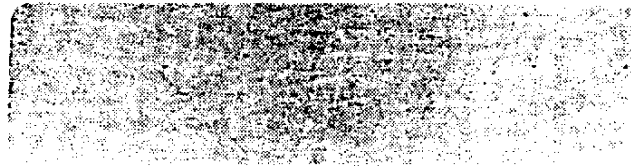


# 99'er Online

January 1986

p.o. box 11983  
Edmonton, Alberta  
Canada T5J 3L1

to:



99'er ON LINE is the news letter of the Edmonton 99'er Computer User's Society published ten times a year. Unless otherwise stated, all material contained in this news letter may be published in other news letters provided that source and author are identified. We welcome correspondence from all TI User Groups and we will credit authors quoted in 99'er ON LINE.

**CORRESPONDENCE:** News letter editor: BOB PASS, 59 LASELLE CR., ST. ALBERT, ALBERTA, CANADA T8N-2G6. (403)458-7633 All other correspondence: EDMONTON 99'er COMPUTER USERS SOCIETY, P/O BOX 11983, EDMONTON, ALBERTA, CANADA T5J-3L1

**OFFICERS:** PRESIDENT--PAUL HELWIG,  
VICE PRES--TOM HALL, TREASURER--SUSAN LIVINGSTON,  
SECRETARY--ROGER LOTEN

**DISCLAIMER:** All information published in this news letter is, for the most part, the fruits of the labors of amateurs; therefore, we cannot guarantee that the information presented is always correct.

**REGULAR MEETINGS:** Regular meetings of the Edmonton User's Group are held on the second Tuesday of each month on the 8<sup>th</sup> floor of the General Services building of the University of Alberta from 7:00 till 10:00 PM and are open to all members in good standing. Non-members may attend their first meeting free of charge. The Executive Committee meets monthly. Members may attend these meetings as observers or to address a particular issue. Arrange with one of the officers listed above if you wish to attend.

**ADVERTISING:** Commercial advertising space is available in this news letter at the following rates: FULL PAGE--\$20.00, HALF PAGE--\$15.00, 1/4 PAGE--\$10.00. Discuss your commercial needs with JIM MULLIGAN at 467-6021, at the next meeting or write to the P/O Box above. Members may advertise their personal computer related items for free but are asked to limit their ads to about 50 words. Mail your ads to the EDITOR'S ADDRESS or hand it to him at the general meeting; newsletter deadline 15<sup>th</sup> of the month.

**MEMBERSHIP FEES:** FAMILY---12 MONTHS, \$20.00, 6 MONTHS, \$15.00. STUDENTS---12MONTHS.\$10.00, 6 MONTHS, \$10.00.

The Edmonton 99'er Computer Users' Society



Date / /

- New Membership Application
- Renewal of Membership
- Change of Address

Name -----  
          last                  first                  initial

Address -----

City ----- Province -----

Postal Code ----- Telephone -----

\* Please note that if you are a NEW member, there is a ONE TIME fee of \$20 for the purchase of hardware and software for the club computer.

\* May we release your name, address and telephone number on a club roster to companies, other clubs and other members?  
                          YES  NO

- Single or Family membership           \$20 (12 months)
- \$15 (6 months)
- Student membership                   \$15 (12 months)
- (please have I.D. card)               \$10 (6 months)
- Out of town membership               \$20 (12 months)
- \$15 (6 months)
- Hardware Fee                           \$20 (Life-time)

----- OFFICE USE ONLY -----  
-----

Membership # \_\_\_\_\_ Amount Tendered \$ \_\_\_\_\_ Date Filed \_\_\_\_\_

Card Issued Yes  No  Authorized Signature \_\_\_\_\_

USER GROUP NEWS

**EXECUTIVE ASSISTANTS...** helping to keep the group running are non-elected volunteers who are in many ways the soul of this User's Group:

Newsletter Editor - Bob Pass  
 Advertising & Editor's Assistant - Jim Mulligan  
 Newsletter Library - Ron Hohmann  
 Disk Library - Ken Godbeer  
 Book Library - Gord Bradlee  
 Bulletin Board Sysop - Tom Hall

If you see a job that needs doing that is not covered by the above departments, how about volunteering your services at the next meeting; you will find that it is worth the effort.

**BULLETIN BOARD...** a BBS service is operated for us by Tom Hall. To get on line, dial (403) 424-3258. In addition to news and the usual BBS offerings, there are programs available for downloading to your TI machine.

**WANTED...** any clippings from newspapers, magazines, or comic strips that you think may be of interest to other members of this User Group. Please forward to the editor, Bob Pass, to Jim Mulligan, or to the P/O box address on the fly leaf.

**ALSO WANTED...** your advertising. Don't forget that members can advertise their computer related merchandise or requests in this news letter for free! Give your ad to Bob Pass or Jim Mulligan by phone, mail, or at the next meeting. See the fine print on the newsletter fly leaf for further info.

**TIME LINE...** the super BBS reported to you earlier this year. Tom Hall has joined and he says that he is quite happy with the service. Tom feels that it is excellent value for the money.

TI-TRIVIA

by: Jim Mulligan

Here are this month's noggin knockers. You can find the answers further along in the newsletter.

1. Will Editor Assembler utility references run in XBasic or MiniMemory?
2. Is the start of the MiniMemory REF/DEF table at hex 6F38?
3. Can the Terminal Emulator II module make Basic and XBasic program debugging easier?

NEXT MEETING

The next meeting, our fifth of the season, is scheduled for Tuesday, Jan 14<sup>th</sup> at 7:30 pm in room 049 of the U of A's General Services building on 116 St north of the Jubilee Auditorium. Doors open at 7:00 pm.

As of this writing, there is nothing specifically scheduled for this meeting so it may be a good time for you to bring along some blank diskettes and peruse the disk library.

DECEMBER MEETING

by: Bob Pass

The December meeting was once again well attended and two new members signed up for membership.

Visiting us was Paul Meadows, president of the Halifax User's Group. Paul gave a brief discussion on what was happening on the east coast. It was good of Paul to take time from his busy schedule and spend the evening with us. Many good tips were passed along to some of our attendees.

Minutes of the November 25<sup>th</sup> executive meeting were read and discussed.

1. Newsletter trading with other groups has been cut from 64 to 39 as an economy measure (see last month's 99'er ONLINE).
2. We will be setting up a "Trading Post". You can bring in your surplus software or hardware for trade or sale. Software must be on original media and include original documentation. All items will be pre-priced at 50% of market value (list available) or less. The society will extract a 10% handling fee on all sold or traded items.
3. Martin Kratz will be speaking at the COCO user group meeting on January 20<sup>th</sup> in the Northwestern Utilities hall on 107<sup>th</sup> Ave. This event is jointly sponsored by us so all our members are welcome to attend. If you have not had a chance to hear Martin's presentation on computer and copyright law, here's your chance.
4. Treasurer's report shows \$281.14 in the bank.

Jim Mulligan was presented with a box of ten diskettes for his prize winning entry in the programing contest to write a BASIC disk labeler.

Further items of information were presented during the open floor discussions.

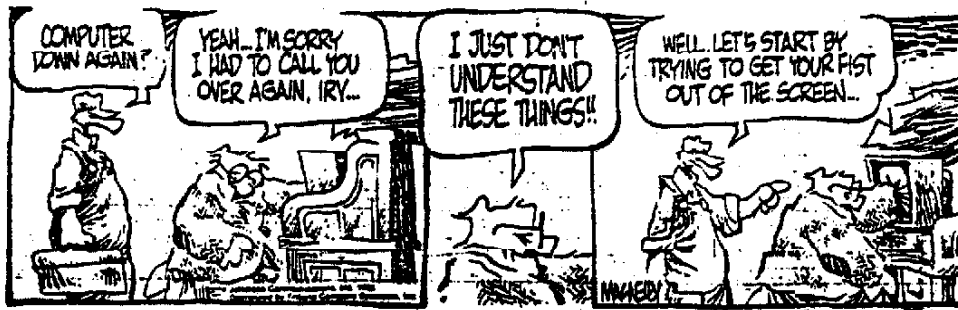
Ken Godbeer presented a list of software available in our library. It is growing nicely with some excellent programs written by our own members and some "freeware" like PTERM and XMODEM requiring cash donation to the author. It has been decided that the best way for you to get copies of this material is for you to bring your own diskettes and copy during the meeting. We will try to make our system more readily available for this purpose.

Wally Barabash has information regarding a Hayes Smart Modem in kit form for \$120. Sounds like a good deal for the handy types.

ABT surplus sales (118 Ave 178 St) has several direct connect, 30 baud modems at \$25 each. They are Rixon T103A2/3 and some modification will be required. Phone set not included. I believe their surplus sales is only open Monday afternoons, so call first.

Judy, of NOVA COMPUTERWARE, mentioned that she has new TI software, hardware, and books in stock. Drop by with your Christmas cheque from Uncle Fred!

Finally, Bob Pass put on a 90 minute tutorial on TI-WRITER which answered many problems people were having. A diskette containing a Bob's TI-WRITER quick reference guide has been added to the software library.



### MAN 1. ROBOTS 0

by: Bob Pass

This little beauty, written by Dale McFeatters, was noticed in a newspaper recently:

The baby was sitting on the floor, minding her own business in the place where she would most likely be in people's way.

One of her brothers sent a black, battery operated robot about 18 inches high rolling toward her. The object being to terrify baby into and outburst of hysterical sobbing, thus enlivening an otherwise slow morning.

The baby watched disinterestedly as the robot bumped up against her foot and went into its tape loop spiel: "Hi! I'm the Atomic Robot. Greetings Earthling!"

The baby mulled this over for a few seconds and then clobbered the robot with a soup ladle. Thus the twentieth century passed another landmark.

The robot has met the new generation, one which greets it without fear.

Until then, serious students knew that the evolution of the robot would be in two stages: first, they would throw everyone out of work and, next, they would take over the world. Several developments threw the forecast off track.

Economists had known for years that a worker replaced by a robot was a worker out of work. But it wasn't until the early 1980's that the Al, Chuc, and Dave Corollary was discovered. That is, a robot that displaces one worker making \$5.75 per hour will create jobs for Al, Chuc, and Dave who will charge \$200 for service calls and they are never there when you need them. Despite enormous leaps in communications technology, they never call back either!

Another setback was the discovery the fact that robots have personality.

It was widely assumed that robots would have no shred of human emotion or compassion; they would be driven by cold, unrelenting logic untainted by sentiment. This being the case, it naturally followed they would get on with the task of wiping out the human race.

But the development of robot tellers, soft drink venders, and newspaper racks that talked showed that robots had the wimpish "have-a-nice-day" personality of a waiter in a California fern bar.

A machine that says "Thank you for selecting 100 percent caffeine free Diet Coke" is not a good bet to lead a savage uprising to take over the world.

### TI-TRIVIA ANSWERS

1. You cannot use these in REF statements in XBasic or MM while programming nor will they run in Xbasic or the MM EasyBug. However they will run in MM if you use the Load and Run option. When the MM encounters them, it can find the correct address of the required utility.
2. No. Even though page 72 of the MM manual says it is, the actual address is hex 6FOE! This is a minor error but if your program uses the REF/DEF table, it will be deadly.
3. Yes. With the TE II plugged into the cartridge port and option 1 (Basic) selected, load your program to be debugged. Then type LIST "SPEECH" and press enter. If your Speech Synthesizer is plugged in, the computer will speak your listing to you and you can follow along with your printed documentation. It is amazing the problems you will find this way which are difficult to find while proof reading.

### TI-FORTH EDITOR

by: Michal Jaegermann

Continuing on from last month, here are remaining screens to complete your new TI-FORTH editor package. Referenced screen numbers are as on my disk. Remember to change them with LOAD statements if you need to put them elsewhere.

SCR# 22

```
( SCREEN EDITOR - 64 column support 20SEP85*Michal Jaegermann )
0 CLOAD EDIT BASE @ HEX 39 CLOAD LINE 33 CLOAD TEXT
36 CLOAD GRAPHICS2 37 CLOAD SPLIT 41 CLOAD CLIST
VOCABULARY EDITOR IMMEDIATE EDITOR DEFINITIONS 3 WIDTH !
2 VARIABLE S_H \ value for conditional compilation
: CINIT 3800 DUP ' SATR ! DUP ' SPDTAB ! 800 / 6 VWTR
DOOO SP@ SATR 2 VMBW DROP
0000 0000 0000 0000 1 SPCHAR 0 1 F 5 0 SPRITE
0000 0000 0000 00E0 2 SPCHAR
E040 4040 4040 E000 3 SPCHAR
0 1000 10 VFILL 0D 7 VWTR ; \ colors of fg (10) and bg (0D)
0 VARIABLE RATE 0 VARIABLE CLE 0 VARIABLE INS
: BLINK RATE @ DUP 1 RATE +! 4 = IF -4 RATE ! ENDIF
OK IF 1 0 SPRPAT ELSE 2 INS @ + 0 SPRPAT ENDIF
180 0 DO LOOP ;
18 LOAD --> \ load cursor positions and auto-repeating key
```

SCR# 23

```
( SCREEN EDITOR - 64 column support 20SEP85*Michal Jaegermann )
: LINE. DUP SCR @ (LINE) ROT SMASH VMBW ; HEX
: HLIST BASE->R DECIMAL 0 0 AT ." SCR # " . CR R->BASE ;
: .CUR CUR C/L /MOD 3 SLA 1+ SWAP 2+ 2 SLA 8 MAX SWAP
0 SPRPUT ;

: /INS/ 1 INS @ - INS ! ;
: ELIST SCR @ DUP HLIST CLIST 30F0 8 0 VFILL ;
: FLIP 0 !CUR .CUR ; \ this is HOME - name for compatibility
: EOUT 1 0 SPRPAT 30F0 8 ROT VFILL CLS SCR @ HLIST 0 IN ! ;
: ED> 66 EOUT ;
: >ED .CUR ;
: BCK NOP FF EOUT QUIT ; \ NOP is a forward reference holder

19 LOAD \ load a generic (TI-Forth) editor
BASE ! :S
```

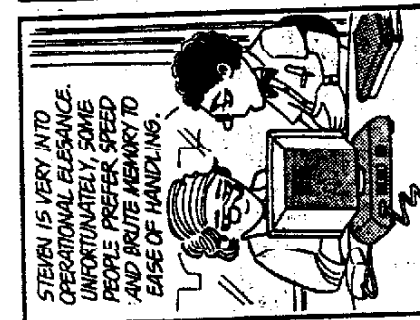
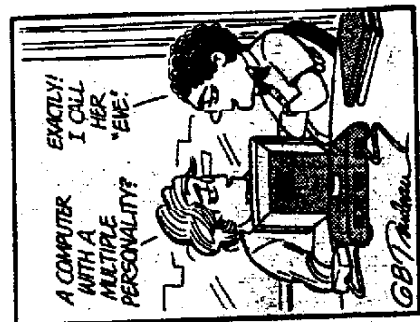
SCR# 24

```
( SCREEN EDITOR - cursor & auto/rpt 6OCT85*Michal Jaegermann )
HEX 0 CONSTANT CUR
: MAP SCR @ BLOCK + ;
: *CUR CUR MAP ;
: !CUR 0 MAX S/BUF 1- MIN ' CUR ! ;
: +CUR CUR + !CUR ;
: %ROW CUR C/L MINUS AND ; : NXT %ROW C/L + MAP ;
: COL CUR C/L 1- AND ;

: RKEY BLINK ?KEY -DUP IF CLE @ 1 CLE +! \ waits long enough?
OK IF 837C C@ \ new key pressed ?
IF -18 CLE ! ELSE DROP [ LATEST PFA ] LITERAL >R ENDIF
ELSE -1 CLE ! ENDIF \ time out - accept
ELSE -18 CLE ! [ S_H @ IN +! ( \ conditional compilation
LATEST PFA ] LITERAL >R ENDIF ; :S
) ] KEY ENDIF ; \ wait here for some key pressed
```

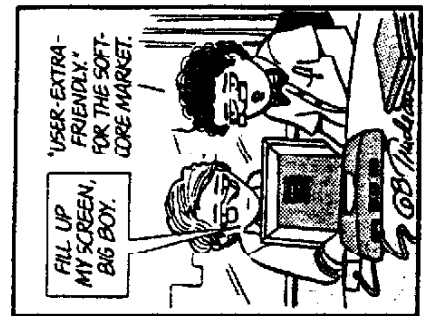
## Doonesbury

By GARRY TRUDEAU



SCR# 25

```
( SCREEN EDITOR - marking & deleting 90CT85*Michal Jaegermann )
: REDRAW ELIST .CUR UPDATE ; HEX
: RELINE OD EMIT CUR C/L / LINE. UPDATE ;
  1 VARIABLE UNMARKED
: MARKOUT DUP C@ 7F AND SWAP C! ;
: MARK *CUR DUP DUP C@ 80 OR SWAP C! UNMARKED @
  IF NXT 1- 0 UNMARKED ! ELSE SWAP MARKOUT ENDIF ELIST .CUR ;
: *MARK UNMARKED @ 0=
  IF 2 0 DO MARKOUT LOOP 1 UNMARKED ! ELIST .CUR ENDIF ;
: MYMARKS UNMARKED @ IF *CUR NXT ELSE 2DUP *MARK
  2DUP > IF SWAP ENDIF 1+ ENDIF ; \ unsigned comparison
: RIP PAD C/L BLANKS OVER - C/L MIN PAD SWAP CMOVE> ;
: YANK MYMARKS RIP ;
: *TAIL MYMARKS 2DUP RIP OVER - BLANKS REDRAW ;
: *LINE *MARK &ROW !CUR MYMARKS 2DUP RIP SWAP OVER
  B/BUF MAP - MINUS CMOVE 3C0 MAP C/L BLANKS REDRAW ; -->
```

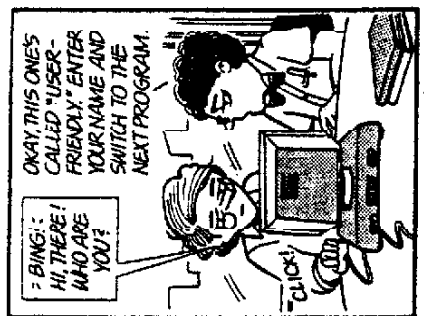


SCR# 26

```
( SCREEN EDITOR - moving text 17SEP85*Michal Jaegermann ) HEX
: ROOM >R OVER + R> OVER - CMOVE> ; ( from cnt below -- )
: MDOWN &ROW DUP !CUR MAP DUP C/L B/BUF MAP ROOM ;
: OLINE MDOWN C/L BLANKS REDRAW ;
: RWORD *CUR DUP BL ENCLOSE DROP SWAP DROP + BL ENCLOSE
  DROP DROP + - MINUS +CUR ; \ move cursor to the next word
: RMOVE RWORD .CUR ;
```



```
: ILINE INS @
  IF PAD BL ENCLOSE DROP DROP C/L OVER - >R + R>
  -TRAILING 1+ *CUR SWAP 2DUP
  NXT DUP >R ROOM OVER R> - MINUS MIN CMOVE
  ELSE MDOWN PAD SWAP C/L CMOVE ENDIF REDRAW :
: DEL BL NXT DUP *CUR DUP 1+ DUP >R SWAP ROT R> - CMOVE
  1- C! RELINE .CUR ;
-->
```



SCR# 27

```
( SCREEN EDITOR - cursor control 17SEP85*Michal Jaegermann )
: +.CUR +CUR .CUR ;
: NWL C/L COL - +.CUR ;
: LEFT -1 +.CUR ; : RIGHT 1 +.CUR ;
: UP C/L MINUS +.CUR ; : DOWN C/L +.CUR ;

: PUTCHAR *CUR INS @ IF DUP 1 NXT ROOM ENDIF C!
  RELINE 1 +.CUR ;

: NEWSCR CLS COL 22 > S_H ! ELIST .CUR ;
: +SCR SCR @ 1+ DISK_HI @ < SCR +! 0 !CUR NEWSCR ;
: -SCR SCR @ 1- 0 MAX SCR ! 0 !CUR NEWSCR ;

: ED.YE 1 ED> R> DROP : IMMEDIATE
: ONEDU *CUR 0 ED> R> DROP ;
: TWODD *CUR RWORD 0 ED> R> DROP ; -->
```



SCR# 28

```
( SCREEN EDITOR - execution table 30SEP85*Michal Jaegermann )
: DOIT IF QUERY ELSE ( adr -- ) RWORD *CUR OVER - 1-
  C/L MIN TIB @ 2DUP + 0 SWAP C! SWAP CMOVE> ENDIF
  INTERPRET .S >ED ; IMMEDIATE
```

: WAIL 7 EMIT ;

```
WAIL CFA DUP VARIABLE ACTION , ~TAIL CFA , \ 01
DUP , DEL CFA , /INS/ CFA , -SCR CFA , \ 05
ILINE CFA , ~LINE CFA , LEFT CFA , RIGHT CFA , \ 09
DOWN CFA , UP CFA , RIGHT CFA , NWL CFA , \ 0D
FLIP CFA , BCK CFA , DUP , TWODD CFA , \ 11
RMOVE CFA , DUP , DUP , ~MARK CFA , \ 15
DUP , ONEDO CFA , +SCR CFA , YANK CFA , \ 19
MARK CFA , ED.XE CFA , DUP , DUP , \ 1D
OLINE CFA , , --> \ 1F
```

SCR# 29

```
( SCREEN EDITOR - main loop & entry 30SEP85*Michal Jaegermann )
HEX
```

```
: EDI BEGIN RKEY DUP BL <
  IF 1 SLA ACTION + @ EXECUTE ELSE PUTCHAR ENDIF AGAIN ;
```

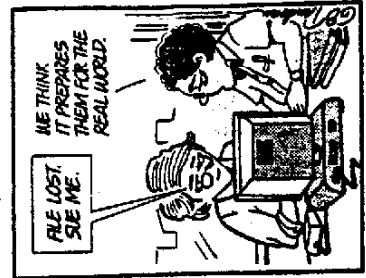
```
: ~MARK CFA BCK ! IF WIDTH ! FORTH DEFINITIONS
```

```
: ER EDITOR [ S_H @ IN +! ( ) \ conditional compilation
  VDPMD @ S = 0= IF SPLIT CINIT ENDIF [ 2 IN +! ) ]
  1 INS ! /INS/ NEWSR BEGIN EDI [COMPILE] DOIT AGAIN ;
```

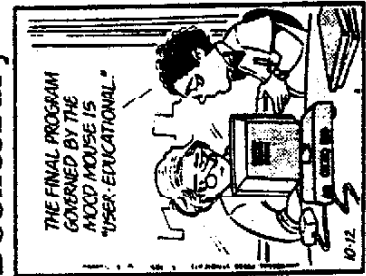
```
: WHERE EDITOR SCR ! 2- !CUR ER ;
: ED@ EDITOR 0 !CUR ER ;
: EDIT SCR ! ED@ ;
```

;S

By GARRY TRUDEAU

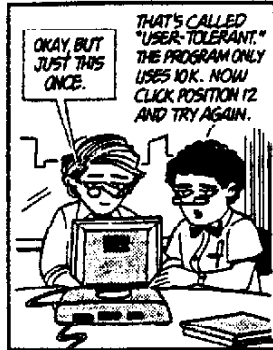
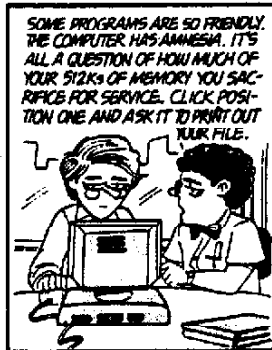
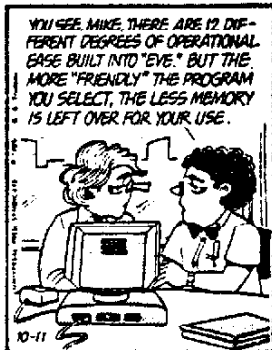


Doonesbury



# Doonesbury

By GARRY TRUDEAU



# Universal software package unveiled

VANCOVER (CP) — University of British Columbia researchers have developed a universal computer software package that will allow computers of different makes and models to talk to each other.

The Syscom Messenger 400, developed by the university and marketed by Sydney Development Corp., could be adapted for the home computer market if it proves popular with computer users.

"During the last few months, representatives of corporations from around the world came to us in Vancouver to see and negotiate contracts for the new system," Sydney's chairman Walter Steel said Monday.

Within the past year, Sydney

has licensed for sales AT&T Information Systems in the U.S., British Telecom in the U.K., Canada's AES Data Inc., Siemens AG and Nixdorf, both of West Germany, and the Olivetti Corp. of Italy.

AT&T has already sold one package for \$45 million to the U.S. Customs service, Steel told a news conference.

Paul Gilmore, who co-ordinates government grants for computer research at the university, said for now the software package is aimed at large computer users.

Within a year or two once large users are established in a network, the software may be made available to home computer users, he said.

Until now, different brands and

mates of computers couldn't communicate with each other electronically without cumbersome program packages.

A United Nations committee, after four years of deliberations, established a universal message system called the X-400. The system standardized codes to allow development of a universal software.

Using the X-400 codes, UBC computer professor Gerald Neufeld started to develop the software package in 1981.

Using grants from the federal government's Natural Sciences and Engineering Research Council of Canada, Neufeld finished his work and handed it over to Sydney for marketing in 1985. The univer-

sity will earn hundreds of thousands of dollars in royalties if the system becomes popular.

To continue development of the program, Gilmore and two other UBC professors were awarded a federal research grant of \$933,000 over three years on Monday. "Our system is a bridge that can link most independent computer messaging networks," said Gilmore.

Judy Stark, a communications analyst and president of Gatling Communications Inc., said the development sounds promising but isn't guaranteed.

"The X-400 code is a new one, only introduced within the last year," she said. "The software package will depend on universal acceptance of that code."

## Computers kill driving passion

*Mona Lisa must have had the highway blues:  
You can tell by the way she smiles*

— Bob Dylan

In the inexorable march of technology, the latest casualty may be the Sunday driver.

Japanese engineers are working to perfect the driverless car. Computers take over the job, just like automatic pilot on airplanes.

No more gearing up to reach highway speed or slipping in and out of lanes like Mario Andretti. No more the sheer pleasure of taking on a challenging road.

If there's a steering wheel on these futuristic cars, it may not be connected to anything; you can spin it to your heart's content, but to no avail. The computer is in control.

The engineers concede that an automated car might not be easy to market. For those who consider driving a pleasure, and not just a means of transport, a microchip mobil would be a soulless conveyance.

Yet for those who find every trip to the mega-mall a nerve-racking odyssey, what could be better?

No more worrying about slippery roads, tailgaters or drivers cutting in front of you. The computer detects them all and keeps its distance.

And that gives cause to wonder what effect these auto-automobiles would have on insurance rates. Presumably, if there were fewer accidents, there would be fewer claims. And if fewer claims, smaller premiums.

Would different cars have different rates, depending not on how much they cost to fix but on how reliable the computer was?

And if you owned an old clunker that you had to drive yourself would you pay a higher rate, a penalty for choosing to drive rather than have the machine do it all for you?

"Drivers" wouldn't even have the pleasure of taking shortcuts. On the new cars, you would just punch up your location and destination on the dashboard computer and let it determine the fastest way to get there. Turn the key and you're off.

That's not all the computer does. It's idiot proof. It tells you when to get the engine tuned, when to fill up, when to add oil, to put on your seatbelts. What's next, a little sensor in the seat telling you when to go on a diet?

Still, the computer-controlled car would be better than a bus. You could read a book or snooze in privacy.

Drunk drivers would no longer be a menace to society.

Maybe you could adapt the video terminal to show movies or play Pac-Man while you're stuck in traffic. What a boon that would be to Calgary drivers who have little choice but to look at the city around them.

Every car could be a luxury car. With your hands free of the wheel, you could put up your feet and enjoy the view.

It might be wonderful to give up driving, but controllable cars won't pass without a tinge of regret.

If the Japanese have their way, will we ever have the highway blues again?



LET OUR FRIENDLY STAFF HANDLE ALL YOUR COPY NEEDS

- Office Supplies
- Office Furniture
- Typewriter Rentals
- Typewriter Repairs
- Business Machines
  - Typewriters
  - Calculators
  - Cash Registers
- Photo Copy Service
- Rubber Stamps

## **broadmoor stationers**

**165 Athabasca Avenue Sherwood Park**

Mon. - Fri. 9:00 - 5:30 pm Sat. 10:00 - 4 p.m.

**SHARP**

**464-4343**

**SCM SMITH-CORONA**

**EDISON-BELL  
COMPUTER  
GENERAL  
STORE**

9872-63 AVE. EDMONTON ALTA.  
T6E 0G6

PHONE 435-4636

First Line Auto Body LTD.

**5% DISCOUNT**

for Society Members



RON HOHMANN

JEFF HAMPSHIRE

6825 - 76 Avenue

465-4225

# NOVA COMPUTERWARE

52 AIRPORT ROAD EDMONTON ALBERTA T5G 0W7  
403 452-0372

## JANUARY SPECIALS

10 PERCENT DISCOUNT ON 32K MEMORY EXPANSION  
TI AND CORCOMP CURRENTLY IN STOCK

MUCAN BUSINESS MANAGER	\$49.95
BMC 13" COLOR MONITOR	\$444.00

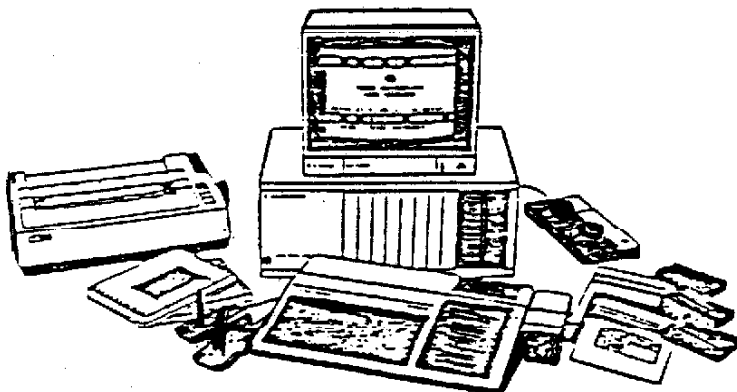
## NEW GAME SOFTWARE


OLD DARK CAVES - A GRAPHICS ADVENTURE	\$29.95
VOLCANO FORTRESS - RED TUNNELS DOOM MOD.	\$29.95
TUNNELS OF DOOM EDITOR	\$34.95

## NON AVAILABLE

REPLACEMENT KEYBOARD, POWER SUPPLY, TRANSFORMER  
REPAIR SERVICES AVAILABLE

USED ITEMS FOR SALE: CONSOLE, MINI-MEMORY,  
SYNTHESIZER, ACOUSTIC MODEM, EXPANSTON SYSTEM  
P-CODE CARD AND SOFTWARE PACKAGE \$500.00



WE STOCK THE  
COMPLETE LINE OF  
TEXAS INSTRUMENTS   
TI-99/4A  
HOME COMPUTER PRODUCTS