JJLONGREPORTS

One of the positive things that the Federation, your so-called "anti-democratic" organization has been doing is the operation of a student employment centre. Stuffed in a back corner of the Federation office, yet manned capably by Federation fieldworker Cathy Huxtable, the centre has been used quite frequently by job-hunting students in the last month. In the office of the employment centre one can register for various jobs available in the community and on campus. The job board features the want-ad sections from various local and out-of-town newspapers, as well as a list of jobs obtained through the centre. One of the amazing things about the centre (where you'll find friendly pictures of your math reps on the wall) is its effectiveness. The percentage rate of placements to the number of students registered is much higher than that found at the local community manpower centre.

Ms. Huxtable is to be commended for her great rapport with employers and students (and for those great posters).

You have no doubt heard about the Federation's plan to set up a bus service to off-campus students similar to London's Western Wheels. Though it is expected that Kitchener Transit will be unable to provide buses to lease until 1978, hope is still held out that an experimental route to Lakeshore Village could be established this fall.

As well as operating a housing office, the Federation is setting up a novel approach to Pre-orientation this summer. It is hoped that such an approach will help alleviate the proverbial "housing crisis" this fall. The idea advocated by your Math rep is based on the idea of having prospective first year students spending the weekend with Federation volunteers. In this way those students, who will be students that by choice or chance, will not be living in residence during their first term on campus. This pre-orientation will give such students a taste of off-campus life and a chance to foster friendships with upper-year students. Unlike the past, this pre-orientation will occur over a number of wekends with different frosh each weekend.

You have just read a piece of positive reporting about the Feds (as promised) that should appeal to all but the die-hard chevronites or separatist engineers. More information (and there is positive information about the Feds, I don't make it up) should follow in future reports. If you have any ideas please mention them to me (I would appreciate them) via the Fed office or through Mathsoc at MCC 3038 X2324. Your praise or criticism is always welcome.

J.J. Long

the virtual mathNEWS

Release 14.2

PULSE

As promised in the last column, this week I will discuss security philosophy in IBM's OS VS2 (MVS) operating system (by the way, has anybody heard of an IBM 1370?).

IBM has been often taken to task for lack of security in its operating systems. Facilities exist for protection of data by means of passwords and expiry dates (for write protection). If the systems programmers and/or system programming management for an installation are not very concerned with security, they can, without any effort, leave their installation vulnerable to penetration, violation, and removal of service by some zealously malicious users (as are often found in a university environment). Violations of security might consist of improper "reading" of data by persons without access rights, or modification of correct data remaining valid for any application which might use the data, but being never-the-less inaccurate.

Many modules in the operating system have optional installation exits to allow users to check for access validity by some criteria at "open time", or "create time" for example. This again leaves much of the security checking to be done by the user code and requires some initiative on the part of management.

This approach to security was consistent from OS/MVT through to MVS (not in VM/CMS). It leaves many installations without default protection thus giving a false sense of security.

Attributes such as ownership of files (ie. relating a specific user to his set of files in the file system) and access control bits are not even concieved of as necessary or desirable. The philosophy of the MULTICS system designer was to have these atributes of file ownership and access privileges as the default, thus accustomizing the user to a stronger security-oriented environment by virtue of the fact he was using MULTICS.

User apathy towards security in an IBM installation can lead to strange situations occurring. For example, recently an installation using IBM equipment for its main data processing work, decided to use TSO for its programming staff. Management felt that "barebones" TSO was too insecure, and ordered that a package called Program Control Facility (PCF) be installed before TSO was to be generally available. PCF allowed management to decide who (which class of users) should have access to data set indicies, and use of certain TSO commands. Systems programmers could easily be given full access to all data sets, while application programmers might be limited to a subset of the whole. Fine, some security was thought of, but real security was still just an illusion. In this same installation the User Attributes Data Set (UADS) is not password protected. This could allow any user to list its contents and thus obtain all passwords to all usrids in the system (or equally allow as a user to modify his attributes, thus making himself privileged). The reason for this oversight was that the installation did not use password protection since it was deemed to be too awkward for use in a batch environment.

With MVS release 3.7, a new Selectable Unit (SU) has been made available which implements the ownership concept in a file system, access control lists and easier use of passwords in JCL. Estimated increase in MVS overhead was between 10 and 15% according to IBM's sales blurb.

The problem with the recent concern of IBM for OS security has left many commercial user ill-conditioned for thinking in terms of security. Other users of MULTICS or GCOS may be more security conscious, but still should not be lulled into thinking they are safe (witness GCOS TSS here).

Next time: more on security, and some rumours(?)

P.S. according to an announcement in a recent Saturday Globe and Mail business section, AT&T in the U.S. has ordered 85 IBM /370 model 3033 CPU's at a cost of over $320 million.
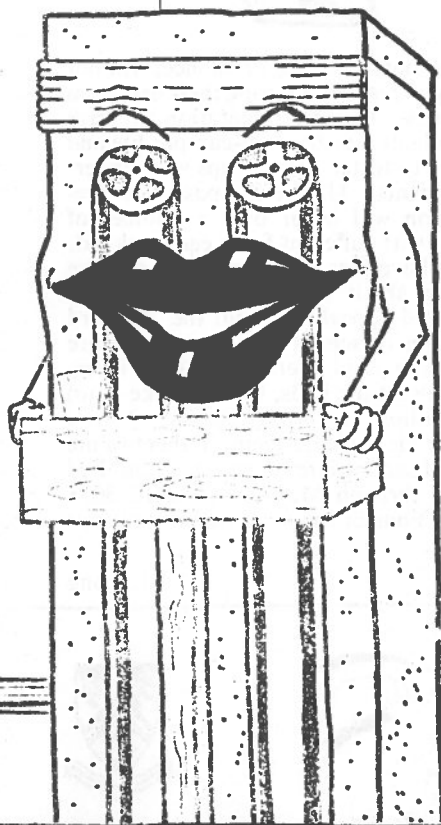
COMPUTER SCIENCE CLUB
GUEST SPEAKER

FROM BELL LABS,

DR. DOUG MᶜILROY:
A DEMONSTRATION OF A
TALKING COMPUTER

7:30 PM WED., JUNE 1 MC5158

ALL WELCOME!

SPONSORED BY: AA&CS DEP'T, MATHSOC, BOARD OF COMM'S

APL Sauce

THE FIRST *APLsauce* CONTEST: Write an *APL* function *COMPRESS* which will act as a partial generalization of the compression function.

```
      1 0 1 1/'ASDF'
ADF
      1 0 1 1 COMPRESS 'ASDF'
ADF
      1 0 2 3 COMPRESS 'ASDF'
ADDFFF
```

COMPRESS need not be a pure generalization of the compression primitive in that it is only required to work for vector right arguments. Use of the scan operator is permitted; branching is not. Origin independence is not necessary.

Please drop your solutions in the **mathNEWS** box on the third floor by Friday, 4 June. A T-shirt will be awarded for the best entry.

That's all for the *APL* side of things. To close, here's an interesting piece of verse. It's extracted from Stanislaw Lem's *The Cyberiad*.

Come, let us hasten to a higher plane,
Where dyads tread the fairy fields of Venn,
Their indices bedecked from one to *n*,
Commingled in an endless Markov chain!

Come, every frustum longs to be a cone,
And every vector dreams of matrices.
Hark to the gentle gradient of the breeze:
It whispers of a more ergodic zone.

In Riemann, Hilbert or in Banach space
Let superscripts and subscripts go their ways.
Our asymptotes no longer out of phase,
We shall encounter, counting, face to face.

I'll grant thee random access to my heart,
Thou'lt tell me all the constants of thy love;
And so we two shall all love's lemmas prove,
And in our bound partition never part.

For what did Cauchy know, or Christoffel,
Or Fourier, or any Bolle or Euler,
Wielding their compasses, their pens and rulers,
Of thy supernal sinusoidal spell?

Cancel me not—for what then shall remain?
Abscissas, some mantissas, modules, modes,
A root or two, a torus and a node:
The inverse of my verse, a null domain.

Ellipse of bliss, converge, O lips divine!
The product of our scalars is defined!
Cyberiad draws nigh, and the skew mind
Cuts capers like a happy haversine.

I see the eigenvalue in thine eye,
I hear the tender tensor in thy sigh.
Bernoulli would have been content to die,
had he but known such $a^2 \cos \phi$!

C.R.G.

A brief introduction is due here. For those of you who have not heard of us, the Campus Reform Group is a collection of similar-minded individuals that share many basic political beliefs relating to issues on this campus. In a sense we could be considered the government of the Federation. The president and a number of councillors, including the Math reps, are considered members of the CRG. Most of the Fed executive are members or sympathetic to the CRG. Though we do not control a majority on council, we are the largest group with seats on council. Many of the recent initiatives of the Federation were brought about by CRG influence.

Recently we have held meetings in the Math building and the Grad Club. We have discussed our new constitution, and ideas for new Federation bylaws, and we are working with the Fed Bylaw Commission in that regard. Of course, we are not flawless, there has been some concern that our chairperson has not been doing a good enough job in getting members to go to meetings. Part of the fault also lies with members who'd rather be outside in this weather. However we do hope to resolve our problems before our next meeting June 2nd in the Grad Club.

Any new recruits are welcome to attend and become a member. Also help is needed in the campaigns of those people the CRG supports for the June Federation by-elections.

Opposition sunk.....

BIZ-BALLERS SET SAIL

Dateline...May 24,1977.

Now that the coed slow-pitch season has officially opened, the WATERLOO BIZ-BALLERS have put the finishing touches on team organization, and have finalized all negotiations with players. The team roster has been rounded out by the addition of the Data Processing Manager, Keith Pybus, and all management positions have been filled.

Party Picketed

A rumour that the Spirit Manager, Sue Burford, was not interested in spirits (resulting in a peaceful demonstration after her 'no-show' at the Grad Club) has been dispelled by Public Relations Manager, Charlotte Penrose. "The excitement of the upcoming season, coupled with a gruelling practice which did not adjourn from the Club until after 4 P.M., led some of our more excitable players to let off some steam."

Practice Manager, Jan Telford, working closely with our Communications Manager, Donna Strangway, has ensured that all team members received adequate training in advance of the season. Most players were dispersed throughout Southern Ontario during the recent long weekend for rest and relaxation as well as to obtain coaching tips from various other teams in the province. (Janetville Senior Girls being the outstanding entry on this list.)

No Holds Barred

After perusal of the rules, the Offensive and Defensive Managers, Brian Roblin and Dave Stubbins, have issued this statement: "There is nothing in the rules, absolutely nothing, which should in any way hamper our style or affect the performance of our team, on or off the playing field."

The BIZ-BALLERS are young but enthusiastic. The team has a great deal of depth in the area of front-office management. The rigorous pre-season training programme has exposed some very promising talent, especially with respect to expected performances in eighth innings to come. (All games are seven innings long) General Manager Sam Veffer sums up the team's key to success: "We'd rather be sailing."

Hard alee!.......GO BIZZIES GO!
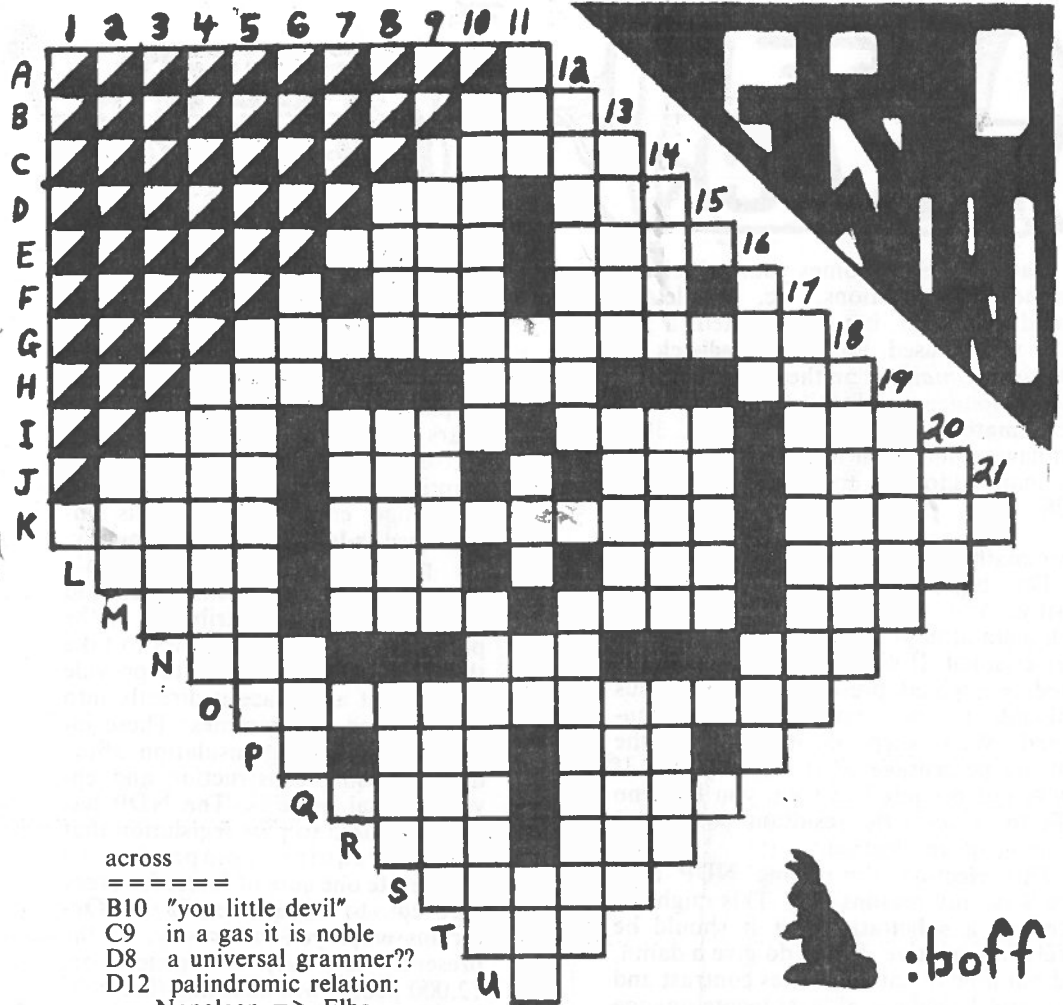
across
======
B10 "you little devil"
C9 in a gas it is noble
D8 a universal grammer??
D12 palindromic relation:
Napoleon => Elba
E7 our nearest neighbour
(astronomically speaking)
E12 a song bird
F8 every dress has one
F12 Evidently Inebriated Igineers
G5 prophets of the dead
H4 fondle
H10 (often) a ship's first name
H16 "the first one is the deepest"
I3 Chinese leader
I7 not flows
I12 where the sun rises
I17 an unpleasant sort of fault
J2 an Enterprising speed
J7 a computer part
J13 associated with neither
J17 water basin
K1 a dirty planet
M7 what Logan sought
M17 what we did with the leaves
L2 disown
L7 unit of work
L13 affirmative
L17 single staff
M3 harden
M7 it used to be roll-topped
M12 180 degrees from I12
M17 chemist's ending
N4 prepare flax
N10 see D12
N16 as compared to outs
O5 pertaining to under the surface
P8 Yoko
P12 past tense of seethe
Q7 aeons
Q12 at once
R8 a cockney's home
R12 the cash register folk

S9 a positive pole
(no ethnic jokes now...)
T10 a honeywell expansion of
instructions

down

2J crumple up
3I lady horses
4H sometimes silent
5G new-comers
6F after deductions
6N a barrel
7I rested
8D a kind of "hsif"
8I what the trumpets do
8O an African country
9C bicycle tube
9I barrel closers
9O syringe-given medicine
10B famous for the wrong reasons
10M a petroleum fraction
11A a rather backward flightless bird
11G manuscript
11J eight (as to lunch)
11N choo-choo crossing
11S black gold
12B before the lease
12M throats
13C a dragging dress
13I a solitary yes (2 wds)
13O the present time (poetic)
14D a popular FASS name (1977)
14I ulcers
14O rode backwards
15I meeting
16F part of the circle
16N contraceptive device
17G an overlord
18H in the direction of
19I tea type
20J bulls don't like it

:boff
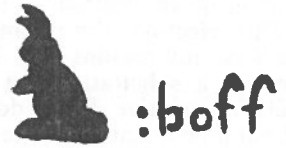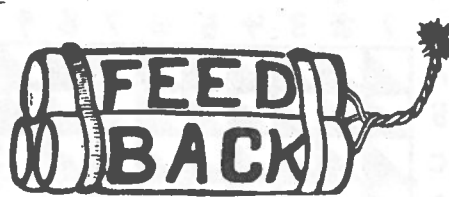
FEED BACK   FEED BACK   FLASH

mathNEWS welcomes your criticisms, comments, suggestions, etc. All letters should be signed, but if requested, a pen name will be used. Put your **Feedback** articles in our *mailbox* on the third floor outside the lounge, or mail it to us on TSS to userid **mathNEWS**, or take it to MC 3038 and have it put in our mail slot, or put it in the mail addressed to **mathNEWS**, MC 3038.

Dear **mathNEWS**,

The biggest criticism of society is apathy. And so it's about time students took a stand in politics and each one of us were counted. If 90% of the eligible voters voted, we would present a more serious challenge to the political parties concerned. What surprises me most is the growing percentage of student apathy. If you're not prepared to vote, you have no right to criticize the resultant policy and planning of an election.

This election I'm voting NDP and, here it is, my reasons why. This might be taken as a solicitation but it should be purely informative. If you do give a damn, find out how the other parties contrast and compare. I was not able to locate anyone willing to do research on the Liberal and Conservative side of things.

Stephen Lewis has resolved to stick with the issues, and he is 'presenting a common sense case for the future of Ontario':

1. The case for job creation; As co-op students, I would expect this issue is of major importance. There are presently 26 job hunters per job in Ontario and at least half of these unemployed (138,000) are under 25 years of age. In the past, the Conservatives have introduced sales tax exemptions on business machinery to encourage employment. This encouraged industry to buy machinery. At present, 20% of Ontario's manufacturing equipment is idle, and the action is only contributing to the problem. The NDP proposes to take the $240 million it costs to provide this benefit and place it directly into job creation programmes. These include energy-saving insulation, affordable housing construction and environmental projects. The NDP has also proposed to pass legislation that would require companies to regenerate one acre of forest for every acre cut, to **keep** over 70,000 Ontarians employed in forestry. At the presently low rate of regeneration, 12,000 people will be losing their jobs in this industry.

2. The case for agriculture; The Waterloo Region is especially noted for its prime agricultural land. There is much cause for the concern of preserving this land for food production. The NDP had proposed to legislate Farm Income Stabilization as an incentive to keep farmers on the land. They will also develop a land use strategy confining farming, housing, recreation, commercial and industrial development to specific land classes.

3. The case for Mary Jane Mewhinney: Mary Jane is your NDP candidate for Waterloo North. In 1972 she was elected to Waterloo City Council and is presently in her third term. She has encouraged the formation of Resident's Associations in the city, is a member of the Board of Governors at WLU and an executive member of the Social Planning Council. Mary Jane has participated in the Legal Aid Committee and also on the Ecological and Environmental subcommittee of the Waterloo Region. Mary Jane has proven her interest in this community and is stressing public involvement.

This is just a taste of what the NDP has to offer this election. If you have any questions, or can spare some time to canvass, scrutineer or even put a sign in your window, call campaign headquarters at: 886-1911.

Diana Flis

CSC *FLASH!*

4

Well, for the third meeting of the semester the Computer Science Club came up with a good one. Kelly Booth, of the CS department here, gave a talk on computer graphics.

It was attended by over fifty people (the seventy-two doughnuts went very quickly). Professor Booth spoke for over an hour and bored no one while talking about the various things needed for imaginative graphics, from the hardware to the software. He emphasized particularly the difference between raster and line displays.

Prof. Booth showed us that the software is much simpler than you would think, there are straight-forward equations for doing everything from rotation to translation and perspectives — much easier than expected. However, I think that while it may be very easy to write on the overhead, it would be much harder to program.

Last we saw a fifteen minute movie of some computer graphics. It started with a show by a little known movie company "Porcupine Pix". This has produced a show on the vector field around something or other (my physics isn't that good). This field resembled a porcupine. The computer rotated this round and about and superimposed various images for quite a display as Prof. Booth pointed out the bugs in the program which meant that not all of the hidden lines were hidden. From here we went on to see all kinds of different pieces on chemistry or physics or biology. We saw some neat graphs which just moved around and up and down as the experiment progressed — and then the interesting part when all of a sudden it stopped dead and said "halting to adjust scale" — and the whole graph sort of shrunk as we watched. There were a few neat pieces of just moving a point around the screen — and varying the pitch and tone of the sound according to a function of the X and Y coordinates. Did you ever know what it sounded like to write the word *dog* or *cat*?

We will be having more excellent meetings this term, you can read about them in the ads elsewhere in **mathNEWS**. And don't forget, you can still join the CSC, only one dollar, in the CSC office right across from Mathsoc MC3038.

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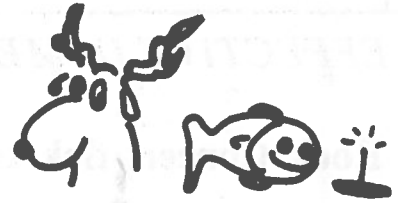
Hi adolescents.

We have the distinct feeling that you're a pretty inhibited group of individuals. In two weeks, we only got TWO (2) letters! What's the matter with you people? We know that you must have SOME problems. After all, nobody's that well adjusted!

If you're afraid that we'll reveal your identity if you write us a letter, then rest easy. The thought never even crossed our minds. Anyways, when it comes right down to it, how many of your friends really care what kind of problems you have?

Enough gripes. On to this week's letters.

Dear Sam'n'Tak

I have 2 problems with my love life which I hope you can help me with. The first is the well known problem of being with your honey until 3 or 4 a.m. every night, and then having to sneak off home. This is a great pain. Can you help? The second problem you will find hard to understand coming from a guy, but here goes. I hate it when my honey goes down on me. There we were, sharing a little time together, when wham, down she went. Help! I'm tempted to visit the red pit (oops, I mean light) district and pick up one of those blue types who will do as I ask but for a price.

sign me any of

./hacks

Dear hack: Get off your bun and spend less time with your honey. As for your second problem: Nothing can stop your honey from going down. Grin and bear it.

Dear Sam'n'Tak

My girlfriend has given me an ultimatum. "It's either me or those damn BIZ-BALLERS!", she says. What should I do?

BIZZIE B.

Dear B.B.: Whatever decision you make, you're sure to be kept BIZZIE-BALLIN'!

As you can see, those problems are pretty tame by any standards. If you think that you have a tougher one, why not let us know? Maybe we can help you. Send us your problem via the **mathNEWS** mailbox or the TSS mail system to userids rhtakashima or scveffer.

Sam'n'Tak

unclassifiable ADS

6 mathNEWS

????? Well, hereit is at 5:45 pm on SUNDAY! this has been one long issue. No this isn't the front page. Might as well be though. this thing started on tues. may 24 with some of the following people(?) ..foxy roxy, our lovable ad manager ...akfm,typist supreme and interim MathSoc prez rohan and the APL of his eye...arwhite, who couldn't think of anything to write, until we X-tended the deadline (deadline? what deadline?) til thurs (&fri&sat)...jjlong for his rep(ort) xixxiciaran, for his non article (maybe it'll make the free cevrag)...the ever present samntak ...jka for the feedback he didn't do...*hugh* for the ad...jbdoherty for typing (and scrounging some filler and ads for us)...Mathsoc for the orifice...johann for his exreme patience and good nature for letting me in the photon room n times (n+1?)...hexgboff for the grid (i think he deserves a t-shirt for that...see me in the office)..time to put another record on.........
puf for the article on ibm security....didn't know they had any...dave for the fling flong and the crib games and the all night spacewar game and the risk game and the crib games........
i wish thye would fix the chip machines..i can't keep living off of nancy green's all my life..
trg (aka rovert) for fat freddy' scat..you'll be seing more of him in the future...marnie who didn't show...this might sound like a lot of peoples but spread over xx six days, we're spread pretty thin. So why don't you show up sometime? iknow you're out therr, you keep coming to the office asking for this ting....bj, we need some mathletics..get off your duff...neat thin:
gs coming up...two (count 'em two!) csc meetings...south campus hall pub on june 9th wiht Brutus a mathsoc pub june 1st...The One And Only Original Outdoor Concert/Beach Party'!!! scheduled for july 16th at columbia field, wiht music and food and things to do. come on out and have a good time. oh yes the ELECTION...get out and vote dammit! it's YOUR province...we are funded yet independent of MatSoc (sometimes).Early monday morning graphix will get these six pages and magically churn them out into another1000 copies...contents of articles is solely the responsiblility of the contributer...mathNEWS supports PIZZA PIE. why don't you?1 minute to timeout and counting...