaire is definitely NOT a good thing. [2]
3. A cheesy-jalapeno bagel on the carpet doesn't taste very good. [3]
4. Can circular reasoning be flawed, and do poor initial assumptions lead to incorrect results? [5]
5. Failing a course is not the end of the world. [1]
6. Haggis consists of oatmeal, spices and ground-up beef or

sheep heart and liver boiled up in a sheep or cow stomach or intestine. [4]

7. Society is run by humans, and humans make mistakes. [2]
8. Teachers are people too. [1]
9. Change is often frightening, sometimes painful, and most often beneficial only when seen in retrospect. [6]
10. It may be possible to survive for a month on tomato juice and canned fruits. [3]
11. The point of higher education is to be able to learn how to learn. [1]
12. Math rules all and there is a free lunch. [5]

Not that it's necessarily all true, or even what I happen to believe, but hey, everyone is entitled to an opinion (including you! write for mathNEWS! Rebel against subliminal advertising!) and you might learn something when you least expect it. So shame on you if you don't have issues from Winter 99! You have no idea what you've been missing! Go get some now! Or then again, wait until the end of your lecture; you might even learn something when you least expect it there too.

Greg "hologrami" Taylor

Red Room, Red Room

Or, Red Room, Red Room

The bulldozers will be busting down the Red Room any day now to make way for more classrooms, computer labs, and office space.

A well-organized group of alumni, staff, and students are gathering signatures for a petition to stop the erosion of our Mathematics and Computer Building heritage. We may have lost the EMS Library, and we may have lost the seventh floor, but we'll be damned if we're going to let the Red Room go.

But first, a little history

The Red Room came into existence surprisingly soon after the original MC building opened. Originally named MC2015, it was years before the room settled down to MC1015. The room was originally painted white in a neo-modern minimilistic style, until the painters remembered that they were still in the 60's. At 70'x55'x20', the room had the largest cubic volume of any room on campus at the time: an incredible (70x55x20) cubic feet.

There are many stories to tell about the Red Room, in fact, there are so many that they would fill a room as big as 70'x55'x19'. Here are some of them.

- The Red Room once contained the second most powerful computer in the world: the VIC-21. This amazing little device was so powerful, the Pentagon kept a zipped-up backup copy of all of its security files. Graduate students and Faculty became the most prolific contributors to Russian computer journals of all time.
- Because of that PENTAGON.ZIP file, Russia not only benefited from our scholars, but also targeted the Red Room with several nuclear weapons. If the U.S. decided to start a war (which the Russians were assured would never happen), then Russia would not only bomb the Pentagon, but the Red Room as well. Concerned members of the University were assured by Russian officials that collateral damage would be kept to a minimum.
- The Red Room, unlike Prabhakar Ragde, has appeared in a movie. Gene Hackman appeared in some movie once where he had to be in some crawlspace. That crawlspace? Yup, the Red Room. You see, back then, computers had hundreds of cords and wires coming out of every port and board, and these cords and wires had to go somewhere. That somewhere? Yup, the crawlspace. Today's computers are much better since those hundreds of cords and wires are all now colour-coded.
- And who could forget the time Dave Winfield hit that bird in the outfield?

Are we misty-eyed yet?

With such a rich tapestry and history, it is clear that the Big

Red Room should not be subdivided into Little Red Rooms. And those Little Red Rooms may not even be red! Imagine, our treasured Red Room, turned into offices and labs and classrooms. Imagine, potential students on a tour in MC not passing by the Red Room and hearing "And this is the Red Room" before



continuing on their tour?

What can you do to stop this from happening? Fill out the form below and send it in to *mathNEWS* by using our **BLACK BOX** on the third floor. We'll pass them on to the group handling this protest.

If you don't act soon, the next time you pass the Red Room may be your last.

CAS

Yes! I want the Red Room to be declared a Historical Heritage Site to prevent it from being torn down and replaced by crappy little classrooms that will be too tiny since the Red Room really isn't that big to begin with and you've got to subdivide it into at least eight pieces, I mean, that's just the way the math goes, and an eighth of the Red Room is just some little 1/8 Big Room and who would want to learn Algebra in that? Why don't you just kick those students out of the WatStar lab; they're not even math students! I mean come on, what up wit dat?

Other enlightened comments:

Signature (please print clearly)

Cynic's Corner

De Voted Candidates

Yeah, I'm back; deal with it. Though usually my articles to start the term off aren't half bad, if I do say so myself, and I just did. But either way... without further preamble the topic for today is the provincial election.

For those of you who haven't been paying attention (and I fall into that category a lot), the Ontario election will be held this June 3rd. Harris called it last week. What you may not be aware of is that the next issue of *mathNEWS* to come out is June 4th, meaning this is my only chance to get in a mention before the votes are tallied. Unfortunately, I don't really know much about current issues since I haven't read a paper recently. (Darn Operating Systems! And I won't even be able to use that as my excuse this term.) But anyway, my first advice is to get informed; now let's see if I can practice what I preach. In the meantime, just some related things that irk me along with other topics to consider.

First of all, when elections are called "early" (and the PCs could have technically waited another year), I'd say it means the current government thinks they have a shot at winning (especially if people who aren't thrilled with Harris split their vote among all the other parties). Don't make any assumptions; make your vote count. Secondly, don't just consider current policies and budgets that are coming out now... getting 10 new doctors in a hospital should be weighed against the fact that 11 may have been lost last year due to cuts. And people are always trying to trick you! As an analogy, say I used to get a \$200 salary until they cut that in half; yet now they say I'll get 75% back in addition to what I'm being paid now! Sounds good until you note that this is \$100+\$75 and still not what I was being paid before. (Incidentally, there was a sign on the road when I was driving home at the end of April, put up by someone bemoan-

ing the fact that although Harris cut provincial taxes, his own (presumably property) tax actually increased.) Something else that bothers me is slamming other candidates. In the couple of PC ads I've seen, it's like Mike Harris versus Dalton McGuinty. They are leaders of entire political parties after all and it's not like they're even the only two running!

All right, since I'm talking about annoyances now, I do want to mention one particular thing that I really don't understand (and may be why the article is leaning a little anti-Harris, sorry). Last month at my student apartment I found little five page pamphlets in the mailboxes. A "report to taxpayers" on "Ontario Education" that included a little smiling picture of Mike Harris on the last page. But what I think is more upsetting than any content inside is the notation (in small print) "Estimated cost of production and delivery 20¢". As was pointed out to me, if they printed up (for example) 5 million of these, that's one million dollars they COULD have used to, I don't know, put into the education system itself?? I mean, I saw a lot of these things just sitting in the recycling box. And I know it wasn't a local phenomenon, these little pamphlets were down in Kitchener too. Why? Why, why? I don't get it; that seems to me to be a waste of money!

Anyway, I'm not saying definitely vote Liberal/NDP/Natural Law/whatever and stay away from the PCs. One should beware of rash promises by other parties too (especially birthday parties) and take their abilities to govern into account. Just be informed, and remember, opinions expressed are my own and those of the aliens controlling my brain. Until next time, bleeklsquif.

Greg "hologrami" Taylor

Guide to Coding Style

You've probably been told before that you need to write readable code. Being able to write a good, readable program can help your academic, professional, and (who knows?) maybe even your social life. If you follow these coding style tips, you'll be writing crisp, readable code in no time!

The Introduction

The typical compiler will spend only a few milliseconds reading your code. For this reason, the first few lines must hook the computer, and pique its interest. Lazy programmers often begin a file with the standard procedure:

Bad Code:

```
int main(void);
```

This introduction, while correct, is downright boring. The computer will quickly get tired of your code and open something more interesting, like the latest Quake patch. You can add zest to your writing by including certain keywords:

Good Code:

```
int main(int Monica, char* Lewinsky[]);
```

Better Code:

```
int main(int OvalOffice, char* Cigars[]);
```

The Body

A lot of programs have a great function declaration, but fail

when it comes to the function body. You have the compiler's attention; now you have to hang onto it! Look at the following code fragments. Which do you think is more interesting?

Boring Code:

```
i++;
```

Interesting Code:

```
Tuition *= 1.50;
//That'll teach them!
```

The Conclusion

When the compiler finishes reading your code, you'll want to leave a good impression. A good conclusion can make the difference between a successfully running program and an "ERROR 4: Tried to parse past end of file." Most conclusions contain three major elements, and it may take several revisions before you can combine the 'return', ';', and '}' in just the right way. But if you put them in a thoughtful order, the compiler will feel refreshed after reading your program.

The art of coding is just like any other art; it requires practice. If you use these simple coding tips on your next assignment, your prof will find it both more interesting and readable. Just don't tell them where you learned it, okay?

Steve Hanov

Life in the Slow Lane

Guess what? I'm baaaaaaaack!!

Hey everybody! How's it going? It's the Subliminal one, here once again to fill the dull void that is Friday morning with witty humour, keen observations on life, and just good, clean, wholesome fun!

...Except that it never turns out that way. Normally, I just end up running my mouth off on some silly thing, while trying to throw in any scrap of humour I can find. I know, you deserve better than that. Well, by golly, today you're going to get better than that! (You're going to run your mouth off on LOTS of silly little things?)

...Ummm, no...why would I do that? Heh heh heh...d'oh.

Okay, so you found me out. Shall we start then?

- It looks like Canada's hopes of bringing Lord Stanley home where he belongs rest with the team in the city that the rest of Canada loves to hate. The Toronto Maple Leafs are the only Canadian team left in the postseason, and with the top 3 seeds in the Eastern Conference gone, the Leafs look more and more like they will be representing the East in the Stanley Cup finals. I realize it's still early in the second round (by the time you read this, games 3 and 4 of the Leafs-Pens series will have been played), but I believe that when the smoke clears, we will see the Leafs get their first crack at the Cup in a long time. Sure, Pittsburgh is a talented team, and the third round promises to be a real goaltender's duel with either Byron Dafoe or (God forbid) Dominik Hasek at the other end of the ice. But, in my humble opinion, Pittsburgh, Boston, and Buffalo are teams that the Leafs should (emphasis on "should") be able to beat. You may laugh, and you may scoff, but I say unto you that I have waited my whole life to see the Blue and White carry Lord Stanley around, and I have faith that this is the year I finally get to see it happen. And if you're not down with that, I've got 3 words for you: GO LEAFS GO!!!
- I feel so let down. My last safe haven from the world of Corporate America has been breached. Now, keep in mind that I've been out of town for the last 4 months, and never really read the K-W Record all that often prior to then, so this may have been happening for a long time. Regardless of that, I'm still ticked off about it. I was reading the Saturday Comics — you know, the big, full-colour pull-out version. (Hey! I hear you snickering back there.) Anyway, on the first page, there's a comic "strip" called, "carsumer capers." (Yes, it is capitalized like that.) All this "strip" consists of is 3 panels with the company logo, which is a talking carface (who is called "Otto" for some strange reason), telling us one of the worst puns I have ever heard. And that's it! Oh, and we're told that this was "brought to you by Carsumer™, yadda yadda yadda." I realize that people have advertised in the comics section for years — but none that I've ever seen have gone so far as to make a strip out of their advertisements. Where have we gone wrong, people? How did we allow ourselves to reach this stage? I take this to be a sign that the Apocalypse is catching the next Greyhound to Waterloo.
- I just spent the last 4 months over in Kingston, as part of my program. I am part of the Math Teaching Option, and as such I am obliged to spend time as, of all things, a student of Queens University. When I went over there, I must admit that I did not think too kindly of Kingston. I simply did not want to be there. It was too far away from home, too far away from Waterloo, too

far away from the things and people that I valued the most. However, looking back, I must admit that Kingston is a pretty decent city. It's fairly well laid-out, quiet for the most part, and fairly friendly. It certainly is a student-oriented city — outside of the downtown, you couldn't walk 2 blocks without running into a convenience store or laundromat. Queens isn't that bad, either. (Hey, they have anti-Western T-shirts there, so they can't be that bad.) My big problem with Queens was with the pathetic excuse of a computer lab that exists at the Faculty of Education. There are about 30 computers, of which roughly 10 are PC's; the rest are Power Macs. There are about 600 people in the Faculty of Education that need the lab. Oh, and the lab closed at 9:45 pm. on weeknights, and sooner on weekends. You do the math. Oh well. Anyway, I did learn a big lesson during my stay at Queens: You really do get out of life what you put into it. I regret that I didn't realize this sooner into my term, because all of the interesting research I started doing at the end of the term conflicted with all of the essays and reports that I had left until the end of the term. D'oh. So, overall, I certainly had a better experience in Kingston that I thought I would, and I learned that you can't give up on something before you even try it. So, this is my one little shining nugget of advice that I can give to you: Take on new experiences head-on, and make the effort to do things. You'll find that you get out of the experience more than you thought possible. That computer lab, though — it was as bad as a talking carface.

Chris "Mr. Subliminal (not to be confused with a talking carface)" McGuire

Top Ten New Uses for the Red Room

10. Liberal party headquarters.
9. Deluxe Mr. Panino's Italian Sandwich franchise.
8. Home of the secret UW missile launching system.
7. World's largest popcorn popper.
6. ER surgery theater.
5. Demolish the floors above it and have an open-air courtyard.
4. Municipal landfill space.
3. Storage for spent nuclear fuel rods. The current location in the basement will soon be full.
2. Home of the world's first working Pentium III processor... made completely out of Lego™.
1. Paint Ball!

Steve Hanov

Snuggles Sez

It's like Simon Sez with a thong bikini on. No really, this is where wait a minute, I'm not on-stream president right now, I can say anything I bloody well please. Woohoo, no bloody disclaimer. Wow, that's reason enough to write articles in the summer term. Hello Everybody, I'm glad you're all skipping your classes to be outside so it doesn't bother your Calc prof when you scream Hi Snuggles due to the mental conditioning (AKA brainwashing) you received during frosh week. Hmm, I think a new paragraph is in order.

See, no reason for my formatting or grammar, I go to the next sentence or paragraph when I feel like it. [No no, dear Snuggles, you'll change paragraphs when **we** feel like it. — ΣEd] Hehe, funny story. During finals last term (insert cold sweat due to flashbacks here) a bunch of us were sitting around cramming for C&O (read: learning the course in a day) when someone commented on motivation. You know, if we had gotten off our asses at the beginning of the term and learned this whole course we would have done much better on all the assignments and the midterm. So that got me thinking about what motivates students. Obviously marks alone aren't enough because I still leave things to the last minute. And then I had it Why don't we just kill the bottom half of students every term. Everyone else within earshot objected, and for good reason too, after some quick calculations we realized that would leave us with 7.8125 students graduating (assuming a starting class of 1000). Never mind the messiness of amputating .1875 of a person, even though those would probably be the smartest, most motivated 7.8125 students ever, they simply wouldn't be enough to fill the demand of Mathies in the world. So I thought a little more, pulled out my calculator, applied the higher math that I've been learning here (Note: lots of required math, no required ethics or morals) and figured out that if we killed the bottom 9% every term, assuming we didn't lose any students except to execution, we would have the same graduation rate that we do now. And don't you think those students would have learned a lot more in their time here due to the unique motivation? We could even spur a little friendly competition by posting rankings every week or so. Just think of it, instead of a special phone connecting to the Governor in case of a last second pardon we could have an emergency phone to the Dean in case of last minute mark changes. See the kind of shit I think up when I'm dealing with the stress of finals. I think that's quite enough from Criminally Insane Snuggles, let's move on to Sexually Perverse Snuggles (Collect the whole set).

I really like summer time. It's not so much the gorgeous days, hot and bright weather that I like as the clothing (or lack thereof) that results. I can see the headlines now "Super Summer Selection Says Sexually Sordid Snuggles Sez". Actually that whole lack of clothing comment was only said so I could use that headline that I thought up earlier. Hehe, one of my many interesting conversations with Chrisby resulted in this brilliant comment "picture yourself, a woman, nice full breasts, [pause] no dick". Thanks Chris, that last clarification really cleared things up.

Well the scary thought of the day is that if you are reading this right when it comes out on Friday, May 14th then tomorrow I turn 21. That's right, the Snuggly One will shortly be legal for everything everywhere. I'm a little scared. I don't feel that old. Ah well, whatever, I'll be in Waterloo on my birthday visiting

and watching the Star Wars trilogy so you can all wish me happy birthday then. Here is the perfect example of my real age. I was helping plan activities for 8 & 9 year olds for my camp and figured out what they liked. They like making something, showing it off, then blowing it up, 'cause that is what I like. I get along great with kids cause I think like they do. ;) Ah well, back to the craziness.

Have a good term, I think I'll continue writing my articles cause otherwise it will set my therapy back. [Hmm... *Snuggles' sanity versus the sanctity of the English language. Choices, choices.* — ΣEd]

The Snuggly One
Snuggleupagus. What ever happened to the days
when Bert and Ernie were just friends?

lookAHEAD

mathNEWS

May 14	Issues with Issue #1
May 19	A stellar followup
May 31	Issue #3 production night 6:30pm, MathSoc (MC 3038)
June 4	Issue #3 comes to you

Math Faculty

May 14	Course Add Deadline
May 21	Last Day for 100% Course Refund
May 28	Course Drop Deadline
June 2—4	Winter Term Pre-Registration

MathSoc

May 14	Hawaiian Pub Nite (TODAY!)
May 20	Saving Private Ryan/The Thin Red Line
May 27	Apt Pupil/American History X
June 3	In Dreams/8mm

MGC

May 27, 31 & June 1	Grad Portraits taken
------------------------	----------------------

MEF

May 21	Refund Request deadline
June 25	Deadline for funding proposal submissions
June 25	Deadline for Nominations to Council and Board of Directors

Co-op

May 11	Work Term Reports Due Missed it? Sucker...
May 31	Employer Interviews Begin

Miscellaneous

May 24	Victoria Day
May 28	Happy Friday
May 29	Contented Saturday
May 30	Gloomy Sunday
June 3	Ontario Election Day

Coming Soon from MathSoc:

Cotton Candy Day

B.Y.O.P. (Bring Your Own Pool) Party

Spermatikos Logos #1

Welcome back everybody! It's your regularly sadistic puzzler, Gigi. I've decided to continue my theme from last term. Only since this isn't Winter, I've decided to change it slightly. Here's the first puzzle for you, hope you find it "fun". If you have any questions about it, you can e-mail me at gngarbet@artsmail. Any submissions can be placed in the BLACK BOX across from the comfy lounge, or e-mailed to either me or to *mathNEWS*, by 6:00 p.m. on Monday, May 31. Enjoy!

This week's puzzle — Summer is Warm

Julie, our first victim for this term, has decided to sign up for some activities through Campus Rec. Unfortunately, each of her first five choices conflicted with one of her classes (let's assume she needs these courses, and can't reschedule them). Can you determine when (day of the week, time of day - all are in the pm) each of the activities are, which class each of them conflicts with, and Julie's order of preference of each activity?

1. The five activities Julie attempted to sign up for are: Social Dance, the activity on Wednesday, the one that starts at 4:00, the one that conflicted with CS 351, and her fourth choice.
2. Neither CS 351 nor the 8:00 class (which was not Fencing) was on Thursday.
3. Fencing was earlier in the week than C&O 350, which was

before the 7:00 club.

4. Julie's second choice was the Thursday activity, which was not PM 330.
5. The 4:00 class was later in the week than volleyball.
6. Neither Ultimate nor the Monday activity (which was not Julie's first choice) conflicted with PMATH 330.
7. Julie's fifth choice was earlier in the day than PM 330.
8. The 7:00 class was neither Akwafit nor Julie's first choice.
9. Fencing (which is not on Monday) is neither PM 330 nor CS 342.
10. CS 342 was earlier in the week than Julie's second choice.
11. Volleyball was earlier in the day than her third choice of activity, which was earlier than the club that conflicted with CS 342.
12. Julie's first choice was later in the week than the 9:00 class.
13. Ultimate was later in the day than Friday's activity.
14. Volleyball (which was not at 9:00) was later in the day than C&O 350.
15. Julie preferred Akwafit over her Tuesday activity, the activity which conflicts with AM 433 over the 6:00 activity, and the 8:00 activity over the Friday activity.
16. C&O 350 is not the 6:00 class, and AM 433 was not Ultimate.

Gigi Garbett

Burbles

News You Can Lose

Government working for you: I always like to see government supporting culture and the arts, especially projects that gain international repute and help to show the world what kind of a country Canada really is. This is why I'm so pleased to report that a movie funded in part by the Federal and Ontario governments won the prestigious grand prize at the FREAK-ZONE International Festival of Trash Cinema in France. The film, entitled "Bubbles Galore", is the inspiring story of a producer of pornographic movies who has to face the challenge of training her leading lady in the ways of the art, and stars Nina Hartley, star of 300 other such films. The movie's credits thank numerous government agencies for their "generous financial assistance" in funding a "feminist sex fantasy". What is most surprising about this is that the film is only receiving national attention now, two years after its creation. I guess it had to make the rounds of the Telefilm Canada and Canada Council offices before being released to general distribution.

I was enraged recently to read about the epidemic proportions in which women in colleges across America are starving themselves to death for beauty's sake. Enraged, as I am whenever I find true human potential being cast aside in the quest for superficial satisfaction. Enraged, because I know that for every such woman who is unable to love herself there is an ugly guy like me who would gladly shoulder that responsibility. We have a society of people who are insecure enough to believe that they will never find happiness except by conforming to some imagined ideal. And that's why I'm such a strong believer in arranged marriages.

How to report a crisis (a quick-reference guide for TV news directors): First, upon learning of a crisis situation, interrupt the current program by displaying a message over the lower half of the screen. Use this space to disseminate unsubstantiated

rumours. Make sure to tell viewers to tune in at six o'clock to get the full story. On the nightly news, have the anchors read the reports of unconfirmed sources, accompanied by graphic stock footage and blurry aerial camera shots of the scene. Then cut to the reporter you have dispatched to the scene. This person will stand in front of some generic house or other building and explain that, although the police haven't released any useful information and they can't show you the scene, the intrepid reporter will remain there all night to provide updates. Show updates periodically, but make sure to only introduce one new piece of information at each opportunity.

For the first and second weeks, investigate every possible link with the crisis. Valuable occasions include funerals and other memorial services, as well as victim counselling groups. Of course, hospitals and people's homes can be covered at any time. Now is also the time to employ university professors and other recognized experts to blame video games, the proliferation of guns, TV, and the breakdown of family values before finally concluding that the motives of the perpetrators will never be known and the fate of the victims cannot be predicted.

In the third week, when public interest is starting to wane, find (or pay) some outspoken media personality to make objectionable comments about the crisis. Make sure you get statements from many of the crisis victims, as well as ordinary people. See if you can get the outspoken media personality fired. Then you can discuss freedom of speech and censorship. Finally, when the well of opportunity has run dry, do a detailed show analyzing the influence of the media, how it may have inflamed the crisis and caused additional suffering to the victims.

Richard Bilson

With files from the National Post

mastHEAD

This week's guest editor: Harold & his tap-dancing flamingos

Hello everyone out there in mathematics land! When they asked me to guest-edit this fine publication this week, I leapt at the chance even though I had no experience in publishing, mathematics, or cross-country skiing. "No problem!" they said. So here I am!

So how did they choose me? Well, you see, I'm just a modest flamingo trainer who goes from town to town recruiting new birds for my tap-dancing act. It's quite the showstopper. I came to Waterloo last week to check out the birds of the Laurel and Grand rivers and after an extensive morning of bird-watching and catching, I had lunch at Harvey's. While there, this rowdy bunch of university students came in; from the sounds of things, they worked for some guy named Matthews.

So while I'm munching away on a poutine, this bunch start talking about who's going to be editor of this Matthews thing. I was thinking they were talking about some brochure or something for this Matthews guy. Anyways, there were four different guys who were vying for this editor job, which sounds like a really plum gig. Four of 'em! I mean, you can't have four co-editors!

So anyways, they are getting nowhere in this argument; they're just calling each other names now. Finally, one of 'em throws their arms up into the air and shouts "Fine! None of us will edit the damn thing!" and another one challenges him by saying "Well *someone* has to edit it!" so the first guy points at me and says "Him! We'll get him to edit!"

So I says "Hey, if it will cause you guys to become friends again, that a-okay by me. I'll edit your Matthews brochure, but

only if I can bring my flamingos with me." They agreed faster than you can get a tap-shoe on my star bird Heddie.

So, here I am, Harold, editing this thing! I was worried at first, but it soon became clear that the editor just sits around the office while everyone else does the work, so I'm just as happy as a tap-dancing flamingo.

Just so you know, here's the list of everyone who came out tonight to help out with this Matthews brochure, along with their answer to the question *Do we have a mastHEAD question yet?* Chris McGuire (It's still in the shower. Give it a couple of hours...), Gigi Garbett (Isn't that a parakeet over there?), Michael Thorsley (Isn't that Greg's problem?), Steve Hanov (It both exists and does not exist), Greg Taylor (Are sphinx fuchsia?), Derek Kisman (No, but I'm sure there'll be one by printing time), Chadwick Severn (This answer is the worst possible one to that question), Richard Bilson (That depends on what your definition of "is" is), and Matt Walsh (Actually, it depends more on what you mean by "answer").

Special thanks goes out to the dancing flamingos who entertained everyone during production night and to Marion at Graphic Services, without whom this brochure would not exist.

Harold & My Tap-Dancing Flamingos

Hawaiian Pub Night At the Bomber Friday, May 14



Come to the Bomber on Friday May 14th, and bask in the warm comforting atmosphere of the Bomber, with a Hawaiian feel. Be prepared for coconuts, palm trees, and tacky Hawaiian shirts. Don't forget the fruity drinks and pretty hula dancers.

mathNEWSquiz #1

When does the hurting stop?

Hey Mathies everywhere! It is I, the Subliminal one, returning to once again tickle your knowledge-starved palettes with brain-watering morsels of tasty trivia!!! (Then again, I may just be giving you a temporary diversion from your class, with a little dose of bribery thrown in.) Anyways, I hope that you've all had a great winter, and I welcome you back to the insanity that is the Squiz! For those of you who may be unfamiliar with the format of the Squiz, let me break it down for you one time. Below are 20 questions, broken up into 4 separate categories. You answer as many questions as you can, and submit the answers to me (I'll tell you at the end how to do this). I then mark the submissions, with each correct answer getting one mark. The submission which receives the highest score wins a fabulous/amazing/terrific prize (or, at least whatever the editors can pick up at the time). Any questions? No? Good. Without further ado, let's get on with the show!!

Music Lyrics

One point for identifying the song and artist of each, one extra point for identifying the underlying theme of the songs

1. "Who's always writing on the wall?
Who's always goofin' in the hall?
Who's always throwin' spit balls?
Guess who? (Who, me?) Yeah, you!"
2. "But he stayed in the city
And kept on changing clothes in dirty old phone booths
Till his work was through
And nothing to do but go on home."
3. "Cause when you say you will, it always means you won't
You're giving me the chills, baby please baby don't
Every night you still leave me all alone..."
4. "All my life I've been like this
If you love me it's at your own risk
When the dust hits my shoe
I got the urge to move."

Comics

1. In "The Wizard of Id," what derogatory term is the King of Id most commonly known as?
2. In "Dilbert," who is the Human Resources director of Dilbert's company?
3. In "Peanuts," who is Snoopy's desert-dwelling sibling?
4. In "Hagar the Horrible," what is Hagar's wife's name?
5. In "Mother Goose and Grimm," what is the name of Mother Goose's cat?

Trials and Tribulations of Stanley

1. The Detroit Red Wings are currently trying to become the fourth team in NHL history to accomplish what feat?
2. Of the 16 teams to make it to this year's Stanley Cup playoffs, which one has gone the longest without winning the Cup?
3. Who was the last person to win the Conn Smythe trophy (which is given to the most valuable player in the playoffs) but whose team failed to win the Stanley Cup that year?
4. Name one of the 2 players in NHL history to win a Stanley Cup the year before winning the Calder trophy (which is

given to the NHL's Rookie of the Year).

5. Name the last team to reach the Stanley Cup Finals after finishing the regular season with a sub-.500 record.

The Music of Pro Wrestling

1. Which wrestler enters the ring to the march of the bagpipes?
2. Which wrestler enters the ring to the strands of Nirvana's "Smells Like Teen Spirit?"
3. Ric Flair's entrance music is the theme to what famous sci-fi movie?
4. Who wrote and performed the Oddities' theme music?
5. Which wrestler had his latest theme song written and performed by the Canadian band, "Odds"?

Well, there you have it. Good luck to all of you. To submit your solutions, you can do one of 2 things. First, you can place the sheet of paper (or other material) with your answers inside the **BLACK BOX**, which is just located outside of the Comfy Lounge, on the third floor of MC. Secondly, you can e-mail your solutions to me at cjmccuire@undergrad.math.uwaterloo.ca. The due date for all Squiz submissions will be Monday, May 31. Again, good luck to all. If you have any questions or concerns, feel free to e-mail me. Until next time, keep smiling!

Chris "Subliminal 3:16 says I just stumped your ass!"
McGuire

Electronic Submission

In case you were curious

We've been getting a lot of people asking recently how you can submit to *mathNEWS* on-line, or sometimes blank looks when we mention that such a marvel is even possible. In light of this, we thought that we'd enlightened the great unwashed (that's you guys) as to how this whole thing works.

The mechanics are simple: type your article into an e-mail, give it the subject line "article" (without the double-quotes), and send it to mathnews@undergrad.math.uwaterloo.ca. (Or, of course, you can type it as a text file and mail us the file. Same thing.)

Some things that you shouldn't do: don't send us MIME attachments, especially not from pine, because they make our lives difficult. Don't send us MS Word documents, for similar reasons. And don't mail us files from Macintosh mail systems, because (once again) it complicates our lives needlessly.

If you're really keen, then you can provide us with some formatting. Our system is a lot like HTML, so you can use most of the same tags, *as long as you type the tags in lowercase*.

The Puppetmasters

ISSN 0705—0410

mathNEWS is normally a fortnightly publication funded by and responsible to the undergraduate math students of the University of Waterloo, as represented by the Mathematics Society of the University of Waterloo, hereafter referred to as MathSoc. *mathNEWS* is editorially independent of MathSoc. Content is the responsibility of the *mathNEWS* editors; however, any opinions expressed herein are those of the authors and not necessarily those of MathSoc or *mathNEWS*. Current and back issues of *mathNEWS* are available electronically via the World Wide Web at <http://www.mathnews.uwaterloo.ca/>. Send your correspondence to: *mathNEWS*, MC3041, University of Waterloo, 200 University Ave. W., Waterloo, Ontario, Canada, N2L 3G1, or to userid:mathnews@undergrad.math.uwaterloo.ca on the Internet.

Pulling the strings: Richard Bilson, Chadwick Severn, Greg Taylor, Matt Walsh

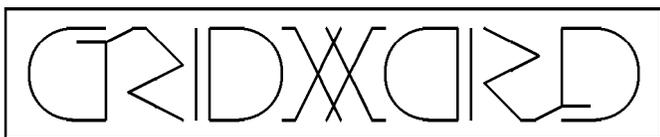
Grid Clues

Across

1. ___ pro quo
3. Same element, different radioactivity
7. Over there
10. What the devil makes you do
12. ___ and ginger
13. Opposite over hypotenuse
15. Relating to the nose
17. Australian domain suffix
18. Third-person neutral
19. Make fun of
20. Discharge milk
22. You (obs)
24. Rustproofer (abbrev)
25. Stall word
26. Cookies with cream filling
29. What the Teamster-Man drives
30. Arrow airplane manufacturers
32. Negation
33. Before
35. Hebrew God
36. Worshipful
38. A piano's black keys
40. Concerning
41. Morning (abbrev)
42. The Little Mermaid
44. Scottish lake
46. 'Til Daddy takes the T-Bird away
47. Defense org.
48. Tower or railway
49. Baby swan
50. Under, in French

Down

1. Open for debate
2. Bobby or Thomas, e.g.
3. Lyric poem
4. Bishop's area of influence
5. Disjunct
6. ___ Whitney
8. "Guns don't kill people" ppl.
9. Having different alleles
11. Accustom
13. Buddhist text
14. Treat with nitric acid (obs)
16. Where pigs live
17. How computers restrict who can use them (abbrev)
21. Adolescent pimples
23. Odd plus one
27. Where cowboys and clowns work
28. Talk show hostess
31. Stringed instrument
34. Edge
37. Thin, wasted
39. Diver's malady
43. Genetic material (abbrev)
45. What boys and big girls don't do
46. Scottish foe (obs)
48. A duck or a joke



1			2		3	4	5		6		
			7		8						9
10		11			12				13		14
		15		16					17		18
19					20	21					
				22	23		24				25
26	27		28		29				30	31	
32			33	34			35				
36						37		38	39		
40			41			42	43				
44		45			46				47		
				48							
	49								50		

gridCOMMENTS

They said he wouldn't be back!

Hey everyone. So, like, welcome to my summer vacation. You might be wondering why I'm spending it in the pages of *mathNEWS*. To tell the truth, so am I. But I've never gotten to be the GridGuy before, so here I am.

So you might think that coming up with one of these crossword thingies is difficult. Not so much. All you really have to do is sit in the middle of a busy hallway with your pencil and paper, and individuals seeking amusement will flock around you, brimming with helpful suggestions. Hence, while I may be GridMaster for this term, today's *gridWORD* would be impossible without the able help of WhoopAss, Anarchy, the Yakk, Princess, and of course, my Lovely Assistant.

So I hope that y'all have fun with it. Because of that whole long weekend, submissions for this *gridWORD* are due on Monday, May 31st at 6:30 in the **BLACK BOX**, or alternatively you can e-mail them to me at mathnews@undergrad.math, or just drop them off in our mailbox in the MathSoc office. So many alternatives!

Anyhow, enjoy the fruits of our collective labour. Be seeing you,

Matt "So-Krates" Walsh

PS. An old tradition that seems to have lapsed over the terms is that of the GridQuestion, to which you all submit solutions. In an ideal world, if there's a tie for most correct grid solution, then the prize goes to the person with the wittiest answer to the Question. So this week's GridQuestion is, *What's the best part about Spring terms?*