

OTTAWA PC NEWS

Vol. 10 No. 5

The Newsletter of the Ottawa PC Users' Group (OPCUG)

May 1993

Review of April's meeting—a member's view

WordPerfect gets it right

by Jackson Hibler

I know this sounds like heresy, brethren, but that old devil WordPerfect has finally seen the true and holy path. Yea, we need but drag its ugly interface before this congregation to know it's evil. It fights us every step of the way, brothers and sisters. Forty days and forty nights and forty function keys, but not one where you might expect it, not even F1. Escape gets you "repeat", for heaven's sake! True, by devout study you can learn which keys will play the simpler hymns, but you soon find that related verses are scattered wherever they happened to find an opening between revisions of their hymnal! Our humble supplications offered in the sparse menus rarely receive a comprehensible reply. WordPerfect is a terse, stern minister. To earn our daily bread, we must pour over the good book, or buy a better book, or enroll in a seminar(y). There are many of those...for good reason! Yea, this is only what one might expect from the offerings of poor souls who have worshipped too long at the feet of UNIX.

Mind you, the truth is that there has never been a decent word processor to answer our prayers anywhere in DOS. Valdocs under CP/M and MacWrite were able to show italics on screen twelve years ago! And they were sinfully easy to learn and use. But what had become the holy writ when DOS was revealed? WordStar! All were expected to climb the steep and narrow path to obtain enlightenment. WordStar made us believe that

word processing power required tedious learning drudgery...self-flagellation being the path to faithful commitment. In the later days, WordPerfect stole away WordStar's ministry by making their word processor even more unpleasant to use while beguiling us with promises of prowess—filling our hearts with lust and greed. In a huddle of underachievers, they stood aloof and challenged the faithful to discover the power and the glory.

But accessible power? We never got that under DOS... It was Saint Samna's Ami and Microsoft's holy Word that first showed us how powerful and approachable a word processor could become. All we had to do was convert to Windows.

Prideful and secure in DOS, WordPerfect came reluctantly to Windows' altar. After all, in Windows, things would have to be done Windows' way, not theirs. But revelations of the power of Windows' word processors began to tempt away the faithful! Thus did WordPerfect finally see the light and seek entry to Windows' congregation. They brought their printer drivers along with them—justifiably proud of their righteous design—but fortunately, Windows forced them to renounce most of their old user interface. Praise be, praise be! For now, at last, it has come to pass that the faithful can find their way about the new WordPerfect For Windows without an ordained minister close at hand. The power always hidden there has finally been revealed!

INSIDE

Software library	
Disk of the decade	2
Charitable sale and auction	
Second annual garage sale	2
Coming up	
Symantec and Fifth Dimension presents	3
PUB crawl	
Screen-saver utilities.....	4
Windows SIG	
Going 100% Windows	5
Fox SIG	
Distribution kits.....	6
DOS 7	6
Learning how	
Notes on memory.....	7
Computerese games.....	7

I believe, brothers and sisters, that WordPerfect's conversion to Windows has been the best thing to happen to them since they first came down unto the PC. Having been struck from their DOS by this revelation, they have now risen up to show us how well they have learned their new catechism. Brother Jamie Simzer brought to our last revival meeting a wonderful program called Presentations, that uses Windows to its fullest. Combining drawing and painting

Continued on page 2

Disk of the decade

Norman Dafoe

This is it! Our **ONE HUNDREDTH** diskette of the month is coming out this month. We are calling it the **Disk Of The Decade** and it will feature some of the best of the goodies found on previous disks-of-the-month (DOM), latest versions of course, as well as some new stuff. Contrary to usual practice, most of it will be archived (ZIPped), and the diskette will be in **high-density format** (1.2MB or 1.44MB).

As a special bonus to holders of our Diskette-of-the-Month card, this diskette will cost only a single number on your card to be checked off! Cash buyers will have to pay our regular high-density price of \$5—a real bargain in any case, and as always, you help to support the club.

Anticipating gold-rush business, I will be making about twice as many copies as usual. Please don't let me down!

Sales at the April meeting were about 50% higher than usual; perhaps I am finally finding things that people want! I sold out of **BIG GAME PACK #8**, which featured **HEXXAGON** for DOS and **DARE TO DREAM** for Windows. Another high-density game disk, **MONSTER BASH #1**, was also popular, as was **CROSSWORD POWER v5.00**, a neat program which allows you to create your own crossword puzzles. **WYNFIELDS** for **WINDOWS** is a well-known DOS relational database program which has been ported to Windows 3.x. An extensive database of 1000 recent movies is being distributed as shareware on a high-density diskette, **MOVIES TO GO**; 4700 movies are available on the registered version. Finally, PC Magazine's **BENCHMARK** has been updated to v7.01.

I will have further copies of these diskettes, as well as new disks, at the May meeting. Come by the Software Librarian's desk and take a look!

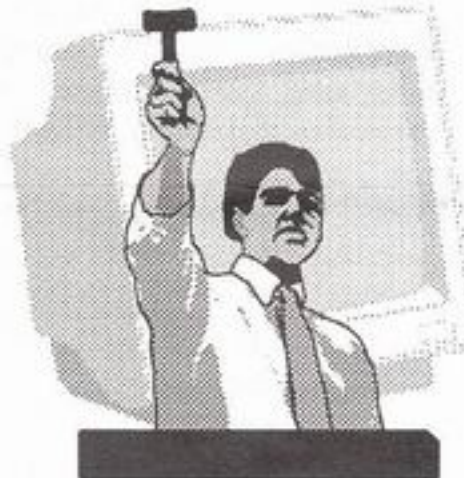
◆◆◆

Charitable sale and auction

Netland's second annual garage sale on May 29th

A local company is organising for the second year a garage sale and auction of new and used office equipment and furniture, and computer software and hardware. As was the case for last year's event, all proceeds go to CHEO.

The venue is on Saturday, May 29th, 9:00 am to 3:00 pm, at the Care Canada Building, 1550 Carling Avenue. It's next to Campbell Ford and the entrance is off of Kirkwood.



Several companies and individuals have again donated items to be sold, and the organizers would greatly appreciate any items club members may wish to give away.

Please take your items before May 26th to Netland, 14 Bexley Place, which is behind IKEA in Nepean. Netland is open weekdays only between 9:00 am and 5:00 pm. If you can't make it, or you have too much and need a hand, give Netland's Joe Brule a call at 721-8696.

And don't forget to go to the sale.

◆◆◆

continued from page 1

tools, this slide-maker can cause parts of each image to be drawn sequentially, giving slide shows a near-animated pace that can be further enhanced with video and heavenly sound...my, hath they brought us wonders!

But lo, that is not all: the rapture of invention is still upon them! Brother Simzer promises us an entirely new GUI interface for their ancient and evil DOS word processor. Yea, brethren, WordPerfect 6.0 is going to ascend to a new graphical interface...quite like Windows, but

in DOS for ever and ever! Mind you, my fellow parishioners and I got only a glimpse of this new and wondrous revelation, but let us rejoice that WordPerfect has vowed to leave its evil ways behind and carry us forward to the promised land. Amen!

◆◆◆

Symantec and Fifth Dimension presents

by Julie Dustin

Get ready for the whirlwind tour of products at the next OPCUG meeting on Tuesday, May 25. Two companies will be showing their new and/or improved products. Symantec, probably best-known for Norton Utilities, has a number of new product releases which will be presented by Blair Canavan. Fifth Dimension Systems Inc. will be showing new presentation products (you may have already seen examples at recent meetings—free loan to OPCUG). Ted Burnett, from Fifth Dimension, promises information on colour output, touching on issues ranging from local bus technology to colour printers.

Symantec's new products

Blair Canavan, District Manager for Eastern Canada, will show a plethora of products from Symantec. The list includes Norton Utilities for DOS 7.0 (Peter Norton fans take note), Norton Desktop for Windows 2.2, and a newly-acquired product called Act! (yes, the ! is part of the name). ACT! is a sales tool for managing clients and prospects and is available on the DOS, Windows, and Macintosh platforms.

It looks like Symantec has been very busy while hiding in the shadow of Microsoft and Intel product announcements (and lawsuits). Canavan notes, "We also are releasing GuideLine which is a new project management product. We wanted to provide an easy-to-use interface for novice project managers." He adds, "Another product we're

Calendar *(subject to change)*

General Meeting Location:	Sir Robert Borden HS 131 Greenbank Road
General Meeting Time:	7:30 p.m. to 10 p.m.
Date and Time	Topic and Location
Tuesday, 25th May, 7:30 pm	See this page.
Saturday, 29th May, 9:00 am	Netland's second annual garage sale. See page 2.
To be announced	Next FoxSIG meeting

The May 25th general meeting is the last of the season. Next season's meetings begin in September. Check the August newsletter for the date.

proud of is Q&A Write for Windows 3.0. The product, formerly called JustWrite, fits in 1.7 MB of disk space. It's great for a laptop and can be bought for as little as \$69."

Norton Desktop

Norton Desktop is a group of utilities products all packaged in its own shell. All Symantec features like backup, recovery, anti-virus, and the much-loved Disk Doctor are included in the desktop product which operates as the shell for Windows. Canavan claims, "It is a full replacement for Window's File Manager and Task Manager."

What a deal

Symantec is offering a special user group purchase program for OPCUG members. Yes, you must be a up-to-date member....oops, I'd better go check my envelope label for my expiry date. Members can purchase Symantec products, including Norton Utilities, for \$29.00 each (only one of each product per customer). Get an order form at the meeting.

◆◆◆

Screen-saver utilities

by Alan German

Recently I found a need for a screen-saver utility program and took a quick tour around the file areas of the PUB to see what might be available. This article provides brief reviews of some software which can be obtained from our club's BBS.

I hope that this information will aid other members in deciding what might be an interesting package to download and, perhaps more importantly, may identify the odd package which sounds promising but is a real dog!

These software titles are all available in File Area # 43 (Screen Utilities) on the PUB.

AMERICA.ZIP: a screen saver with fireworks

This has perhaps the most dazzling display of "fireworks" in packages of this type. 'AMERICA' simulates rockets with dramatic mid-air star bursts. Its use of multiple colours in a single explosion provides an almost 3-D effect. The burst pattern covers lots of display area, and the fragments weave across the screen rather than travelling in boring straight lines.

This package has a number of downside features. Firstly, there is no built-in time delay feature, so this screen saver must be activated manually. Secondly, the program defaults to a fixed number of particles and explosions. If the default values do not appeal to you, you must reset them manually each time you run the program. This latter requirement is especially tiresome and may well eliminate this package from consideration by many people.

Info: Freeware from Thomas R. Wilson of Houston, Texas. Size: 24576 B. Version date: 7-04-89

SPARKS.ZIP: a screen blanker

Not so nice. After a few star bursts across the top of the screen, the display settles down to a rather boring series of coloured dots fanning out up the screen from random points. It would appear that individual pixels of different colours are being used to simulate roman candles—a rather weak display.

The package can be made memory resident, it offers variable time delay, and features hot keys to enable/disable its operation.

Info: Shareware; \$ 10.00 registration from William D. Hause of Bryan, Texas. Size: 4856 B. Version date: 11-10-90

EXPLOSIV.ZIP: a screen blanker with rockets

In this fireworks display featuring "rockets", multiple star bursts in different colours explode from ran-

dom points across the screen, producing an impressive effect.

The bursts are smaller (and somewhat less dramatic) than those provided by 'AMERICA'; however you can easily reconfigure 'EXPLOSIV' to change the number and timing of the explosions, and a memory-resident feature provides a customizable time delay before the screen saver kicks in.

On balance, this is probably the pick of the crop currently being reviewed—good show, good features.

Info: Shareware; \$ 5.00 registration from Reidar Gresseth and Chris Hook, Vancouver, BC. Size: 9216 B. Version date: 3-21-90

EXPLS210.ZIP: fireworks plus for DOS and Windows

This is version 2.1 of EXPLOSIV (mentioned above) and, as with all new versions of software these days, the program size has greatly increased—the original archived file was 9 kB whereas this package weighs in at 228 kB!

To be fair, the new archive includes both DOS and Windows versions of the screen saver. Furthermore, you get lots of screen saver patterns, some 16 choices in all.

Some are incredibly dull; check out Stars if you like watching paint dry. Worthy of note are Linus—a kaleidoscope, and Aranea, Ifs, Orchid, and Serinde—constantly changing sets of fractal-like images. The original fireworks option has been modified so that now each star burst contains the same group of multiple colours—not a move for the better.

Info: Shareware; \$ 5.00 registration from Reidar Gresseth and Chris Hook, Vancouver, BC. Size: 227700 B. Version 2.1

Continued on page 5



Going 100% Windows

by Philip Baker

Windows detractors are fond of pointing out that very few people use Windows exclusively, instead running DOS programs at least occasionally. Regardless of whether this is a legitimate criticism, it is certainly true. The question therefore arises as to how close we can come to using only Windows programs.

Major applications are certainly no problem. Almost immediately after the introduction of Windows 3.0, there were applications for it available in every important category. In every category except databases, these applications matched or exceeded the capabilities of their DOS counterparts. With the recent additions of FoxPro for Windows, Access, and Paradox for Windows, Windows is now the way to go for database management too. Almost all applications now appear in Windows versions simultaneously with the DOS versions, or more often, before them. Many important applications are not released in DOS versions at all, and those that are available for both generally offer more features in the Windows version (at the very least OLE support).

Those applets that we used to have to use pop-up TSR programs for, such as calculators and calendars, were also quickly available in Windows, without requiring the user to remember any obscure hot-key combinations.

One category of programs seemed to be inevitably locked into the DOS world. Low-level disk utilities not only were unavailable in Windows versions, but you couldn't even run them safely from a DOS box within Windows. However that is no longer true. Central Point's new PC Tools for Windows allows you to repair disks from within Windows and has a defragmenter that will even run in the background! Since Symantec will doubtless soon be offering similar products, it appears that this category of software will be adequately filled with Windows product, even though it had seemed the least likely ever to go this route.

So, is there anything left where DOS software is the only choice or the better choice? Those areas of software which have traditionally been dominated by shareware are still lacking in Windows support. I do not know, for example, of any Windows software that will compress files in the PKZIP 2.04g format, except by in-

voking DOS-based compression programs. Similarly, any Windows-based off-line QWK mail readers that I have seen have suffered from serious shortcomings. There is just one other purpose for which I prefer to use DOS. I find it a lot more convenient to type "XCOPY *.DOC A:\\" than to click on a file list, choose Select Some from the file menu, type "*.DOC" into the dialog box, click on OK, then drag the files to their destination. Graphical file management just doesn't work very well when operating with file patterns, in my opinion.

It would seem we are very close to the point where we can go 100% Windows. Ninety-nine percent of what we want to do can be done and done well within Windows, and I expect that shareware authors, as they get more experienced with Windows programming, will soon fill in the gaps in that area, and surely a file manager can be devised which combines the advantages of graphical and command line file management. All in all, we should be using Windows software exclusively just about in time to switch to NT and whole new set of software.

◆◆◆

Screensaver *continued from page 4*

IM17.ZIP: Inner mission

This package offers all the features of a typical screen saver utility; however, the operation of the unregistered software is severely restricted. What you are downloading is a (crippled) demonstration version. The package is mentioned primarily because it features some unusual screen effects.

A cavalcade of (astronomical) stars passes by in a perspective view to the user. The effect is a Star-Trek-

like voyage through deep space. Hitting the Enter key causes your "spaceship" to travel briefly in warp drive with the stars leaving visible trails as you pass.

A novel effect is the ability to add custom messages which initially appear as small text in the distance, then float towards you, becoming larger as they progress until, finally, the message whizzes past both your ears. Lots of opportunity for some fun with your colleagues/family here! Another trick is that pressing the "t" key pro-

duces the time and date as floating messages.

You should be aware that there is a one-week time limit on the operation of this version, and that it produces (after asking permission) a small write-protected file in the root directory.

Info: Crippleware; \$ 5.00 registration from Kevin Stokes, Durham, North Carolina. Size: 44638 B. Version 1.7

◆◆◆

Distribution kits

by Andrew MacNeill

For those who don't already know, the Distribution Kits for both FoxPro 2.5 DOS and Windows are now available from Microsoft.

There are no major changes in the DOS release. The Windows release, however, features:

- a Setup Wizard that creates a full Windows setup application
- the Microsoft Help Compiler that creates Windows-style Help, and
- the Windows Style Guide, a viewer document that outlines some interface guidelines when developing Windows applications

For those who were hoping for a smaller compiler library, unfortunately, you're out of luck. The DOS runtime libraries are close to 1.5 MB size each and the Windows runtime is 2 MB. Not only that, but you can't include FLL files into your application for running FP/Windows applications—they have to be kept separate. The Setup Wizard, however, is quite

neat. It performs all standard Windows setup tasks such as copying required DLLs and making necessary changes to the WIN.INI and Program Manager groups.

April meeting

Special thanks once again to Neon Software and Val Matisson for a wonderful time at the last meeting. Neon will be back in Ottawa late June for training. If you are interested, please contact Neon Software at 419-472-3010. Also, the Toronto FoxPro DevCon is coming up quickly so be sure to register—information is available on the PUB.

Next meeting

The last Fox SIG Meeting before Summer will be in the last two weeks of June. We are still finalizing a date, but it will be after the Toronto Developer's Conference (11-12th of June). The meeting date will be announced on the PUB and through the fax mailing list. If you have not received a meeting notice via fax before, please fax your fax number to Andrew MacNeill, 596-3313, immediately.



New tools on the PUB

Recent Fox uploads to the PUB include TOOLBARS.ZIP, a FP/Windows screen file showing how to create Windows-style toolbars for your application, and selections from the latest FoxMasters Fox magazine. Check them out!

International version of FoxPro 2.5

FoxPro 2.5a is now available from Microsoft. This upgrade is NOT a bug fix, but an internationalized version of the product. If you are writing international software, you may want to upgrade. Information on this latest version is available on the PUB.

◆◆◆

DOS 7.0

Julie Dustin

The initial excitement of receiving DOS 6.0 is over and we've all compressed our disks. Okay, I admit I'm still waiting for everyone else to compress their disks first. So we ask ourselves, is the product worthy of its new version number or should it have been DOS 5.1. I believe the rule about buying only every 2nd major upgrade of your favourite software is still applicable despite some software companies using new version numbers to disguise bug fixes and create marketing hype. Let us know what you think—you can write a letter to the editor by mail or by BBS.

Chicago

Meanwhile, did anyone notice Bill Gates mention DOS 7.0 in the recent DOS 6.0 world satellite broadcast. Some of us may have been having too much fun watching the show to notice (I know I was impressed by all the "smoke and mirror" stuff). Just for the record, it was reported in Canadian Computer Reseller that DOS 7.0, code-named Chicago, would be out in a year and would have 32-bit capabilities and multitasking.

However, to confuse the picture, Gates also predicted that five years from now many systems would be running Windows NT. Don't you love technology!

◆◆◆

Notes on memory

by Eric Clyde

All programs need computer memory to run. Most users overlook the fact that, in addition to the memory requirements of the word processing or other program they are running, the operating system, mouse driver, disk cache, print spooler, and any other TSR (terminate and stay resident) programs also use up memory space. These 'forgotten' programs can take up over 100 kB of memory, leaving the major application strapped for space, causing it to run slowly if at all. Hence the popularity of memory managers.

It is a common error to assume that the more memory you have over 640 kB the better. This is only true if you are using Windows, or if the application you are running is able to take advantage of the additional memory. Unfortunately many older programs still in wide use cannot use memory beyond 640 kB. But if a powerful enough computer (286 or better) and a memory manager program is available, some scarce memory within the 640 kB can be freed, as explained below.

Conventional memory

Nowadays, all computers have at least 640 kB of memory (called conventional or base memory). Actually 1 MB of memory is available, but the part above 640 kB, known as upper memory, was generally reserved for other functions, such as keeping track of the information appearing on the monitor. Some of this upper memory can be used to store DOS programs if you have a 386 or better and use DOS 5.0, DOS 6.0 (with MemMaker), or a memory management program such as QRAM (for 286s) or QEMM or 386MAX (for 386s or better).

Expanded memory

To partially overcome the problem of the 1-MB memory limitation, a technique called memory paging, or bank switching, was used. A 64-kB page (block of memory) is used as a window through which up to 32 MB of memory can be addressed. Assuming that memory is available, pages from the 'expanded memory' are switched in through the window as required. On a 8088 or 286 machine, a special board is needed; on a 386 machine or better, expanded memory can be emulated through software.

Using expanded memory slows processing down, because the memory is not directly addressed as in other types of memory. It is still much faster than retrieving information from a hard disk.

Extended memory

The development of the 80286 and newer chips made it possible to address more memory. The limitation of the 286 chip is 16 MB, for the 386 it is 4 GB (4,000 MB). The portion of memory beyond 1 MB is called extended memory. These chips can run in two modes—real mode (emulating the older 8086 or 8088 chips, and thus limited to address only conventional memory) and protected mode (able to address the extended memory as well).

Until recently, few programs were written in protected mode, principally because they would not be able to run on the millions of 8086 and 8088 microcomputers in the market place.

All versions of DOS, at least up to now, operate in real mode: Windows 3.0 could run in real mode, but Windows 3.1 can run only in protected mode. OS/2, the still to be released Windows NT, and the various versions of UNIX are protected-mode operating systems.

Using upper memory

You may be able to move some programs to the upper memory block. For example, on my computer, a 386SX with 5 MB of ram, I have a number of TSR programs I like to keep available in memory as, of course, command.com etc. Without using a memory manager, the total space used by these in base memory amounted to about 85 kB, leaving 555 kB available for my applications. When I ran Word Perfect, for example, I occasionally found I didn't have enough memory to do all I wanted, and had to reboot with a somewhat slimmed down TSR repertoire.

After loading DOS 6.0 and running MemMaker (not without some minor difficulties, I should add), I find that I now have 600 kB available in conventional memory: the 85 kB taken by command.com and the TSRs now being slotted into the upper memory block between 640 kB and 1 MB. Word Perfect and other programs haven't refused to do anything since—touch wood!

Some care has to be taken with the process. For example, in one trial run Norton Commander was loaded high and operated just fine for most requirements, but when I tried to run some other programs I got the message that I didn't have enough memory—this despite Dir telling me that I had about 620 kB free!

The moral is to make a backup bootable floppy disk containing your current config.sys and autoexec.bat files before using MemMaker. Then, in case of major difficulties, you have a working fall-back position.

While experimenting I boot up from a floppy disk, which I use to try out various combinations. Only when I am certain that there are no prob-

Continued on page 8

Ottawa PC News

Ottawa PC News is the newsletter of the Ottawa PC Users' Group (OPCUG), and is published monthly except in June and July.

Deadline

Deadline for submissions is the last day of the month prior to publication.

Mailing Address

3 Thatcher St.
Nepean, Ontario K2G 1S6
Telephone Answering Machine 723-1329
PUB (BBS) 8N1 2400 bps 228-0665
PUB (BBS) 8N1 9600 bps 228-1247
PUB (BBS) 8N1 14.4 kbps 228-8550

Chairman

Harald Freise 828-3411

Past Chairman

Doug Poulter 745-8768

Treasurer

Stan McRoberts 722-0849

Secretary

Robert Parkinson 523-7299

Membership Chairman

Mark Cayer 224-8031

Convenor

Lynda Simons 739-9318

Software Librarian

Norman Dafoe 723-1909

BBS Sysop

Chris Taylor 723-1329

Hardware/Software Broker

No appointment

Beginners' Corner

Eric Clyde 749-2387

Newsletter Editor

Chris Seal 831-0280

Assistant Editors

Julie Dustin 228-0724

Susan Phillips 725-2935

Newsletter Mail Coordinator

Herb Kelland 733-4259

Group Meetings

OPCUG meets monthly except in June and July. Check the answering machine, the PUB and the newsletter for the date and place of each meeting. Meeting times are 7:30 p.m. to 10 p.m.

Membership fees

\$25 per year

Disk-of-the-Month

\$25 for 5.25 ins. diskettes and \$35 per year for 3.5 ins. (for 10 diskettes)

Printed by

Zippy Print
227 Rideau Street (at Cumberland)
Ottawa, Ont. K1N 5X8
Tel: 236-0340

Memory continued from page 7

lems will I make backup copies of the config.sys and autoexec.bat files on the hard disk and then copy over the newly-proved versions from the floppy disk.

Using expanded or extended memory

Take a look at the manuals provided with your software to see if they can use either expanded or extended memory. If any of them can, and you wish to make better use of your computer, you should consider acquiring a memory manager.

◆◆◆

Computerese games

Shown below are eight emoticons, which are pictures drawn by computer hackers using common keyboard symbols. Can you guess what they mean? To identify them, tilt your head 90° to the left. Match the pictures to their descriptions. Credit goes to GAMES magazine (June 1993).

For example, ;-) is a winking person.

1. *:o)
2. *|:-)
3. +-(:-)
4. 0-)

5. 0:-)

6. 8-o

7. 8:-)

8. :- (

a. young girl

b. the Pope

c. scuba diver

d. Mr. Bill

e. Santa Claus

f. dunce

g. angel

h. clown

The answers will appear in the next newsletter.

◆◆◆

MEMBERSHIP APPLICATION/RENEWAL

Membership #
(if you are renewing)

First name

Last name (please use caps.)

Address

Apt. #

City

Province

Postal Code

Country

()

()

()

Home phone #

Business phone #

Fax #

I use the following hardware: ☐ XT ☐ AT-286 ☐ 386 ☐ 486
(Check those that apply.) ☐ 300 baud modem ☐ 1200 baud modem
☐ VGA ☐ EGA ☐ Herc. ☐ 2400 baud modem ☐ 9600 baud modem

I would like to help in the following club activities:
(Check those that apply.)

- ☐ Programming instruction
- ☐ Hardware techniques
- ☐ Newsletter input
- ☐ Software library
- ☐ Promotion/Publicity
- ☐ Bulletin Board
- ☐ Other

I use the following software:

MEMBERSHIP FEE \$ 25.00

Disk of the month subscription
(\$25/yr. for 5.25" or \$35/yr for 3.5"
10 disks per year)

Cheque ☐ Cash ☐ TOTAL \$

Mail to: Ottawa PC Users' Group
3 Thatcher St., Nepean, Ont. K2G 1S6