## CSC Flash!

After a busy January and a FASSfilled early February, the CSC exec started working on getting some meetings together. The result is a March full of interesting meetings. Yesterday, we heard Professor Hugh Redelmeier, who recently joined the CS Department, attacking the concept of the variable in programming languages. Next Thursday, Prof. Kelly Booth will discuss the use of Pascal to write large programs (specifically a graphics package) and some of the problems that arise. Prof. Tom Cargill will then examine how the programming language Ada solves some of Pascal's problems. Ada was developed for the U.S. Department of Defense and is destined to become a world-wide standard. This should prove to be a very interesting talk for those with strong
opinions for or against typed languages. Can Ada solve the problems that Pascal has with typing? Come to the meeting, at 8:00 p.m. on Thursday, March 5th, to find out. Posters will announce the room.

A week later, on the 12 th, the CSC will present a Movie Night, with some great films, some of which may even have something to do with computer science! More details will come along later.

Later in the month, we hope to present a talk by a former student now working at Bell-Northern Research in Ottawa. He will discuss information provider terminals for Telidon.

For the more distant future, we have contacted lecturers arranged by the ACM and have some tentative commitments for next term. For the even more distant fu-
ture (sadly, more likely in an alternate universe than in ours) we hope to get Donald E. Knuth to speak here. We have sent out a letter of request, but have yet to receive a reply. It is rumoured that he doesn't like to travel, but he does think that UW is a good school. (We buy his mega-priced books, don't we?? - tech ed)

Finally, the CSC Curriculum Group is still going strong, as our weekly meetings continue. There will be another meeting this afternoon at $3: 30$, starting in the CSC office (MC 3037), and moving elsewhere if necessary. If you have any comments on the curriculum, please come and give them to us. Now that we have had some general discussions of problems, at this meeting we'll map out a strategy for making suggestions for change.
peter rowley

## Volume 25, Number 7 Friday March 6, 1981 math NWW

## Another C\&D Threatened

The Environmental Studies Society's C\&D stand has joined the list of student services endangered by a possible Food Services takeover.

Many of you may be aware of the repeated threats against the C\&D run by MathSoc in the third floor lounge. Recently the sandwich contract for the EngSoc C\&D was taken over by Food Services. This apparently was accomplished by Food Services underbidding the prices of the former supplier. Unfortunately it seems that the quality and variety of the sandwiches supplied to Engineering have gone downhill as well according to some Engineering students. It seems as if some students are having problems getting their complaints acknowledged. Apparently a similar.
thing happened the last time rood Services supplied EngSoc.

However the problem in Environmental Studies is quite different. In fact it involves the location and the very existence of the ESS C\&D stand.

Despite the construction of that marvel [sic] of architectural beauty [sic] called ES2, the Faculty of ES apparently will still be short of space. (Perhaps ES2 should have been bigger; would another floor have ruined the aesthetics of the campus any more?) Talk in the ES faculty has centred around putting a glass bubble over the ES1 courtyard to make it into a lounge. However in that case the Environmental Soc's office and C\&D stand might have to be moved from its present location. That might not be so
bad for the society, but other problems could develop.

Apparently Food Services may wish to set up a facility in the new courtyard lounge. This would may cause the closing of the ESS C\&D or hurt its revenue. Food Services already has a facility in the Modern Languages Building which is connected to by tunnel and immediately adjacent to ES1. Also South Campus Hall, the home of Food Services major facility, can be reached from ES1 by a tunnel system, so that users would not have to go outside in winter. The addition of another Food Services outlet in ES1 or ES2 may not really be necessary. (Necessary? How could it ever be necessary? - tech ed) Whether this happens or not could affect the future of $E S S$ 's $C \& D$.

## Math Gets VAXinated - MFCF to buy VAX-11/780

A recent interview with professor John Mnrris, Director of the Math Faculty Computing Facility (MFCF) confirmed the rampant rumnur that the MFCF will soon nbtain another large computer. Arriving sometime in May and taking up residence in the current 11/45 (UNIX) machine room will be a VAX-11/780, with 4 megabytes of MOS memory, 60ø mega-bytes of RM05 disk space, a Flnating point Accelerator, and a $809 / 160$ bbpi magnetic tape drive which runs at 125 ips (i.e. fast). For comparison purposes, the Honeywell $66 / 60$ has a mere 512 K 36 -bit words, which is 2 M 9 -bit bytes, or just a bit more than half of the VAX's memory capacity. The $66 / 60$ has 1000 MB of disk space.

The computer will communicate with the outside world via 32 asynchronous lines, 16 hardwired to terminals in the present UNIX terminal room, and 16 on the Gandalf system. Four of the hardwired lines will be connected to LAl2ø Decwriters, to provide hardcopy capability. The VAX will not have a separate line printer, but it will have a high-speed synchronous line to the Honeywell, so it can make use of the $66 / 60$ 's printers for big jobs.

The VAX-11/780 is an impressive machine, the result of a programme at Digital Equipment Corporation to enhance the reliability of computers. Some sites have logged up-times in excess of $95 \%$. part of this reliability and serviceability is due to the presence of a microcomputer-based con-
sole (an LSI-11) which ties into various parts of the main CPU and can be used for automated diagnosis of failures. Attacned to the LSI-11 is a Decwriter which serves as the system console.

The $11 / 789$ is also powerful. It is a 32-bit machine, with a 31-bit address space for user processes and a constantly accessible 31-bit system space. Its instructions are more powerful than those of most computers. For example, it can insert an item in a queue, or perform the computation $A(I):=B(I)+C(I)$ in $a$ single instruction. It has an 8 K cache which reduces memory cycle time to 290 nanoseconds, along with an instruction buffer and a translation buffer. The last allows efficient implementation of the VAX's virtual memory scheme, which pages memory from disk to give the programmer the impression of using up to $2^{\wedge} 32$ bytes of memory as if it were all physical MOS memory. Finally, it has three buses to improve throughput: the UNIBUS, for connection to terminal drivers and other standard PDP-11 UNIBUS devices, the MASSBUS, to handle the disk and tape drives, and the Synchronous Backplane Interconnect (SBI) to connect the processor and memory.

What will all this hardware do? It will run the November 1980 distribution of Berkeley UNIX/32V, for which the University will pay $\$ 600$ ( $\$ 300$ to the University of California and $\$ 300$ to Western Electric for a standard UNIX license). It will handle the load
currently supported by the PDP-11/45 running UNIX, as well as most graphics work, including support of CS488/688. The amount of filespace on the $65 / 69$ devoted to graphics has been estimated at 100-200 $M B$, $s o$ the arrival of the VAX will certainly decrease the inad on the $65 / 50$ 's filesystem. The supplanted $11 / 45$ will move to the fourth floor, where it will drive the newly acquired frame buffer.

In May, both the $11 / 45$ and the VAX will run UNIX, the latter in test mode. Berkeley UNIX does not have drivers for the RM95 disk drives that will be used-- they will have to be written. If all gnes well, courses should be switched to the VAX before the end of May. In any case, the VAX will certainly be used for course work in the fall.

The whole package will cost approximately $\$ 407,000$. The money will come from general university funds, to be paid back by the Math Faculty over four to five years.

Thus, for the first time, a large DEC machine will soon arrive on campus. Because the VAX will be running UNIX and not DEC's VAX/VMS operating system, it is unclear whether or not a conperative relationship for the development of software will emerge with DEC as it has with Honeywell and IBM. Whatever fringe benefits evolve, however, it is clear that the arrival of the VAX will greatly improve the computing facilities available to Math students.
peter rowley

## Galumphing Gourmets

The Laurel Room Snuth Campus Hall.

This modest manifestation of Fond Services belies their spotty reputation earned in other troughs they nperate. טperating for lunch and Weảnesday, Thursday and Friday evenings, this fixed price (\$3.85) hnt and cold re-entrant buffet is undrubtedly the best fond on campus.
There is a comprehensive salaá bar from which we definitely recommend the 'pink stuff' (some sort of fruit mousse with oranges) and the deviled eggs. There is also the usual selection of three bean salad (ugh!), cottage cheese, prtatn salaú, and sn $n$.
There is a choice between two hot entrees of which one is gond, and the other better. One recent choice was between breaded shrimp and a quite gond chicken a la king ( nn vol au vent). In addition to the hnt entrees, there are vegetables and pntatnes. A platter of finger fond, including olives, celery and radishes is also placed at the hot fond station of the buffet, together with sauces appropriate tn the entrees.

Desserts are included in the price along with regular beverages. Soft drinks can be ordered from the bar at $20 \phi$ each. The bar is run by Bar Services and will serve alcoholic beverages on production of University identification.

The Laurel Rnom is not very large, and reservations are advised, particularly near end of term and on Fridays. Phone extension 3196.
Rating: $\underline{2} .5$ Bunnies

As threatened in a previous column, herewith a recipe for those of $y$ yu who want to do it yourself. We are starting with a dessert, or emergency supplies, however you want to look at it. Thanks for sharing his culinary expertise go to Ralph Hill (rahill).
$\frac{\text { Ralph's }}{\text { ane cookies }}$
Take one cup of butter and melt it over low heat. Add 1 cup brown sugar, 1 whole egg, whisking well. Then add 1 tsp vanilla extract, and a gond tsp of salt. Adal 1 cup Bisquick and blend thornughly.
Remove from heat and ada: 6 oz shreaded coconut, 2 tbsp whole milk, 1 tbsp crunchy peanut butter, cinnamon to taste, 6 oz chnonlate chips and as much rolled nats as you can stir in.
Drop ontn greased cookie sheet by tablespnonfuls (globs) and bake at 275 F for 15 th 20 minutes. Allow to conl before removing from pan.

## Previnusly Rated.

The Corkscrew 400 King St. W, Kitchener.

A relatively expensive eatery in northern Kitchener. Gond recursive salads, but really only a place for the well-heeled carnivore. Licenced. Major cards. \$10-\$15 per person without drinks.
1.7 Bunnies

The Gypsy Cafe 84 King Street North, Waterlon.
An eclectic delicatessen well within the reach of most students. Average entree $\$ 4.00$ to $\$ 5.00$. No licence.
2.0 Bunnies
jewinterton et al.

VIDEOMANIA for the entrepreneur

Those who think that the entrepreneurial spirit is no longer present in Canada have not heard about Videmania.

Videmania is the name of a new magazine that is about the burgenning viden industry in Canada. The last few years has seen an explosion of interest in the viden market. Sales of viden recording and playback machines, and viden tapes and discs have taken off in North America. The impending introduction of pay TV to Canada will certainly spur more interest in the viden field.

However the introduction of Videnmania may be of interest to students of UW who have ideas about starting their own businesses. Three of the principal penple involved in the Thronto-based publication are former students of this university.

David Carter, Salah Bachir, and Larry Hannant all have extensive experience in the field of writing. Waterlon students may remember them as important contributors to the Chevron. Mr. Bachir also has experience in advertising and in the steren and audio business. Their talents may combine to produce a unique publication of interest to videnphiles. It will be interesting to see how this magazine does in the long run.

## $\mathbf{M} * \mathbf{A} * \mathbf{S} * \mathbf{H}$

There has been growing concern about the problem of sexual assauits around the University of Water1m. Since last April there have been seven reported assaults in waterloo Park, two since January. There have also Deen problems reporteci along the path to the philip Street Co-op Residences.

The Federation of students is currently lonking at two ways of alleviating the problem. The long term solution thought necessary is to nave lights installed in the path througn waterlon Park. With this in mind the Federation will be making a presentation to the Waterlon City Council this coming Monday (March 9) asking that they instal such lighting as soon as pnssible. (Attention is also being given to the Philip Street path, but as this crosses private property more problems are involved)
is a short term solution Bnb Ellintt, (the new Federation VicePresident), is organizing an escort service, M.A.S.H (Men Against Sexual Harrasment), which will operate for the remaining weeks in March, offering escorts thourgh Waterlon Park. Plans are to run the service Monday to Thursday, and the hours of $8: 30-11: 30$ have been proposed although this is currently under review.

The Federation is working closely with the Pnlice in organizing this service. It has been emphasized that this is an
escort service not a patrol. Volunteers are needed, drop by the Federation office for mor details.

As well as offering a short term solution the Federation hopes that this action will, in the words of President Wim Simnnis,
"draw attention to the issue, show the serinus nature of the issue, and perhaps put pressure on Waterlon City Council''.

## Concert for Cancer

The North Waterlon Unit of the Cancer Snciety is holding a 'Concert for Cancer' on Wednesday, April 1, at 8:00 PM in the Center in the Square. This concert will feature Dave Brnadfont, Don Harron (of Charlie Farquharson fame), Catherine McKinnon, Second City, Yuk Yuks and others.

Seats come in two varieties. The front row seats are $\$ 25$ each (which includes a reception). Ordinary seats are $\$ 10$. The Federation has a block of about 200 seats in th 10-14 row. A fund (of about $\$ 2000$ ) has been donated by the Federation, Societies, Villages, and Church Colleges. Part of this fund will be used to subsidize the ticket prices. Waterloo students can obtain tickets from the Fed office for $\$ 7.50$. The rest of the money will be given as a direct donation to the Cancer Society.

Tickets will be available in the Federation office from March 9 to 20. Br ing your student card.

> Beverly Glenn-Copeland will do Benefit Concert for Zimbabwe

Tnronto jazz pianist and singer Beverly GlennCopeland will perform a benefit concert for Zimbabwe reconstruction at Cnnrad Grebel Cnllege on Friday March 13 at 8 pm.

Penple accquainted with the horrors of apartheid in Snuth Africa happily greeted the end of a similar white supremist regime in neighbouring Rndesia last March. But pnlitical independence did not immediately solve all the new nation's problems: Zimbabwe has had to correct generations of discriminatory practices against the majority African prpulation, as well as repair the tremendnus damage done by seven years of war.

Several KitchenerWaterlon organizations, including the Waterlm Public Inerest Research Group (WPIRG), Canadian University Service Overseas (CUSO), K-W Oxfam and the Global Community Centre, are currently raising money for Zimbabwe reconstruction projects.

Tickets for her performance are $\$ 4$, or $\$ 3.50$ for WPIRG or Federation of Students members, and are available from WPIRG and the Federation of Students.

In Sampling we're taught, unaware,
What a circus of symbols may bear;
Now it's not that I mind
Good notation, refined...
Yet without it there's just nothing there!

## Deadringer Report

Welcome sports fans, all across Canada, the United-States, Alberta and Quebec. We're in Waterion this week, bringing you live reporting of last Mnnday night's Floor Hnckey action. In the main event, the vath Deadringers lnst a enntroversial 2-1 game tn the Ducks.

In the opening twenty, the play was sluggish, with nothing much to chnose from bnth teains. The Ringers again were first to flash the red light. Wayne Honper Jrnve a pretty shot to the short side, beating the enemy nestminder. However, several minutes later, the Ducks tied the game with a rising shnt, just under the crossbar. The score at halftime was 1-1.

In tha second half, the play was much the same, bnth teams getting few shots, and few scoring opportunities. And then, with five minutes remaining, playing short-handed, the Ringers failed to clear the ring from their zone. One of the Ducks interceptea, went in alone, and rifled an average speed shot into the
cop corner of the cage. In the aying minutes, the Ringers' Kelvin Martin pushed no in the net for the apparent equalizer. But wait, the referee called it nff. Mn gnal! No goal! The ref claimeu that Kelvin was in tne goalie's crease. What an nutraga! The Ringers were funing. The game endad, leaving the Ringers on the short end of a 2-1 score. And there you have it, ladies and gentlemen.

The three stars as selected by Flone Fhckey Night in Canacia were: Andy Pink, wayne Honper and Rnn Sissnn.

The Deadringers finish the season in second place, with 3 wins and two Insses. The Ringers therefore get a bye intn the second round of the playnffs. This means a week nff to rest, to study, or to travel to Ile-au-Nnix, or Sudbury, or Mississauga. The first playnff game is Mnnday March 9th, 5:45 at Seagram's Stadium. Let's all wish the Ringers the best of luck in the playnffs.
M. Adringer


I'D SURE LIKE TO APOLOGIZE FOR MY TERRIBLE BEHAVIOR!"

BRIEF ENCQUNTER


# חUTEPRI 

Owning a printer and getting printed listings are two completely different problems. Once you've managed to scrounge yourself a printer you've still got to integrate it into your system. In the business this is known as
"'interfacing"' the printer or ' getting the buyger to work''.

The printer I had acquired was a Centronics 101A that weighed in at abnut 70 or 80 prunds. It also haõ a half-inch diameter cable creeping from its bowels that terminated in a 50 wire Cinch connector (a Cinch connector is a little clamp-like affair that has an indentation running its length which is filled with metal contacts - aw, don't worry about it). My only nther information about the thing was that the input was parallel and that twn nice young men had put it in my Aunt's car for her.

The difference between serial and parallel data is critical. With serial transfer you have essentially a single data line which alternates between l's and g's until a full character has been transferred ( 7 bits). A parallel interface has 7 data lines and so can transfer a full character in a single shot, taking less than one-seventh of the time that parallel dnes. Since my printer was parallel this meant that data transfer would be fairly fast - gond! But Martha (that's one of my computers) only had serial output - bad! Fred, on the other hand (yes, that's the name of the other one), did have a
parallel interface. Unfortunately Al (that's the mndem) accepted only serial input which meant Fred cnuldn't use it. Besides, Fred didn't have disk while Martha dia (what a bunmer, eh?). Sn I either had to give Martha a parallel interface or Fred a serial one.

I decided that since the majority of my work was currently being done on Miartha that she shoulu get a parallel port. Fred grew quite upset at this sn I pulled his plug and let his chips conl for a while.

Martha's CPU was an 8И8.0. microprocessor. This chip was designed to do I/O via the IN and OUT commands. IN and OUT would each dump a port address from 0 to 255 on the lower 8 bits of the address line as well as placing a 1 on the Io line. Now the way this works is thusly: both memory and ports both look at the address lines. If the IO line is hign (has a 1) then only the ports listen, if it is low then only memory listens. For ports the 256 different addresses allow the CPU to access up to 256 different inputs/outputs.

First thing you have to do is figure out what your port is going to look like. It has to be able to hold data transmitted to it as well as data which it wishes to send back. You can either try to design the whole thing yourself or you can wimp out like I did and simply buy a port chip.

The chip I bought was the Mntorola 6820. This thing has two ports on it (hey, why not go whole hog
eh?) named $A$ and $B$. These can each nandle 8 bits of data and each bit can be programmed individually to be either input or output. This means that the port takes a tntal of ten different commands: set direction of $A$, set direction of $B$, read/write $A$, read/write $B$ (the CPU has a read/write line that determines wilich of these occurs). Each of these commands uses up a separate port number giving a total of 4 port numbers.

Now, you have to be careful that your machine has 4 free port adaresses. On Martha 80 thru 95 were available so I chnse 80 , 81, 82, and 83. Sn, you're ready to go. You've simply got to set up some logic to check for the proper addresses and that the IO line is high. When all this is true you turn on the chip and let it do its stuff.

All tnld, the design ended up using 3 chips: the 6820 , a chip with 2 four input NAND gates (don't worry abnut it), and another with 2 four input NOR gates. Thes design looked gond on paper...now to realize it in hardware.

If you've ever had the chance to look inside a piece of modern electronic equipment, no doubt you've seen those neat little perforated boards with nice, orderly little traces of copper joining things together. These are known as printed circuit boards or PCBs. Making one of these involves special photngraphic equipcontinues on page 7
continued from page 6
atent, acid and strange yellow stains on your fingertips you won't be dning it this way. This leaves only two other methods: hand-soldering, and wire wrap.

Hand-soldering involves melting a soft metal alloy known as solder with a hot iron and using this to join points tngether via wires soldered to contacts
simple huh? For small projects tnis isn't ton bad but when you have hundreds of contacts to solder it can get pretty tedinus, not to mention the fumes given off by the melted solder.

## Wire wrapping is

 essentially the same as soldering except that instead of fastening wires to contacts with solder, you wrap the ends of the wires tightly around the contacts. This is fairly fast and easy to do but naturally has its drawbacks. Wire wrapping requires special sockets for each chip, and the snckets sometimes cost more than the chip!I'd done soldering jobs before, but I'd never tried wire wrap. This perhaps as much as any other factor decided me towards giving the port a go with wire wrap.

Several Saturdays later found me cross-legged on the floor of my bedroom with wire wrap tool, wire, chips, sockets and perforated bnard before me. The great adventure was about to begin! Within a few hours my printer would be merrily whipping off listings by the droves.

Or so I thought.
-dthedmonds

## Monologue


$\frac{\text { ney }}{\text { fona }} \frac{\text { gets }}{\text { dnes }} \frac{\text { is }}{\text { is }} \frac{\text { nna, }}{\text { keep }} \frac{\text { all }}{\text { you }}$
$\frac{\text { alive. }}{\text { worth }}$ it.'1. There will be no Mnnologue this week, as Mr . Templeton is on assignment (and miditerms).

## SOCIAL DIRECTOR'S REPORT

The pub last Wednesday was a success as far as I am concerned in spite of the small turnout. ( I had not expected a large crowd so at least I was not disappointed. ) As far as I know, all who did attend enjoyed themselves. Wednesdays are not the best time to hola a pub but I was unable to book the Math Faculty Lounge for the Thursday sn it was either Wednesday or nothing. Anyway, I guess the reasons for the scarcity of numbers were (1) penple do not like pubs on wednesdays; (2) it is a busy part of the term right now with lots of work to be done; and (3) there was a lot of conpetition with other pubs going on and the free cc movie and the csc meeting etc. The dj was excellent and was able to establish a gond rapport with everyone. ( And he even had some fancy lights! ( Plus he was kinda cute!!!) ) I plan to book him for our next and last event as well. I had wanted to
nave a Matn-Nurses Pub on March 19th but - again - I can not get the Math Faculty Lounge. Therefore that pub has been cancelled - much to my regret - or, should I say, much to the regret of the males around here! Our last event will be on Tuesday, March 31st which, in case you don't know, is the official last day of classes. There will be a buffet supper ( subsidizea so you really should go ) for which we will be selling advance tickets. After the supper will be a normal pub. I am hoping to get some of the faculty and grad students to attend as well - but whether they will or not I really can't say. Since this is the last event of the term, I thought it would be nice if people dressed up a bit for it but this is strictly up to you and jeans will not be barred ( just discouraged). Well, that is all for this week. I will write more next time. Love ' $n$ ' XXX... Marnie

## THE STRANGER

The stranger called me from the classromm as I walked by. Hearing my name, I walked in expecting to see somenne I knew. He was seated at a desk, and was wearing a heavy coat and bnots. A bit of snow was melting on his hair and collar.

The man was abnut 45, maybe 50, but a stranger for certain. He looked me up and down, and laughed softly to himself. I stond quict while his thoughts drifted for a short while. His face brightened and his smile grew large, but his thoughts were still miles away. Or years behind maybe?
"Helln my friend. How are you?," he said as he came out of his thnughts.
Now the stranger seemed faniliar. I was sure I'd seen his face somewhere before. His voice and quiet laugh sounded familiar ton. Was it on the radin? No, it was something else, but I couldn't - - friend?
"Hi. Should I know you?"
"Oh, you know me", he laughed, "but you won't realize from where for a while yet." He noticed me staring. "Then you'll laugh ton, believe me."

He made quite an impression. His clothes looked ton young for him, by about 15 years maybe. Or was it wrong? I sure liked his taste. The colnurs and style lonked really comfortable and attractive and I thought they now suited him. Just the colnurs I like, too. His bonts were still dripping the snow and salt he'd accumulated. He had left a trail into the classronm from the door to his seat.
"I knew you'd like the outfit", he told me. How did he-
"I also remember you've got a few minutes to talk", he continued quickly, "Please be patient with me." He looked at his watch. "I've only got 10 minutes myself."
"I still don't know -"
"I know that, but I'm not going to tell you where you know me from. Like I said, you'll find out soon ennugh." He smiled again. He must have thought something was funny.

He was a clock watcher. Or rather, a watch watcher. The classronm clock was stopped, as usual. I'd been working so long, I didn't know what time it was myself.
"I've got to go by $2: 30$ ", he said to himself, just loud enough that I heard. Lots of afternoon left, so I couldn't have been working for ton long.
"What can I do for you?", I asked, "I still don't know where I've seen you before." Perhaps I met his as a child.
"Oh, already you think you've met me? I thought it took longer. I'm not good at remembering details. Anyways, there's not much we can do right now. All I'm supposed to do is meet you this time. Next time is the more important rendezvous. We'll have more time to talk, and we will have more than enough to talk about. I do remember that you've got to get to a class sonn."

Class? I still had two hours till my next class.
He smiled and said "It's almnst $4: 30$ nnw. Check the hall." Sure ennugh, I had 5 minutes to get to my lecture.

I looked back in the rom, and the stranger was standing. He put his gloves in his pockets, tried to shake some snow from his boots, then looked closely at his watch again.
"I've got to go", I said.
"I know." He took one long look at me again, from head to toe. He smiled. "Take care, and I'll see you next time."

Next time? He had said something about next time.
"If you say so. Thanks for reminding me about class. Take care."
I left quickly and started down the hall. I had turned the corner when I realized he had known that I had a class, and that I was thinking I had time before it started. I turned back, but when I got to the room, the stranger was gone. All that was there was the snow puddle and the footprints to it from the door.

[^0]continued from page $\mathbf{8}$
It was late that night that I recognizeu the stranger. He was right, I laughed. I laughed really hard. Little details of our meeting flashed in my mind. The clothes, the voice, the face.

I eventually relaxed and stopped laughing. I thought about our next meeting. That is going to be something that I'll look forward to till - till when? He never said! He new he forgot details, why didn't he make sure he'd tell me when we're getting together. At least I can remenber details now.
The clothes? Of course I'd like the style.
The voice? It was a tape recording that I recalled, not the radin.
The face? That face had to be almnst 50 years old.
Everything was so crystal clear now.
I looked again, then walked away from the mirror.
gkholman

## WATSFIC Meets

Since the last mathnews, watsFic has held twn meetings.

The first meeting was held on February 19th in MC 5097. In addition to the regular war-gaming sessions and the routine threatening of the mathNEWS reporter, a number of other things were discussed at the meeting.

The Secretary of War announced that a D\&D (Dungenns and Dragons) tournament whuld be held on the days of Saturday March 7, and Sunday March 8. The daytime tournament will be held between the hours of $9 \mathrm{a} . \mathrm{m}$. and $5 \mathrm{p} . \mathrm{m}$. with a lunch break from 1 to 2 p.m. It was also announced that despite requests from some members, there would be no Science Fiction movie night this semester.
The next meeting was held on February 25th, in MC 5158. This meeting was much better attended than the previous one. Even the president showed up. A greater variety of war games was played and the reporter was threatened
with C\&D coffee (he har hot chncolate instead). WatsFic members also voted to give an honourary lifetime membership to Denis Mullin. Mullin was a founder and long-time member of WatsFic and editor of Starsongs. He also was a founder of and a long-time editor of mathNews and did much volunteer work for MathSoc.

In a related developnent it was learned that some members are wishing to start a new Science Fiction magazine on campus. The former Starsongs folded over twn years ago. In its place a new magazine to be run by Watsfic members, but not funded under Watsfic is proposed. The tentative name of the new magazine is The Apprentice.

Club members who have not been to the past few meetings are urged to pick up the Watsfic newsletter WATSNEW. This week's issue contains information on Austrailian SF awards and British Fantasy awards. It is available in the Watsfic office in the MC building.

Quotes of the Week
A weekly c̄̄llection of ${ }^{-}$amusing campus quates

This begins what could be a popular weekly feature in mathNEwS. If you read an interesting quate on campus, or hear one from a prof or other well known figure, mail it to mathNews for inclusion. Mail can be put in the third floor mail box or sent on TSS.
"The problem is it's distracting, but there's not much they can do abnut it.'
An arts frosh, in Feb. 13
Imprint 'Campus Question'
on CC free movies.
The butterfly has wings of gauze, The firefly, wings of flame. The bedbug has no wings at all, But he gets there just the same. $\bar{A}$ Valentine' s Day message.

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## gridword meets GODZILLA



ACROSS

la Rave lip will be triumph (7)
li Nest may pardon (7)
2a Age one (3)
2e Why status? (3)
2 i Opposite from the wind (3)
2 m Anger (3)
3a Car made curve (3)
3e Bear mug becomes resentful (7)
3 m Door or welcome (3)
5a General Control Approach (3)
5 e eg: Honeywell (3)
5 i Question needs solving (7)
6a What dish did with spoon (3)
6e Diamond is incommunicato (3)
6 i City whistles air (3)
6 m French friend (3)
7 a Fine or magical (3)
7 e vet code was much desired (7)
7 m Execute basically (3)
8 g Mnther of nations (3)
9 a Bunny or car (3)
9e Domain? (7)
9 m She s a no-stick (3)
10a Instruction Address Register (3)
10e of all Scotish (3)

10
10m Recnra company (3)
lla Necessary (7)
$11 i$ Mineral spring (3)
11 m the Anguilla rostrata (3)
13a Federal Bureau of Investigation
13 e Th select sounds like vertex (7)
13 m is human
13 m is human (3)
14a Dawn is divine (3)
14 e America (3)
$14 i$ Printer to nothing
(3)

14 m New (3)
15a Tibi hex
15 i CPR city is puzzling on display (
CPR city is puzzling (7)

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DOWN
    al in a pod (3)
    a5 Pictorial (7)
    al3 Fie! Fne, what pay you Fum? (3)
    bl Rnyal Order of Registrars (3)
    b5 Automobile (3)
    b9 Paddle (3)
    bl3 Gadiva's (3)
    cl Bewitching is can then (7)
    c9 Prim penple are, uh, drips (7)
    el Of the water (7)
    e9 Computer Assisted Instruction (3)
    el3 Auburn? (3)
    f1 Chemical suffix (3)
    f5 Something Cryptic and Obvious (3)
    f9 Eggs (3)
    f13 Mind to a Greek letter (3)
    gl To pitch (3)
    g5 Many (7)
    gl3 Tap to touch (3)
    h7 Miss Gabor (3)
    il Mode or carte (3)
    i5 Pat sent for copyrights (7)
    \(i 13\) Incorporated (3)
    \(j 1\) Margaret (3)
    \(j 5\) Whiskey grain (3)
    j9 Generation --- (3)
    jl3 North Ireland Regiment (3)
    kl Born (3)
    k5 Pascal/Basic function (3)
    k9 Perfectly alike (7)
    ml Almost alike (7)
    m9 Forestall before airshaft
        \(-1 a-1 a-1 a\) (3)
        n5 Austrialian bird (3)
    n9 High spot in space (3)
    n13 Rural Engineering Institute (3)
nl Timely adverb (3)
ol3 Legendary bird of prey (3)
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## Grads Quible Over Persons

The Grad Club held its annual general meeting on February 26th in EL 101. At this meeting a number of bylaws were changed. The membersnip bylaws and the bylaws concerning club officers had the most major changes.

The greatest controversy however was over the elimination of sexist woras in the bylaws. Chairman was replaced by chaiperson and he was replaced by he/she. One male member of the audience thnught that such a move would Dastardize the English language. However a female bnard member replied that chairman only sounds better because penple are not used to such new words as chairperson. The mainly male audience approved the use of words like chairperson. Very few female grad students visit the Grad Club presently, and it was felt there shouldn't be additional barriers to their involvement.

The membership alsn approved of a motion that broadened to scope of the Grad Club from that of a social club only, to an organization that nfficially represents Grad students. In doing so the Board of Directors will have more powers.

A final bylaw change that would have eliminated the faculty constituencies by which the 25 Board members are elected was tabled. While some members felt it had merits, most felt that proper notice had not really been given for such a major change in the bylaws. The proposal had
not been brought to the Bnard of Directors first as is required under corporate law.

Despite the low turnnut of 35 persons (though quorum of 57 was met by the use of proxies), much was accomplished at the AGM. In addition to bylaw changes many reports were given by the officers. There was much npen discussion regarding the recent renovations in the Club which were generally well received. However some controversy may develop next year when the subject of expansion is discussed by the Bnard of Directors. The question may be not what the expansion is, but how it is funaied. Thnugh current revenues may be able to finance expansion, some members would like to see that expansion partially finance by a laon so that they can keep a compulsory fee for full-time grads. Apparently in 1982 grads
are to decide if compulsory fees continue. Expansion can probably be financed with a refundable fee and compulsory fees can continue whether or not there is an expansion. The issues are not strictly related though some Board members think they are. This will make for a great deal of interest in the activities of next year's Bnard.

## j.j.1.

## Qnarchronists

The Society of Creative Anachronism is an organization that seeks to selectively recreate the better aspects of the Middle Ages (before 1625). Founded in California
(wherelse?) in 1964, the society has spread throughout North America. The continent has been divided into seven "kingdoms". Snuthern Ontarin and the U.S. upper midwestern states form the Midalle Kingam (they must be Tnlkein fans).
ioronto has a very active SCA chapter and now Kitchener-waterlon through the ausspices of an oncampus club will also have a chapter. SCA on campus was formed last month and meets in the Campus Centre no most Tuesdays. Through their affiliation with the parent SCA (which is not yet finalizeá) the local SCA hopes to stay independent of other organizations on campus. Their constitution which is partially modeled on some medieval practices may not be able to totally meet the recngnition criteria set nut by the Federation.

However this article cannot give proper justice to the SCA club. If you want to learn more about them you are urged to attend their meetings, which are advertised by poster on campus bulletin bnards. (They assure us that extreme care is taken to prevent serious injury during their medieval jousting tournaments.) All "lords" and "ladies" (to use SCA terminolngy) are invited to next meeting. You are urged to get a copy of a publication prepared by some Middle Kingdom members of the SCA that explains the organization in detail.

MamaDuck

## In The UW Arts Centre Gallery

The Gallery is in the Mnaern Languages Building, ana is open 9 a.m. to 4 p.m. Monday to Friuay and 2 p.m. tn 5 p.m. Sundays.
Rnger Savage: A Survey continuing until mar. 15. prints, drawings and paintings organized in the Art Gallery of Nova Scotia.
$\frac{\text { Communique }}{\text { January 29, }} 1981:$ Ottawa, January 20, 1981:
The Honnurable Jean-Jaques Blais, Minister of Supply and Services Canada, announced today that the Rnyal Canadian Mint will strike two commemorative coins in 1931 -- a silver dollar and a \$loy gold coin.
The $\$ 100$ gold coin will mark the decision of the Cnadian Parliament, on July 1,1980 , to adnpt the


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## Sublet Apt

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song 0 Canada as the national anthem of Canada. The obverse of the coin will bear the effigy of Her Majesty Queen Elizabeth II and the inscription " ELIZABEITH II"' "100 DOLLARS" and 'CANADA 1981''.
The reverse will depict the map of Canada and, superimposed, a scroll with the first four musical notes of the national anthem. The words "o CANADA'' will appear below the design which is the work of Nova Scntia artist Rnger Savage. The cnin will contain $1 / 2$ ounce of gold and will have a diameter of 27 mm . A mintage of 250,000 coins have been approved and this coin will be available from Septemeber 1 to November 3才, 1981.

MASTHEAD: Finally we are ALMOST finished for tonight (this morning). It's only $3: 16 ; 78$ am wed morning now...what else do you expect at this time of day!!! Help came from varinus and sundry penple (and places!). THese include Tracey Alien( typing, inaking sure that $i$ am fed, hunting dinwn diablns); Tracy Tims (our lnyal?? subscription editor - if you haven't got yours yat, blane him); Peter rowley ( figuring out how to get this thing running on the diabln, csc flash, VAX); Robert Byrd ((this is one of the strange penple you met tonight, Gary!) onnversationalist, bad jokes, some typing, contributing to the insane atmosphere, etc) ; Rnss Brown ( previewing, ); William Hughes (everything! previewing, photnning (little that got done before the photon died) laynut, ULP, MASH, concert for cancer); Keven Conlin( sweets!, giving up his last piece of pizza very gentlomanly) ; ashok patle( confidence (or lack of?) in us); Dave welbourn (gridword, layout); M Adringer ( deadringer rpt); GKHolman ( NEN creative stuff - keep it up GK!); Marnie Shaw( social); JJLong ( grad stuff); Mamduck(anac); and pizza pig for fond, and Gary and the port lab for brief moments of sanity and coffee (and time out for space-invaders). Well that all for tonight fnlks. mathNEWS is brought to you rain or shine...photon or no photon, system crashes or no crashes, coffee or no coffee, sanity and especially insanity, ...bye till next week, joanne


[^0]:    I went to class.

