

# OTTAWA PC NEWS

Vol. 9 No. 2

The Newsletter of the Ottawa PC Users Group (OPCUG)

February 1992

## Review of Last Month's Meeting

### Minasi's Menagerie of Mythological Monsters: Are We Stuck with DOS

by Jackson Hibler

Dos 5.0...Windows 3...3.1...NT? OS/21.3 .. 2.0...3.0! Pink'? Sparta'? Macintosh System 8? Sure are a lotta beasts in the woods these days! Mark Minasi, most familiar to me through his BYTE Magazine articles, dropped by to (lush all these operating systems out onto the stage at last rrtotth's meeting.

The first thing to jump out at us was that they didn't: most of these monsters wouldn't emerge from the mists. What Mark could do was show us their genetic heritage ...how these creatures seem to be evolving.

#### DOS and Windows

Windows was originally created to give the writers of applications software a Mac-like graphical front end. This was a solution to a problem that most PC users didn't know they had until the solution was presented. But from the looks of the flood of new Windows-aware programs, and the users buying, Windows has indeed encountered a growing hunger.

It's important to be clear that Windows is not an operating system. It depends upon DOS for such services. Primitive as it may seem to us now, DOS is sufficient to support the graphical user interface and "multitasking" that many of us enjoy through Windows 3.0...and will perhaps enjoy snore in the bug-fixed, TmeType-enhanced 3.1.

The problem is that Windows still cannot deliver all that it promises

also because of DOS. It doesn't multitask DOS applications even as well as DESQview. And it's pretty clear now that users just won't readily abandon their massive inventory of DOS programs, even for multitasking. But even when conning Windows-aware programs, DOS/Windows multitasking depends upon every running application behaving with decorum, politely yielding to the others, or the whole thing breaks down. Real task isolation, and preemptive task switching will require a whole new operating system ... and that's what OS/2 and 3 and Windows NT are all about.

#### OS/2

OS/2 arose as Microsoft's solution to hard-wired problems in the 80286 chip and developed into a true, pre-emptive, nmlitasking operating system. Sadly, it also started life crippled with a 16 bit architecture unable to fully use the new 32 bit 80386; a severe shortage of printer and other drivers; and by IBM's decision to configure it as a proprietary (they called it a "device independent") system that would drag users back to IBM hardware. OS/2 was greeted with a thunderous silence from the buying public. (Even Microsoft abandoned the project: first spinning off their graphical user interface effort into Windows and ultimately departing the OS/3 team altogether!)

Now it seemvs that IBM has seen the light (from the door left standing open when we all departed) and is

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bringing OS/2 2.0 back into the main stream: opening it to competitor's hardware ...and software ...including Windows programs ! Mark (who is currently writing a book on OS/2) has been conning the new OS/2 in beta for some time now and is quite impressed. It fixes the limitations of DOS/Windows; it's robust, and it looks like it may indeed con every

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**NEXT MEETING: TUESDAY, FEBRUARY 25, 1992 details on p. 3**

# Preliminary Survey Results

by Julie Dustin

First of all, thanks to you all of you who have responded to the survey. We've fed responses into a computer and pulled out some figures. We haven't finished our analysis, but here's a preliminary look at the results.

## Member Profiles

A total of 91 members have responded to the survey to date. That represents about 20% of the membership.

It looks like OPCUG is the only user group of choice for many of our members. A third of respondents have been with us less than 1 year while our 2-5 year members and 6-10 year

## Minasi's Monsters

*Continued from page 1*

one's applications! The problem is tithing: IBM's marketing error squandered years of OS/2 lead time. Mark wistfully remarked that despite the emerging qualities of Version 2.0, it may already be too late!

## Windows NT and Sparta

Time is not on Windows' side either. Windows cannot remain tied to DOS, so work has started on Windows NT. But "New Technology" means years of development time. So pieces of it may be released as they are built: "Sparta" (for bare-bones 32 bit-aware operating system?) and "Windows NT-----Server" and "Workstation" (to try to keep us living in the kitchen while the rest of the house gets built?) Sounds like fun! All of that confusion gives a "window" of opportunity for the new OS/2, if it can get out the door...

## Pink -the fully-loaded operating system

And what if it doesn't? IBM has an answer for that too: Pink. Mark's explanation for this name was that it was the colour of the index cards on

members both retake up about 15%o respectively.

## Hardware

59% of members are using 386 computers and 69%o have 2400 baud modems. Only 14% have no modern, while 33% are still using XT's.

## Software

Over 74% took the plunge and upgraded to DOS 5.0 while just under half (44%) use Windows. By far the most used software is WordPerfect: 85% of those surveyed are users. It's no wonder Jamie Sinizer was taxed trying to show us "everything we wanted to know about WordPerfect for Windows and weren't afraid to ask".

which the OS/2 development team wrote all the nice-to-have features (as opposed to the must-haves which went on blue cards). This system is supposed to glue yet another competitor-associate's GUI, Apple's Mac, onto yet another "object-oriented" operating system! But will everyone stay together this time long enough to finish the job? Mark figures we will all see Mac System 8 long before that happens and most of us will probably go to the Mac if we decide to abandon our present GUI mess.

One thing seems sure to me: DOS/Windows 3.x just won't be good enough. But the alternatives remain both mythological and monstrous. You only hear tell of them, or they're too far out, or too improbable to matter. Let's keep our fingers crossed and pray were not handed more of what we've got.

As he left the hall last month, Mark was heard to mutter: "I can just see myself in 5 years using DOS 25 and Windows 18 - but I hope not!" And so say all of us, Mark.

## Education

The highest level of interest seems to be in learning about moderns and BBS access, followed by programrttirrg fundamentals. There's a fair amount of interest in learning DOS applications too, but we haven't completed any sort of breakdown on that yet.

If you haven't returned a survey, it's not too late. It's too late to get into the draw for a prize, but you can still be a statistic! Please send your completed surveys in by mail or upload them as files to the newsletter file area on the PUB. Thanks again for participating.

## Handyman's Special AT Motherboard from PUB up for Auction

The OPCUG, having put a new motherboard into the PUB computer, is able to auction to the membership the old AT motherboard that has been running the PUB for the last 4 years.

To give you some idea of it's value, a new AT motherboard costs around \$100.

The specs. on the old board are as follows: 286/10MHz CPU, 512k usable RAM, Award BIOS, 2 x 8 bit slots, 6 x 16 bit slots.

You are invited to bring sealed bids to the February meeting.

## Intel presents at February meeting

by Lynda Simons

The guest speaker at our next meeting, Tuesday, February 25, is Jon Coxworth, Architect Manager from Intel. Jon's is a relatively new position that Intel has created to meet the needs of a changing marketplace. Part resource person and part ambassador, an Architect Manager acts as a conduit between end users, large MIS departments and Intel.

Jon will talk to us about future trends both at Intel and in the industry covering the performance upgrade path; the P5, the next chip in Intel's x86 series; and the stuff of dreams, Micro 2000. Micro 2000 is, however, no dream.

Micro 2000: A Plan not a Dream  
Micro 2000, "an action plan that combines proven developing technologies", is Intel's plan for the microprocessor of the year 2000 -that's less than 8 years away. Here are its preliminary specs.

Transistors: 100 million  
Die Size: One square inch  
Clock Rate: 250 MHz

Processing Rate: 2000 MIPS  
Compatibility: upward from the 386  
To compare, the 486 has 1.2 million transistors, and processes over 40 MIPS at 50 MHz.

About Intel...

To prepare you for the meeting, here's some background data on Intel.

- Of the 150 million PCs in the world, 85 million contain an x86 Intel CPU.
- 11,000 new x86 machines are shipped every hour.
- Founded in 1968, Intel has its HQ in Santa Clara, CA
- Intel employs 24,000 people around the world.
- Intel made \$4.8 billion in sales in 1991.
- Intel spent \$600 million on research and development in 1991.

He comes bearing gifts

Jon will be bringing posters and T-shirts to give away at the meeting, and if you want one of the Intel key-rings *which contain* a 486 chip, come early! There will be a limited number of those. Intel is also giving the club a 9600 baud modem for the PUB, so we will be drawing for the 2400 baud modem this replaces. And that's not all. Intel is also sending us an Intel SatisFAXion' board to give away.

What people are saying about Intel

For those of you who haven't kept up with the press on Intel lately, you might like to read two recent columns by PC Magazine columnist, Bill Machrone, who devoted his December 31, 1991 and his January 14, 1992 columns to Intel (page 85 in Volume 10, Number 22 and page 86 in Volume 11, Number 1) . And in our newsletter, Mark Edwards has some relevant news for you on page 4.

### Calendar *(subject to change)*

Meeting Location: Sir Robert Borden HS  
131 Greenbank Road

Meeting Time: 8 p.m. to 10 p.m.

| Date                 | Topic      |
|----------------------|------------|
| Tuesday, February 25 | Intel      |
| Tuesday, March 24    | Micrografx |
| Tuesday, April 28    | Symantec   |
| Tuesday, May 26      |            |

## New Executive by Acclamation - Convenor's position Still Open

The election of the new executive last month took only a few moments as none of the positions was contested. There was no candidate for the position of Convenor, and this position is still vacant. Your new executive is listed in the masthead on the back page of the newsletter. We'll introduce them to you in more detail next month.

Serving on the executive provides an opportunity for some very valuable experience: it is also fun! So if you think you'd like to try your hand at serving, don't wait: this opportunity won't last long. Call any member of the executive for more information, or to offer your services.

## AMD plan to release a 486 clone series in mid-92

by Mark Edwards

According to the US publication, the Electronic Engineering Times, those of you planning to buy a 486 machine, might be well-advised to wait a few months. Advanced Micro Devices (AMD) is about to announce the release of a pin-compatible 486 clone that meets or beats the performance of Intel's 486 chip. They expect to start shipping in mid-92.

The AMD chip, which will come in 25, 33 or 50 MHz versions, will feature a larger cache size (see sidebar) than Intel's. Another added wrinkle is the way AMD is implementing the higher clock speeds. They will be internal only so that, while the CPU will run faster, it will still talk to slower memory (by slower, I mean 90 ns).

### How the internal cache on a 486 chip works

The cache is an instruction pre-fetch so that the processor is always busy. In older CPUs, the processor executed an instruction, then went to get the next one, waited while it was fetched, then executed it and so on. The pre-fetch means that the next instruction is there waiting when the CPU needs it.

### Facts, Half-truths and Trivia

by Mark Edwards

Last month I told you about the ultimate CPU. To go with the ultimate CPU, you have, of course, to have the ultimate disk drive. Conner Peripherals Inc. has announced a 3 millisecond access time drive that stores 510 Megabytes. Typical best access times for most drives available for a PC are in the 10-12 millisecond range, and

#### Notebook version with 3 volt operation

AMD will also be offering a notebook 486 chip which will operate on 3 volts and have the ability to run in a partially static mode., two features which are important for the notebook market. Most notebooks run off 3 volt batteries. A processor that will accept 3 volts directly-that is, with no intermediary power supply to convert the current to the 5 volts normally required by a CPU-is more efficient and extends battery life. Providing partially static operation is another feature which saves power and extends battery life. The amount of power used by a computer is dependant on clock speed. To reduce power to a minimum, notebooks generally have a sleep circuit that shuts the processor clock off when nothing is happening, and wakes up (turns on the clock) when a key is pressed.

#### Lower prices for all 486 systems expected

Apart from offering us added features, the advent of the AMD 486 will benefit you and tire by its undoubted effect on prices. To give an indication of the price cuts expected for the CPU (which is probably 20% of the overall system cost), Intel has cut the price of 386 chips by 35% since AMD released its 386 clone. The 486 series of chips is

expected to cause a 7-10% drop in system prices. AMD plans to market their 486 aggressively. Currently, 35% of their revenue comes from sales of their 386 clone, and they're shooting for a larger percentage with the sales of the 486.

#### Chips & Technologies aren't entering the fray

The other top contender for tna king a 486 clone, Chips & Technologies, has announced that it has no plans to produce a 486 chip.

#### Intel's next x86 architecture chip, the P5

Meanwhile, Intel is close to announcing the next chip in its 8(1x86 series with a working name of P5. This CPU will have over 3 million transistors, will incorporate some non-stop computing features (better Irish recovery), and will process at over 100 dhrystone MIPS. This is around five times the performance of a 25 Mhz 486DX. On-board cache will be 16 to 24 Kbytes. P5 will combine Superscalar RISC (Reduced Instruction Set Computer) technology, a floating point unit, and provide 386 compatibility. Together in a single piece of silicon, these elements will provide a general-purpose, high-powered CPU. More details to follow as they become available.



#### Random Bits

those using XTs are probably living with 40-60 millisecond access. Just think ...Wing Commander would load before you could say "Roger Ramjet".

#### Lighten the Mood

Blown away by technology?  
Here are some fractured definitions to lighten the mood:

**beige toaster:** a Macintosh

**lunatic fringe:** Customers who can be relied upon to buy release 1.0 of software.

**programming :** A pastime akin to banging one's head against the wall, but less rewarding.

**troglydte mode:** Programming with the lights turned off, sunglasses on, and the terminal inverted (black on white) because you've been up for so many days straight that your eyes hurt. 000

## Keep Track by Creating Dated and Sequentially-numbered Backup Files

by Robert Parkinson

Perhaps you have a situation where you are collecting rapidly-changing information, like e-mail, into a log file. Or maybe you are modifying one specific file, such as a *source-code* file, a number of times in a day. If so, you may find a use for a small batch file that I wrote which quickly creates dated and sequentially-numbered backup files.

### Setting your system date

To use it, you first must have put the day's date into your DOS environment with a date utility, probably run from your **AUTOEXEC.BAT**. In this case, I use **SETDATE.COM**, but there are probably many alternatives. **SETDATE.COM** is on Disk-of-the-month #77 which you can download

from the PUB (File Area 2,4) or get from Norm Dafoe at the *meeting*.

*Note: You can also set your date entirely with batch file code, but that's quite convoluted; it's far simpler to use an existing utility to do the job. If, however, you are interested in pursuing the exclusively batch language option, download the tutorial DATEITLZIP from the PUB. DATEITZIP is on the PUB in Area 33: Batch Files and Area 37.: File Utilities.*

In this example, the variable *DOSDATE* is one of a number of variables that **SETDATE** puts into the environment. *DOSDATE* is in the normal DOS *mm-dd-yy* format.

### Substitute your own path and filenames

Give the following batch file whatever name suits your purpose. Substitute your own drives and directories for "d:\dir\" and substitute the name of the file that you wish backed up for "filename". I have used the fully-numeric extension "001" for the backup filename. You may want a more informative extension, such as "TXI", or "A01", especially if you are backing up more than one file within a given directory. If you use a date utility other than **SETDATE.COM**, you will have to change the "%oDOSDATE%" variable to your utility's variable name is. I have included some "REM" lines in the following code to provide more information.

### Batch file to create sequentially numbered and dated backup files

```
@ECHO OFF
:START
CLS
IF NOT EXIST d:\dir\filename COTO ERROR1
IF "BDOSDATE$==" " COTO ERROR2
IF NOT EXIST d:\dir\BDOSDATE8.001 COTO 1
IF NOT EXIST d:\dir\BDOSDATE$.002 COTO 2
IF NOT EXIST d:\dir\%DOSDATE%.003 COTO 3
IF NOT EXIST d:\dir\BDOSDATE$.004 COTO 4
REM Add more "IF NOT EXIST" lines to
REM correspond to the number of labels that
REM you have created below.
GOTO ERROR3
:1
COPY d:\dir\filename d:\dir\%DOSDATE$.001 > NUL GOTO END
:2
COPY d:\dir\filename d:\dir\%DOSDATE$.002 > NUL GOTO END
:3
COPY d:\dir\filename d:\dir\%DOSDATE8.003 > NUL GOTO END
:4
COPY d:\dir\filename d:\dir\%DOSDATE%.004 > NUL
GOTO END
REM Add as many more labels as you consider
REM will be your daily maximum.
:ERROR1
REM This error routine is called only if the
REM source file does not exist.
ECHO Whoops:
ECHO d:\dir\filename does not exist
```

```
ECHO.
PAUSE
GOTO LAST
:ERROR2
REM This error routine merely puts the date
REM into the DOS environment if it isn't
REM already there, and starts again. Use any
REM other utility you wish that puts a date
REM into the DOS environment. Change the
REM variable names above accordingly. When
REM using SETDATE.COM, the "X" parameter is
REM needed. SETDATE X COTO START
:ERROR3
REM This error routine is only used if you've
REM run out of the preset maximum number of
REM daily backups.
ECHO Whoops:
ECHO We've run out of filename extensions for
ECHO d:\dir\%DOSDATE%.
ECHO d:\dir\filename has NOT been backed up.
ECHO Best modify your batch routine.
PAUSE
GOTO LAST
:END
REM The "DEL" line is illustrative of one usage
REM only. You may not wish to delete the source
REM file.
REM If so, modify or remove the following line.
DEL d:\dir\filename
:LAST
```

## What can my OPCUG do for me?

By Andrew Clyde

The past few months have given us two big changes to the PUB: both the hardware and the software have been upgraded. We have replaced the AT motherboard in the PUB computer with an 80386/40 MHz motherboard, and the PUB software is now the latest version of TBBS, version 2.2.

### That's the Medium, but what about the message?

The messages in the General Message area recently, have been more of personal than general interest, and as a result no discussions have bloomed. There is, however, one concern that was brought forward that is of general interest: Msg#:36702 from Micheline Johnson to Harald Freise. Here is Micheline's message (edited for size with her approval) together with Harald's reply.

Msg#:36702  
 \*GENERAL MESSAGES\*  
 02-02-92 23:25:35  
 From: MICHELINEJOHNSON  
 To: HARALD FREISE (Rev'd)  
 Subj: OPCUG

Hi Harald:

This is a "What can my OPCUG do for me?" message - rather than a "What can I do for my country?" message, to misquote Kennedy. It is a request for data so that we can evaluate whether to stay with or move on from the group. Unfortunately, there was no competition for the position of Chairman, and therefore no statements by you or others as to the direction in which you plan to steer the group. So here are my questions:

1. The General Message Area of the PUB is an excellent source of feedback on the round and needs of the membership. Do members of the executive log on regularly?

2. The meetings appear to be mainly platforms for sellers of high speed hardware and software. Is the OPCUG primarily for business users

of PCs, or is it for people who use them for fun and productivity at home? How about devoting time to comparative reviews of more affordable products, hobby-oriented products such as music (MIDI etc.) or entertainment and to computer-oriented education? I'd like to see informative debates between the proponents of competing products, though I doubt if we could get an IBM representative to debate a Microsoft representative!

3. A few months ago, John Ings proposed a series of technical courses to be run by volunteer instructors. This sort of activity is the essence of what a User Group should be. What happened to John's plans? I'd like to see the courses started soon, even if only on a small scale.

Bye - Micheline

Msg#:36812  
 \*GENERAL MESSAGES\*  
 02-08-92 02:32:54  
 From: HARALD FREISE  
 To: MICHELINE JOHNSON (Rev'd)  
 Subj: REPLY TO MSG# 36702  
 Hi Micheline!

I agree with you that it was unfortunate that there was no competition for the job of Chairman, nor for any other position this year. This, of course, meant that none of the nominees for the 1992 Executive got to publish their platforms, so I'm glad of this opportunity to fill the information gap.

### Plans for 1992

My plan for 1992 is to continue on the same course as that of my predecessor. In consultation with the rest of the volunteers in the executive, and with the best interest of the majority of the club's membership in mind, I will work to maintain a high level of stability. This is not to say that the club cannot be improved; sonic improvements have just been implemented and others are in progress. Here are some examples:

- The PUB hardware and software have just both been upgraded.
- The results of the Newsletter and Education Survey are being published in the February *newsletter*, and armed with this data, John Ings will be meeting with interested members and preparing a class schedule.
- The Software Library Survey is still underway; we will be publishing the results of this survey in the April issue of the newsletter.

I would also like to *see the* reinstatement of some Special Interest Groups (SIGs). Traditionally the SIGs have been championed by a keen *volunteer*. In recent years, however, no *member has* come forward to take on the challenge of organizing and being responsible for a SIG. The club will support SIGs with newsletter and PUB space and any other resources it has available.

### Is the OPCUG for business or home users?

To quote from the OPCUG constitution: "The objective [of the OPCUG] is to organize for mutual learning and support in areas related to microcomputers patterned after the IBM PC family and its successors." That means the OPCUG is for anyone and everyone who uses, or would like to use, a PC, which includes both business and home users.

### The Speakers

I consider that we are fortunate that our membership profile attracts the quality of major presenters that have been to our club. This industry is in a constant state of flux and keeping up-to-date is a major undertaking. We take pride in the fact that major vendors have consented to share their news with us. But our *meetings consist* of more than just visits from major company representatives: we have enjoyed Hugh Chatfield's yearly up-date on MIDI music as well as our

*Continued on back page*

## Introduction to DOS Commands, Part 3

by Eric Clyde

In October and November, this column covered a number of DOS commands and rules for filenames. This month we look at four more commands: CHKDSK, ATTRIB, TIME and DATE, and some comments from our readers. Note: the commands are shown in uppercase letters; you can enter them in lowercase as well.

### Find Disk Errors with CHKDSK

The CHKDSK command checks and repairs any errors it finds on disks, and reports on file fragmentation. Use it regularly, to prevent problems developing on your floppy or hard disks before they get too serious.

```
CHKDSK [drive  
name:]
```

If CHKDSK finds errors, a message will appear on the screen. Make backup copies of files reported as having errors, then reissue the command as follows:

```
CHKDSK [drive name:]/F
```

This will fix the errors, and, make any lost clusters (sections of files) into files in your root directory. CHKDSK names *these files* FILEOOO0.CHK, FILEp00I.CHK, etc.

### Set the time and date with TIME and DATE

All files have a date and timestamp associated with them. *These are* set by the computer's system clock. If the time and date are wrong, you can change them.

```
DATE
```

Enter the correct date in the format shown on-screen

```
TIME
```

Enter the correct time in the format shown on-screen

On some computers, this method of correcting the date and/or time only works until the computer is switched off. Your computer may have a special setup program for correcting the time and date permanently. Check your system's manuals.

### Protect your files with ATTRIB

All files can have attributes or "special codes" attached to them which give them a particular characteristic. For example, you can make a file "read only" which means that you cannot make any changes to it. You can change these attributes with the ATTRIB command. ATTRIB uses the minus sign to *remove an* attribute and a plus sign to add an attribute, as shown in the following example. ATTRIB +r filename.ext Makes file "filename.ext" read only. ATTRIB -r filename.ext Removes the read-only status.

The attribute codes are as follows: r = ready only-the file cannot be accidentally overwritten, deleted, or hanged.

a = the archive bit is set if the file has not been backed up since it was last changed h = hides the file from casual snoopers. The DIR command does not list these hidden files.

s = indicates a system file

DOS 5.0 and other programs in the club library also have routines for changing the hidden file attribute.

### Corrections and Comments

November's article indicated that subdirectory names cannot have extensions: this is not so. However, some programs do not recognize directory names with extensions, so it's safer not to use them.

For the sake of completeness, I should have mentioned that some extended characters are allowable in filenames. Extended characters do not appear on the keyboard, but you can produce them by holding down the Alt key and typing the corresponding ASCII number on the numeric keypad, e.g. Alt+157 produces 'Y'. A list of the codes appears in the DOS manual.

Robert Parkinson adds the following helpful hints:

### Parameters & Switches

People often confuse the terms "parameter" and "switch". A "parameter" is anything that appears on the command line after the command itself, such as source pathname and target pathname. A "switch" is a unique parameter which is usually *preceded by* a special switch character. In DOS, the forward slash (/) is the switch character, although other programs use a hyphen (-) or other switch indicators.

Generally, a command switch will work wherever you put it on the command line, as long as it is after the command itself. Example: FC file.1 file2/E

### Use Redirect to Save Time

To avoid scribbling down screen messages when working with DOS, redirect your output to your printer or to a file which you can read or print out later. The redirection symbol is the right angle bracket (>). The example below shows how to *redirect the* results of a COMP command to a file called "RESULTS.FIL". COMP \*.DAT - .OLD RESULTS.FIL

Experiment with all of *these commands*. It is always useful to have tried them out *before you* need to use them. If you have any questions or problems, give me a call at 7492387.



### Beginners' Sessions

Eric Clyde holds sessions for beginners in Room 110 at 7 p.m. before each general meeting.

**Ottawa PC News**

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

**Deadline**

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

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**Group Meetings**

OPCUG meets monthly except in July and December. Check the answering machine, the PUB and the newsletter for the date and place of each meeting. Meeting times are 8:00 p.m. to 10 p.m. Beginners' sessions are from 7:00 p.m. to 8:00 p. m.

**Membership**

fees

\$25 per year

Disk-of-the-Month \$25 for 5.25 ins. diskettes and \$35 per year for 3.5

PUBtalk

Continued from page 6

annual Swap Meet and our surprise visit last month from Mark Minasi.

**The bottom line**

Thank you for your message; I hope that I have answered your questions.

I apologize for the delay in reply, but I have written this answer after several days' thought.

Also, I am a very busy computer consultant. My time is limited, as is the case with ail the dedicated volunteers who put a lot of time and effort into seeing that the membership enjoys the best club possible, given the time and money available.

How many questions have been asked on the PUB and how many have been answered over the years? I know that I have asked my share and attended the classes given by volunteers. How much shareware and public domain software has been distributed at a nominal cost? How much information has been disseminated via the monthly newsletter?

This isn't really an either/or situation of "What can the club do for me?" or "What can I do for the club?" The OPCUG is a self-help group. We gather to help one another.

Harald

◆◆◆

**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 # \_\_\_\_\_

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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

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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 \_\_\_\_\_

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I use the following software: \_\_\_\_\_

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**MEMBERSHIP FEE \$ 25.00**

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

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Mail to: Ottawa PC Users' Group  
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