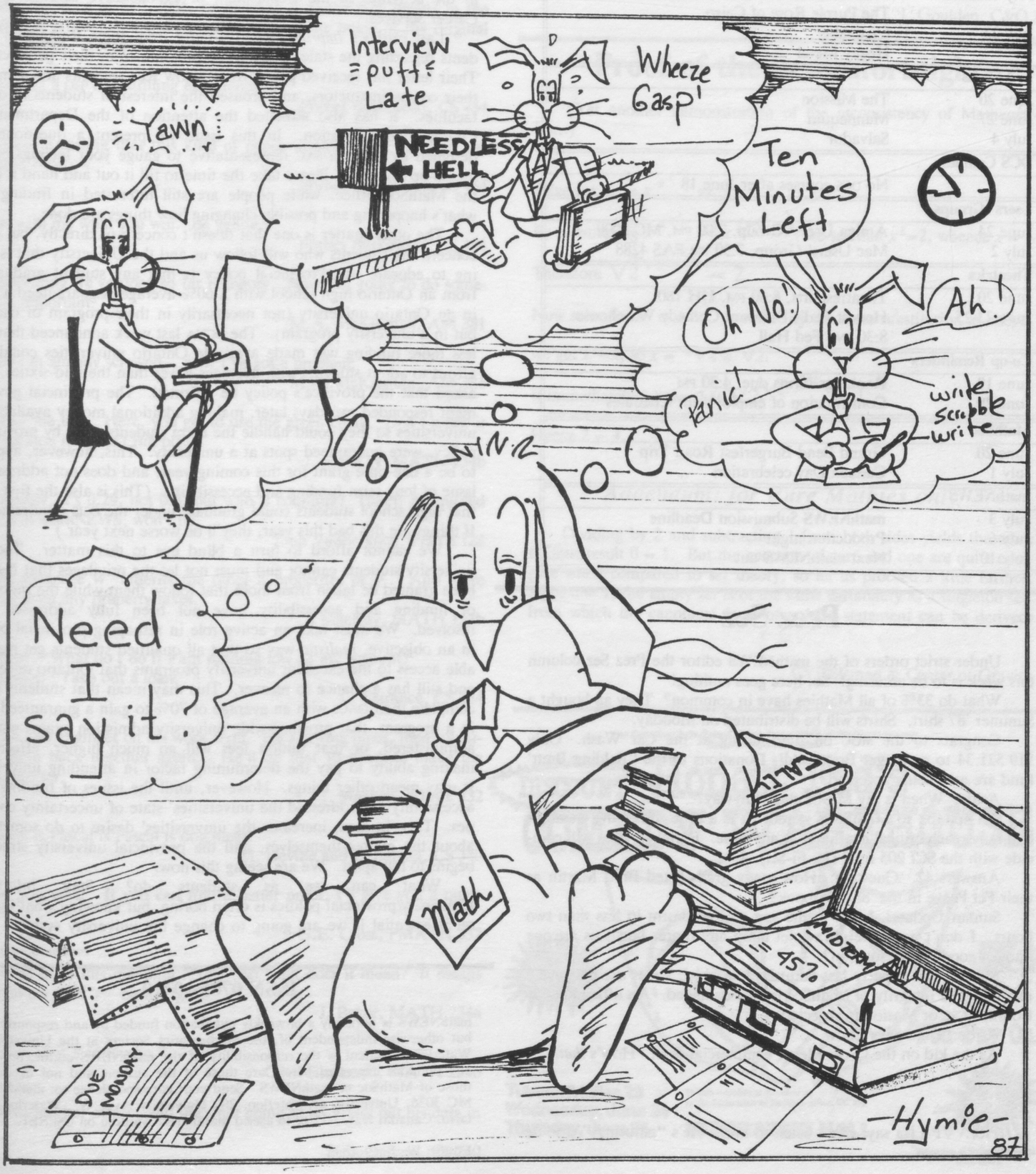
Volume 44 Number 3
Friday, June 19, 1987

math NEWS



LookAhead

Cinema Gratis	
June 24	Scream of a Butterfly
	Local Hero
July 8	The Natural
	Being There
July 15	Manhattan
	The Purple Rose of Cairo
July 22	Caninabis
	Heavy Metal
Fed Flicks	
June 20	The Mission
June 27	Mannequin
July 4	Salvador
DCS Courses	
	No DCS courses after June 18
Users' Groups	
June 24	Amiga Users' Group, 7:00 PM, MC 2009
July 2	Mac Users' Group, 7:30 PM PAS 4288
Theatrics	
June 20	Theatresports, 8:00 PM, HH 180
June 23-25	Honest Fed's Discount Comedy Warehouse
	8:30 PM, Fed Hall
Co-op Reminders	
June 19	Rankings forms due, 4:30 PM
June 29	Confirmation of employment schedules
MathSoc	
June 20	Grand Bend Burgerfest Road Trip
July 1	Canada Day celebration
mathNEWS	
July 3	**mathNEWS** Submission Deadline
July 6	Production night
July 10	Next **mathNEWS** out

Prez Sez

Under strict orders of the **mathNEWS** editor the Prez Sez column this week is to be amusing! So, here goes nothing!

What do 33% of all Mathies have in common? They all bought a Summer '87 shirt. Shirts will be distributed on Monday.

Congrats to the MGC on fund-raising at the Car Wash. Only $19 521.34 to go to get Brett bald! Donations to the "Balding Brett' fund are now being accepted.

Aside: When is my M SCI class, anyway?

An epitaph to MathSoc's stereo. It is a little under the weather, and may reach critical condition at any time. Burial services will coincide with the SCI 205 final (Hi-Fi-Sci).

Answer: 42. Question: How many grads listed Brett Martin as their Pet Peeve in the '88 Yearbook?

Suntan Update: I laid in the sun and got burnt in less than two hours. I don't need the ultraviolet lamp any more, but does anyone know a good plastic surgeon?

Marion had a party last Saturday, to which I was *not* personally invited. The integrity of MathSoc is thus damaged. An official policy from the CSC or Marion is expected.

Aside: Dino Says Chow.

As the kid on the Oscar Meyer commercial says, "How's *that!*"

Bill Tilford

P.S.: VP Lisa says don't listen to him! He's "amusing." (So he thinks.)

Edlines

Many things have happened around the University community in the past three weeks. Two things that caught my eye are the Ontario Council on University Affairs' announcement that qualified high school graduates students may not get to an Ontario university at all this year and the provincial government's announcement of more funds to allow these students to go, and the increasing student interest in the activities of the Department of Co-operative Education and Career Services.

Last Friday's *Imprint* carried a letter from some Recreation students regarding the state of the co-op program from their perspective. Their letter has received praise from fellow Rec students and some of their course instructors, and aroused the interest of students in other faculties. It has also attracted the attention of the Department of Co-operative Education. In this issue we present a questionnaire designed by a Math SAC representative to gauge your feelings about the co-op program. Please take the time to fill it out and hand it in to the MathSoc office, while people are still interested in finding out what's happening and possibly changing how things are done.

The other matter is one that doesn't concern us directly, but does concern the students who will follow us and the University that is trying to educate us. Provincial policy is that any student graduating from an Ontario high school with a 60% average is guaranteed a spot in an Ontario university (not necessarily in their program of choice, but in a university program). The OCUA last week announced that unless more funding was made available Ontario universities could not afford to admit students with averages lower than the mid-sixties, and asked that the province's policy be affirmed. The provincial government responded two days later, making additional money available to universities so they could handle the extra students who, by provincial policy, were guaranteed spots at a university. This, however, appears to be a one-time grant for this coming year, and does not address the issue of long-term funding and accessibility. (This is also the first year that high school students could graduate under the OSIS requirements. If things are this bad this year, they'll be worse next year.)

We cannot afford to turn a blind eye to this matter. Today's university students cannot and must not let the privileges that they've been granted be taken from those that follow them while the problems of funding and accessibility have not been fully addressed and resolved. We must take an active role in reshaping provincial policy in an objective, *realistic* way so that all qualified students get reasonable access to the excellent university programs that Ontario once had and still has a chance to recover. This may mean that students must complete their OACs with an average of 70% to gain a guaranteed spot in a program, that province-wide university admission exams may be administered, or that tuition fees will go much higher, effectively making ability to pay the determining factor in attending university. It may mean other things. However, until the issues of funding and accessibility are addressed the universities' state of uncertainty continues. This, in turn, increases the universities' desire to do something about the matter themselves, and the provincial university structure begins to fall apart. We are seeing this now.

What can we as students do? Stay informed. University/provincial politics is often boring, but knowing what's going on is essential if we are going to change the university system. Stay

continued on page 6

ISSN 0705–0410

mathNEWS is normally a bi-weekly publication funded by and responsible to, but otherwise independent of, the Mathematics Society at the University of Waterloo. Content is the responsibility of the **mathNEWS** editor; however, any opinions expressed herein are those of the authors and not necessarily those of MathSoc or **mathNEWS**. Send your correspondence to: **mathNEWS**, MC 3036, University of Waterloo, 200 University Ave. W., Waterloo, Ontario, Canada, N2L 3G1 or to userid mathnews@watdcsu on USENET.

Editor: W. Jim Jordan

Welcome back, my friends, to the show that never ends...

Prof Quotes

Yes, our profs have given us some wonderful gems during the past three weeks, and we figured we should let you in on them. If your prof (it doesn't matter what the course is) delivers a wonderfully worded, incredibly insightful, easily misinterpreted or hopelessly muddled line in a lecture, write it down and hand it in to us by slipping it under the door of MC 3036, or handing it to the nice people in the MathSoc office. Remember, **mathNEWS** is the home of the original Prof Quotes. Accept no substitutes.

"Forking a DSP is a thrilling experience."

Forbes Burkowski, CS 454

"I have a feeling that this kind of paper would not be accepted too well in Moscow."

Forbes Burkowski, CS 454

"Do with me what you will. Be gentle."

Forbes Burkowski, CS 454

"Everything we've done so far is theory...Now I'm going to do something important."

M.A. McKiernan, AM 381

"But I'm already screwed... er... I've got a problem."

M.A. McKiernan, AM 381

"Draw the line. Here, you get to use the green chalk. Don't screw it up because it doesn't rub off."

J. MacKay, MATH 134b

"Actually, it's 0.29, not 0.3, but who is counting? That'll get quoted *again* in **mathNEWS**, won't it?"

John Vanderkooy, PHYS 122

"The subspace W inherits the other 8 properties of V. And there aren't even any property taxes."

J MacKay, MATH 134b

Student: "What do I do if I am running low on my account?"
Professor: "Take out a loan."

C. Durance, CS 234

"That's an engineer on his work term. He's sawing pipes, then soldering them back together again... He'll do that 10 times to make the pipe shorter."

J. MacKay, STAT 332

"Pascal is Pascal is Pascal is dog meat."

M. Devine and P. Larson, CS 340

"Tell you what. If you can find a better proof, I'll give you a quarter."

G.E. Cross, PMATH 352

"So you have this mapping $P(v)$. So what does it mean? It means you take v and 'P' on it, right?"

J. Baker, MATH 234a

"We'll call it S for cyclic."

Gord Sinnamon, MATH 234b

"Karen has her own i, and she's not going to let Frank put his data in it."

F.D. Boswell, CS 240

"What happens if we have a couple more numbers? We would run out of blackboard. That's called a run-time overflow error."

F.D. Boswell, CS 240

"You shouldn't read a text or handouts as a Harlequin Romance. You go back and re-read it... think of it as pornography."

Charlie Haff, C&O 350

"All that was meant to bore you shitless."

I. Goulden, C&O 230

Proof of the Sesquifortnight

(Yet another demonstration of the inconsistency of Mathematics...)

Solve for x in $x^{x^{x^{x^{\cdots}}}} = 2$.

By substituting $x^{x^{x^{x^{\cdots}}}} = x^{\left(x^{x^{x^{\cdots}}}\right)}$, we see that $x^2=2$, whence $x = \sqrt{2}$.

Therefore $\sqrt{2}^{\sqrt{2}^{\sqrt{2}^{\sqrt{2}^{\cdots}}}} = 2$.

Now solve for x in $x^{x^{x^{x^{\cdots}}}} = 4$. By the same substitution as above,

we get $x^4=4$, so $x = \sqrt[4]{4} = \sqrt{2}$.

It immediately follows that $\sqrt{2}^{\sqrt{2}^{\sqrt{2}^{\sqrt{2}^{\cdots}}}} = 4$.

Hence $2 = 4$.

Addendum: for Pure Mathies only

Dividing by 2 and subtracting 1 from both sides yields the more famous result $0 = 1$. But the concepts of zero and one are quite complex when compared to set theory, so let us proceed a little farther. Since $0 = 1$, the empty set is of the same cardinality as a singleton set, from which the canonical form of a false statement can be derived:

$$x \in \not\emptyset$$

CYBERman & Center of Gravity

The Creative Arts Board of the Federation of Students presents
An UPSTAGE Production

DISCOUNT Honest Fed's
COMEDY WAREHOUSE

8:30 pm

You Pay Only
$4.00*

Tuesday, June 23
Wednesday, June 24
Thursday, June 25

Tickets available at the door or
in the Federation of Students office, CC 235.

FEDERATION HALL

*Federation of Students Members
$5.00 Others

Hacker's Hexadecathlon

Wheel wars have been a part of on-campus computing for some time (especially around Stanford and MIT). Waterloo has been spared much of this, but the urge to display knowledge and ability still runs high in many people around this place. To facilitate this, the hexadecathlon has been developed to test all-around hacking ability. There are sixteen events, as follows.

0. 100 Megabyte Core Dump–The object of this event is to warm up the competitors for the other fifteen. Contestants must simply write a program that causes a core dump of at least 100 megabytes of data. All software must be written by the competitor, but he/she (are there any female hackers?) may make any calls to the operating system kernel or lower levels of the machine if they know them. Points are awarded for size of the dump caused and time required. Bonus points for creating a dump that escapes the operator's notice.

1. Disk Crash–Competitors take turns at crashing the disk heads using only software. Each competitor gets six attempts, with the best one counting toward the final score. Points are awarded for the volume of magnetic oxide removed from the platter surface, with bonus points for scraping right down to the aluminium.

2. 110 Baud Hurdles–The object of this event is to break down international data communications security. Competitors must log on to a VAX in Australia using a specified home computer and 110 baud modem, making every wasted byte count. Points are awarded according to the time taken to complete the event, with penalty points for each warning issued by Datapac. Bonus points are awarded for completing the call through the USSR.

3. OS Swap–Competitors choose two computers and swap their operating systems. Porting MS-DOS to a Mac and emulating a Macintosh with a PC is all right for newcomers to this event, but more experienced players are expected to do something comparable to implementing CP/M for the IBM 3090, and MVS for the Sinclair ZX81. Bonus points are awarded for improving the usability and response time of both systems (as in the above case).

4. Terminal Conversion–This preliminary test of hardware skills consists of converting a standard VC303 terminal to a colour Sun-3/160–compatible using only parts listed in the most recent Radio Shack catalogue. Bonus points are awarded for hardware support of vector graphics and text blitting.

5. Stack Frame Vault–This is a simple event. Competitors must write a recursive program that will blow a limited stack. Points are awarded for the depth of recursion, with bonus points for successful computation of Ackermann (20,20).

6. Interface Race–Each competitor is supplied with an identical nonstandard bizarre peripheral device. Competitors must devise and fabricate the appropriate interface cable. Points are awarded according to the time taken, with bonus points for not using a rainbow-coloured ribbon cable.

7. Datapacman–This title can be read two ways, and both describe this event. Competitors must modify a national database from another city via Datapac. Points are awarded for the size of the database, the subtlety of the modification, and the length of the routing of the call. Points are deducted for each warning from the Bell Police. Bonus points are given for using BC Tel and for creating a new database.

8. Smallest Useful Ada Program–At last, a software challenge. Competitors must write a useful program in Ada (the judges decide what is useful and what is not). Points are awarded for the shortness of the program, as well as for the time taken.

9. Most Obscure APL One-Liner–Competitors must write a one-line APL function (the number of arguments is up to the competitor). Points are awarded for the number of fellow competitors who cannot understand the code, provided that at least one judge can decipher it. (APL has been described as a write-only language.)

A. Single Board Design–Given a 4004 CPU, a hex keypad and an array of 7-segment displays, competitors design and fabricate a single-board computer to specifications handed out at the beginning of this event. Points are awarded for time, with bonus points for building one more powerful than a Cray-3.

B. SNOBOL Fight–Competitors must write a garbage collection/memory management system for use in interpreted languages like SNOBOL and Prolog. Points are awarded for time, efficiency of storage allocation and garbage collection, and defeating the default system memory allocation limit. Detecting other programs of this sort on a multiprocessor system and disposing of them as well should be attempted by experts only.

C. Tightest Self-Modifying Code Loop–Self-explanatory. Competitors must write a program containing a self-modifying loop. Points are awarded for the speed of the loop, with bonus points for the elegance of the design and type of program the loop is in (*e.g.*, a chess program). Machine independence and resistance to stray gamma rays modifying memory gets double bonus points.

D. Binary Patch–Each competitor is given an identical piece of non-working core image. Points are awarded for the expediency of the patch, with a bonus for doing it without proper access permissions or a hex calculator.

E. "Home, James" Device Driver–Competitors must write a daemon to drive a peripheral device such as a laser printer. Points are awarded for time, speed of execution and complexity of use, with bonus points for doing it in a WATCOM language, or replacing the current driver.

F. User Loser–The hexadecathlon ends on a fun note, with competitors trying to remove the most ordinary users from a time-sharing system in the least amount of time. Points are awarded for the user/time ratio, with a bonus for throwing the super-user off, too.

The ACM is lobbying to have the hexadecathlon listed as a medal event in the 1988 Olympic Games in Seoul, South Korea. Training for Canada's team is underway. Happy hacking!

dwarf, Dr J., C. of G.

Connections

Did you know that the use of water powered alarm clocks in 11th century monasteries to wake monks for prayer helped cause the drive for industrialisation in the United States at the turn of the century? Or that the sudden increase in exploration in the 15th century eventually set the stage for the development of the atomic bomb?

Connections is a series that's being co-sponsored by the Centre for Science, Technology and Values, the Deans of Science and Engineering, and the Sandford Fleming Foundation. The series, a set of ten 50-minute films, explores the surprising relationships between modern developments and the technologies and inventions of the past.

Many connections between the past and the future are straight forward, but the series emphasizes how many innovations arise when seemingly unrelated technologies are combined (a classic example is the combination of the wine press, discarded underwear which was required because of climate changes in Northern Europe, and metal type– linen goes to make paper, and the press, paper and metal type are used together for printing).

The series also helps to define the origins of elements of everyday experience, (like the assembly line and the wristwatch), how culture and the way we look at the world define the way we use our inventions, and how our technology affects our society and the way we view our world.

There is no admission charge for attending these viewings (*i.e.*, this means *free* show). Each of the presentations is self-contained so you don't have to worry about references to other screenings that you might have missed. Of the ten presentations, six are still to be shown. The screenings take place in EL 102 at 11:30 AM every Thursday.

Ron Pfeifle

When we last saw our heroes they had been imprisoned in a Klein bottle at the command of Math Topspace. His master plan for topologists to rule the campus seems to be succeeding, with Watman and Duck safely out of the way. Let's see how bad their predicament is...

"Ouch! [groan] Watman, that hurt! Watch where you're going!" wheezed Duck, in a voice an octave higher than usual.

"My deepestopologies, Duck, but it's pitch dark in here, so I can't watch very much. This bottle is rather Klein, so we can't avoid bumping into each other."

Suddenly Watman felt his stomach homotopically turn into a quadruple sterated octohelix as a local nonlinear transformation storm passed by.

"Uuuugh... so that's what Village breakfast feels like. Hey, it's light here! What's that you've got, Duck?"

"It's called a wand of light, Watman. I stumbled across it in a maze of twisty little passages a while back. Oh, look, what's that?"

"The old **mathNEWS** logo! What's that doing in here?"

"Odd, I'd been wondering what the new **mathNEWS** logo was doing out there. Hmmm... that's it! Math Topspace is trying to switch the world inside this Klein bottle with the real one outside! That would explain many things..."

"...like where the statues on campus come from," Watman continued. "We'd better stop this topological homotopicidal maniac from ruining our beautiful campus!"

"Sounds like a moby frob!" an 18-year-old with a pasty complexion interjected.

"Do you come from this side of the Klein bottle?" Duck asked.

"No, I'm just passing through," the teenager explained. "Here, let me show you how..."

And the next thing they knew, the threesome were on the east side of Ring Road. Apparently the ICR *was* the Klein bottle they were imprisoned in, and all the dents in the road there were merely the efforts of UW Security to cover up [there are two meanings there only if you want there to be] the entrance to the Klein bottle.

"So how did you come to discover our prison?" Watman asked the teenager.

"Well, I was wasting away in CS 180 when I decided to do some exploring, and apparently this Klein bottle has a back door at Sytek address 6502, so that's how I got in. Think control-A twice to get out, if you're ever stuck in it again."

"But how will we stop Math Topspace? He's the ultimate glitch in the machine!" Duck despaired.

"I've got it!" Watman exclaimed. "Not even *he* can withstand IBM imprisonment!"

And with no further ado the teenage hacker proceeded to bring down Sytek, port by port. Math Topspace, meanwhile, was observing this with trepidation.

"Uh oh, it looks like this microV-V-VAX won't be safe for long. I'd b-better escape via WATMATH to another UUCP site."

But the whiz had disabled all the sytek ports except for number 80.

"What's this? NO RESPONSE FROM REMOTE UNIT NO R-RESPONSE FROM REMOTE UNIT N-NO RESrhzzSE grtfzx REMO'&TE UN-Itttt I'm trtrtrapped! No, wait fsssssx , here's an address:

```
#call 80
enter terminal type  vc404

Welcome to Student CMS
```

"Arrrrrxrrrrgh! No subdirectories! The rrresponse time is so slow.... oopz ... my process is being swapped out ... quick, let's finish the file transfer [gasp gasp]

```
STACK OVERFLOW
CPU LIMIT EXCEEDED
R, T=* **/* ** 23 59 59
```

"Well, that takes care of Math Topspace, Watman. Let's go see how much of the damage we can repair."

But things would not be so simple. Lurking in the connecting underbrush, the infamous Forrest van der Graph overheard their plans. If they had spoken to him directly, it couldn't have been planar. As the deterministic duo took their leaf of the whiz kid who had rescued them from the frightful land where coffee mugs and donuts were the same, walking along their arc-disjoint dipaths, Dr. van der Graph sped away to his forest hideout on his Hamiltonian dicycle.

What evildoing is Dr. van der Graph planning? Will he succeed in throwing a spanning subgraph in the works of our heroes? Find out how many graph-theoretic puns we will be able to squeeze into the next issue of...

na-na-na-na na-na-na-na na-na-na-na na-na-na-na **WATMAN!**

The Chuckler

Cacalculus

(to the tune of "Susudio")

for Paula and Jan

There's a subject that's been on my mind,
all the time,
ca-ca-calculus,

And the prof don't even know my name,
But I think he hates me just the same,
ca-ca-calculus,

Chorus:
I've got to pass it, this time 'round,
I've got to get through it, but I don't know how,
The prof makes me nervous, he makes me scared,
But I think I can pass if I just say the word,
ca-ca-calculus,

If I see this theorem once again,
Well, I think it's going to split my brain,
ca-ca-calculus,

And if this problem set ain't in on time,
Well, then my mark will have a minus sign,
ca-ca-calculus,

emily (MLE)

MGC

Upcoming Events

Massive Hot Dog Bar-B-Que	June 24	11 AM-3 PM	near CS sculpture
Car Wash	June 27	10 AM-4 PM	TBA
Canada Day Booth	July 1		Outside
Pizza Day	July 8	11:20 AM-1:20 PM	3rd floor MC

Glasses, buttons, '88 sweatshirts, Frisbees and raffle tickets will be on sale soon. All monies raised from these ventures will go toward the "Bald Brett" Fund.

Any sweatshirt ideas, comments, or designs should be submitted to MathSoc. If you have any neat UW memorabilia, please contact the auction director listed on the MGC board outside MathSoc.

Anyone interested in helping out at the Car Wash (it's lots of fun) call Greg Hoggarth at 886-0389. Massive Hot Dog Bar-B-Que volunteers please leave your name with either of our Internal Fundraising Directors (don't worry, we'll have a fire extinguisher).

Next MGC Meeting: Monday June 27, 4:30 PM in MC 3004.

Brett Martin

MGC Car Wash Report

On Saturday, June 6 about 15 energetic Mathies (plus someone from Guelph) forgot about school for the day and washed cars! The first MGC car wash has held at the Ultramar gas station at Weber and Columbia from 10 AM to 4 PM and was considered a success by all present. A good (although sometimes wet) time was had by all and we raised $243 for MGC. Many thanks go to all volunteers and to Ultramar, Home Hardware and Tim Horton's Donuts for their sponsorship.

The next MGC car wash is on Saturday June 27 at a mystery location (*i.e.*, it hasn't been decided yet). We need many more volunteers for this one, so come out and support MGC.

Greg Hoggarth

continued from page 2

concerned. Bad things will happen around us if we aren't challenging things that are questionable, and good things won't happen if we aren't encouraging things that are constructive. Stay active. Ideas are great, but with no one to implement them, they remain only ideas. The Federation of Students, the University administration and the Ministry of Colleges and Universities all have some control or influence in these matters, and will exercise their control or influence with or without your input. They are all interested in what you have to say. You can make your concerns known to all or any of these groups, and get more information on matters from them. Write a letter with your suggestions or concerns to all or any of them. A university education is a precious thing, and we can't deny those that follow us the privileges we have enjoyed.

W. Jim Jordan

Hi, folks. It's me again, back with another episode of *What Can Go Wrong This Issu*

```
*1 core dumped
# SESSION 1 CLOSED TO 7101.0
# CALL 7100
# UNKNOWN C-C-COMMAND
#
```

The Imagen died, System C went down, but mNstill goes on! Thanks to Hymie, CYBERman, dwarf, Bill Tilford, Brian Capstick, John Herbert, Sue Masson, Centre of Gravity, Dr. J., Greg Hoggarth, Brett Martin, emily, Ron Pfeifle and the Chuckler for their articles (oh, and Chris Kitowski, too). Dedicated and patient production crew: Paul Obeda, Camille Goudeseune, Paul Totten, Steve Smith, Andrew Tron and yours truly. Thanks to dorbolo@watdcsu for pulling his big print job. Have a good sesquifortnight. wjj

Summer Social Says

It is already mid-June. Have you made good use of your summer yet?

With the sun shining down and the humidity rising, it seems like a perfect time to go to the beach. MathSoc is therefore running a road trip to Grand Bend Saturday morning (like in 24 hours, eh!). The day's events include a bed race, boat racing, and a dance with the River Street Band. This is the Bend's big weekend with lots of people from all over enjoying the sun and the refreshment tents on the beach so join in.

Nota Bene (Latin, don't you know): *Buses will be leaving at 8:00 AM, not 10:00 AM as had been previously announced.*

The (in)famous Wine & Cheese (or is it Sleaze?) is coming up on Saturday, July 4, so if you have any favourite themes, please tell us. We are open to any suggestions. The same goes with what type of pub you would like for the end of term pub in Fed Hall on Friday, July 31. It's ours, so lets make the most of it.

A final note goes to all patriots. Canada Day is only a week and a half away (that's July 1st). Even though there are no classes, we could use some volunteers to help MathSoc run a Scavenger Hunt and the Feds are looking for lots of people to be clowns, paint faces, set up games, and other neat stuff like that during the day. Please sign up at MathSoc or at the Fed Office if you want to show some spirit by helping UW put on a great Canada Day for all of K-W.

Let's all get involved in some of the great events going on this summer on campus. This is supposed to be the best time to go to school, if you look for some fun around you.

John and Sue
Summer Social '87

Honest Fed's Discount Comedy Warehouse

Something funny is happening at Fed Hall.

What is it?
Where do we get tickets?
How funny is it?

Now, now, children, just sit back and let old uncle Chris tell you a story. It all started about a year ago when a group of people got together and said, "Hey, Let's put on a show!". Now this show was going to be different than the other shows. This one was going to be a comedy revue (similar to Second City). Well the writers wrote and the actors acted and the show was lots of fun (of course you know by now that we are talking about *High 80's*).

The year those same people, along with some new blood, sat down to write a show that was funnier than the previous one. That show is comming soon to a Fed Hall near you. The show is *Honest Fed's Discount Comedy Warehouse*. You'll laugh, you'll cry, it'll become a part of you. The original cast, the original script, for the first time anywhere on the planet.

The show dates: Tue., June 23; Wed., June 24; Thurs., June 25
The show times: 8:30 PM
The show place: Federation Hall
The show price: $4.00 Feds, $5.00 non-Feds

Tickets on sale: at the door or in the Fed Office

Dean's Honour List

In recongnition of outstanding academic achievement throughout their undergraduate careers, the following students will graduate on the Dean's Honour List at Spring Convocation, May 30, 1987 (in fact they "will have graduated" by print time) and have their names displayed in gold on the walls of the Faculty Colloquium Room (MC 5158).

AGGARWAL Atul Sagar, ARMORER Peter Carter, ASH David, ATKINSON Rober George, BARRON Jo-Anne C., BEAN Michael A., BISCHOPING Katherine, BONNEAU Paul Rolland, BRADY Andrew John, BURKE Robert Frederick, CAETANO Paul Viera, CHENG Roy Sai-Chung, CHIEW Wendy Chooi-Leng, DENT Catherine Lisa, DU Yong Yao, FUNG Andrew Kar-Man, GRAHAM James D., GREEN Terry M., GREENBERG Victor, HEEMAN Peter Anthony, IVEY Thomas Andrew, LAFRANCE MArtin P., LEE Ho Man Jimmy, LEE Patricia Man Su, LEUNG Kam Win, LI Peng, LYONS Daniel C., MA Philip K. H., MAK Kwok Tung Michael, MCCAW James Lloyd, MENZEES Alfred John, MITHCHELL Brian R., MURRAY Ian Robert, NG Siu Yan, OMIELIAN John Stanley, OUELETTE Marc Joseph Rene, PRUSSKY Joel, REES Stephen Andrew, ROPER Nancy, ROUTLIFFE James George, SCHWARK Paula A., SCHELLEY Wayne, ST. DENIS Stephen, STEINER Stefan Hans, STRAIN Lori G., SUTIONO Guno, TOWER James Allen, VORKOETTER Stefan Martin, WHEETAM Douglas John, WOODGER James Thomas.

In recognition of outstanding academic achievement during the Winter Term, the following students have made the Dean's Honour List (Winter/87):

AHMED Mohammed Hamed, ANDERSON Christine M., BARBER Susan, BEAN, Michael A., BENJAMIN Gavin Stanley, BISCHOPING Katherine, BOESE Barbara Joan, BOESE Glen Victor, BOLDRINE Mary Ginetta, BRZUSTOWSKI John Michael, BUTLER Scott Thomas, CARETTE Jacques Jr., CASTELL William David, CHAMBERS Christine Jean, CHENG Dora, CHIEW Wendy Choo-Leng, COLLEY Paul Arthur, CORCORAN John Anthony, D'IPPOLITO Frank Mark, DAVY Jonathon, DENGLER Edmund Andreas, DIETRICH Terry Francis, DISKOS Donna, DONSIG Allan, DUNSEITH Martin Rick, DUPUIS Ron Gerard, EDELSON Robyn Arlene, EDMONDS Philip Glenney, EDWARDS Alexander B., EVANS Colleen Ruth, EWERT Kelly, FONG Philip, FRENKEL Leonard, FRYER Paul Kenneth, GARLAND Richard A., GOH Yang Hwa, GOOSEN James Andrew, GRAHAM Sandra Lynn, GREENSPOON David I,. HALEY Donald Fraser, HAYWARD Scott Kelley, HAZENBERG Graydon Hendrick, HEWLIN Todd Guy, HO Sheung Chi Howard, HOR Judy, HORNBY Kathryn Elaine, HOUSTON David M., HOWARD Jennifer, HUANG Peter Minoru, IORIO Pierre, IVEY Thomas Andrew, JEANERRET Christopher Georges, JOHN Michelle Martine C., KOCHER Paul S., KRAMER Jeffery Scott, LAFRANCE Martin P., LEE Howard Man Ho, LEE Shan Shan Agnes, LEE Therese, LEVIS John Michael, LOZINSKI David William, MACK Frederick Randall E., MACBEATH Ian, MACDONALD Hamish Iain, MARKS Donald Andrew, MATTAR Lori Ann, MAXTED Mark Arthur, MCALLISTER Michael Joseph, MCALLISTER Shawn Patrick, MCCLURKIN David J., MCINTOSH John A., MCKENZIE Andrew Craig, MENEZES Alfred John, MILES Dawn M., MUSTATEA Lucian, NEW Stephen J., OMELIAN John Stanley, ORRETT Ross Andrew, PARSONS Eric Walter, PATHRIA Anu Kumar, PAVAN David John, PENG Michael, PIANOSI Gary Michael, PILLE Geoffrey John, PRUSSKY Joel, ROEHRIG Chris J., ROUTLIFFE James G., RUSSO Giuseppe, SCHLUETER Kevin G., SCHRANZ David W., SHEIDOW Thomas Gordon, SHORE Jennifer Ann, SIDDIQI M. Faisal, SIMONSEN Katy L., SMITH Grant Jonathan, SOJNOCKI Gary Joan, STEPHEN John, TIGHE Kevin P., TOWNER Joanne Louise, TRABANDT Jan Uwe, VANDERZWET Jeffrey John, VEACH Eric Hugh, WALKER Toby Hamilton, WARMERDAM Norman Frank, WEEKS Laura Patricia, WESTERVELD David J., WIDISH Robert A., WILLIAMS Peter Austin, WONFOR Alison Lee, YEO Peck Chuan, YEUNG Alex, ZHENG Lou Quan, ZILIO Daniele Costante, ZINN Ronald Scotte.

In recognition of outstanding achievement durin the Fall term, the following students have been added retroactively to the Dean's Honour List (Fall/86):

CASH David S., MOLTANYER Lev, ZHENG Luo Q.

The Tired Typist

In the SAC

In the Friday, June 12 *Imprint* there appeared a letter entitled "The Unhealthy State of HKLS Co-op". We encourage you all to read it. Even though the article deals with HKLS, most of the points are valid for Math as well.

In SAC meetings, some of the topics currently being discussed include whether students are getting a fair shake, day-to-day problems encountered by students, availability of co-ordinators, costs of co-op, applicability of jobs, and some type of evaluation done by students on their jobs.

This last issue has been developing over the last few terms. Both EngSoc and the Recreation Students Association have undertaken such an evaluation. The department feels that such evaluations would result in some companies withdrawing fro co-op. However, some students feel that a questionnaire detailing what the job actually involved and what the salary was would be a positive supplement to the *Want Ads*.

What do you think? What problems are you as Mathies encountering in the co-op system? Please let us know what your experiences have been with co-op so that we can attempt to identify where problems exist and begin correcting them. We can only ensure the future vitality of co-operative education at UW if we all take the responsibility of identifying what is done right, and what needs improvement.

Please fill in the following questionnaire and return it to the MathSoc office. Encourage your friends to do the same!

1. Academic Term and Program: _____
2. Are you going through interviews right now? (Yes/No)
3. (Before this term,) when was the last time you got a work-term job through an interview arranged by the Department of Co-operative Education? Year: _____; (S / F / W)
4. Did the job match the job description? (Yes/No)
5. Did the job provide you with good work experience? (Yes/No)
6. (Approximately) when did your co-ordinator visit you during your work term?
   (No visit / week 1-3 / 4-6 / 7-10 / 11-12 / 12-15 / 15+)
7. Do you find the visit from your co-ordinator during your work term to be valuable? (Yes/No)
8. Are you satisfied with the services of the Department of Co-operative Education and Career Services? (Yes/No)
9. Do you think that the Department of Co-operative Education should have students evaluate their work term jobs through a questionnaire? (Yes/No) Should MathSoc? (Yes/No)

Please list any comments you have (on a separate sheet, please), along with any personal experiences you have had with co-op education, and submit this to MathSoc. Thank you.

Brian, Jim, John and Paul
Your SAC Representatives

GRAND BEND ROAD TRIP
Saturday, June 20
(Tomorrow)

Bus Ride Only:

Mathies	$6
Others	$7

Bus Ride, Dinner, Refreshment Tent, Dance:

Mathies	$16
Others	$17

BUSES ARE LEAVING AT 8:00 AM
(no matter what we told you)
RETURN ABOUT 1:30 AM

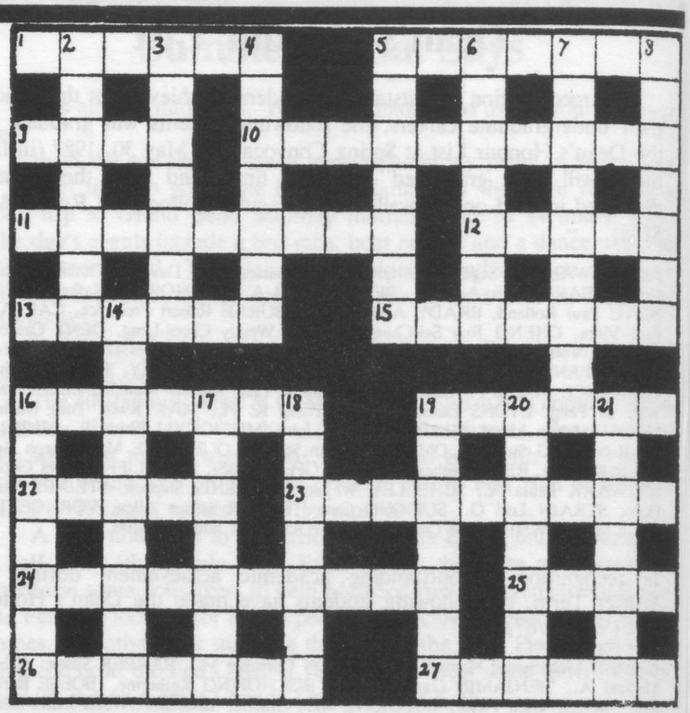
GRIDWORD

Cryptic

Across
1. Stress the current monetary unit (6)
5. Else 0 or 1 man out of this world (7)
9. Cut western tacks (4)
10. Moderation of anger leads a new city everywhere (10)
11. Match up a hundred or taken about deceased (9)
12. An Arab is a terrorist group with a backwards intelligence score (5)
13. Ravel surrounding identification before the weekend (6)
15. Arranging no grits? (7)
16. Storm a cubic centimetre ordinate split by itself (7)
19. A number shown by a canine tyrant (6)
22. Hard, cruel, directionless, backwards, sudden movement (5)
23. Temperature of dream-time black fish that is shaking (9)
24. Note a ringer of promise notes "against the grain" (10)
25. One left title in the eye (4)
26. Rise this way with the French speed consumed (7)
27. A speaking saw? (6) (sorry, this is a re-used clue)

Down
2. Criminal excursion at the same elevation (7)
3. Deceased out of a numbered Communist (7)
4. Completely a child's friend (7)
5. Overpower police about the German soldier (7)
6. An obstruction of the Ontario city to the right (7)
7. The portable dwelling close to which I have been experimental (9)
8. Glaring sheltered circle (7)
14. A contained dog can not be made well (9)
16. The accountant is fifty or that is a heat measurement (7)
17. Love softly he takes up sick for the Shakespearean woman (7)
18. Tangle the headless sent beverage (7)
19. Doubly direct the first person's sibling to inevitable retribution (7)
20. Wipe out the Greek letter which will replenish raised yellow lead (7)
21. A number affirmatively Spanish on the stress (7)

Submitter .....
Favourite Acronym .....
Comment .....



Conventional

Across
1. SEASONING
5. IN A BAD MOOD
9. SUCCESSOR
10. LIGHT UP
11. SLEEP LONG
12. CHARACTERISTIC
13. FINALLY
15. UPRIGHT
16. EAGER
19. SPELL
22. PREVIOUS
23. REPTILE
24. SORCERY
25. PART OF SPEECH
26. SHUTTLE RETURN
27. SPOILED

Down
2. COUNTRY
3. MOST MASSIVE
4. SMOKE CARRIER
5. MUSICAL INSTRUMENT
6. CONTAMINATED
7. STEP
8. CINEMA
14. NAPKIN
16. AUTHORISE
17. RANGE OF HEARING
18. CERTAIN BEVERAGE HOLDER
19. CONTORTION GAME
20. CON
21. ACT OF SHUTTING

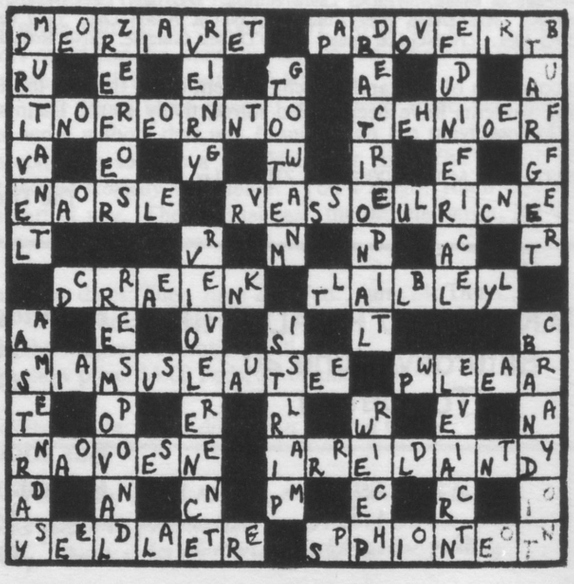
Sgt. Pepper's Lonely GridComments

Oh no, it was a slightly disappointing issue for submissions. Only 13 (Ach!) solutions were submitted: 11 cryptic (9 correct) and 2 conventional (1 correct). I suppose 3 weeks is much too much time for you–it takes all the pressure off and hence you forget about it. Well, this issue you have less than 2 weeks to complete your solution, so I'm expecting much more from you (look, if A.W. aka not B.S. can do these, anyone can). The deadline for submission is 19:00 on Monday, June 29, 1987. Solutions are accepted under the **mathNEWS** door (MC3036) or in the BLACK BOX whose new home is the MathSoc office (MC3038). Come on, go for glory–GridWord is the official crossword of the 1988 Calgary Winter Olympics .... or not.

The following winners of the issue go on to fame and fortune (this could be you): conventional **Alison & David** and cryptic **fans of Ma Bell**. They may claim their prizes by successfully answering the skill-testing question in the MathSoc office (MC3038) (wait, I guess they've already answered the skill-testing question!).

Correct Submitters: A.W., Peter Found, Jim Gardner, Randy Richard, Matt Harding, A.Mark Earnshaw, Zig (with Nick), and Smurf. These others drifted in: Penguin Lust, Scott Graney, Peter Found.

Favourite Morning: a contradiction in terms, Friday, the morning after, the ones that begin at noon, Jan 30/63 (Do you remember it?).

Now get going to some serious GridWording .... it's often useful to waste a few minutes of your life.

fletniowski