



HACKette

NEWSLETTER OF APPLE/MACINTOSH USERS' GROUP OF HAMILTON VOL. 25 NO. 2 NOVEMBER 2006

The next meeting is on:

Wednesday

November 8, 2006

in Dundas

6:30 P.M.

Our guest will be

Bob

from

Bobzilla

Please note

that the

December

meeting will

be on

December 6

at

Caroline's

41 Spadina Ave

Hamilton

HACK is a member of



**NEXT EXECUTIVE
MEETING...**

November 13, 2006

at Creative Technology

This newsletter was
produced using
InDesign CS

A MESSAGE FROM THE PRESIDENT

Last month we had Tom Lawlor from Henry's Cameras talk to us about what is new in digital camera technology. For the movers and shakers in the group, the latest thing is anti-vibration or steady shot systems. Even the lower range cameras have it built in. My favourite is the shock proof camera that works underwater without any special attachments. The only thing missing was the Nikon D80, I would have liked to see that one. Oh well I guess I will have to go into the store to see it.

I can't stress enough the danger of installing any peer to peer file sharing software on your Mac, especially Lime Wire. It causes many problems and is the next best thing to a virus on a virus free Mac. "free music" comes with a price. The real cost is in the damage it could do to your computer. If you bring it into the shop, it will cost you \$200.00 for us to fix it. In order to get rid of it you have to back up your hard drive and reformat and reinstall everything. This should take you about 4 hours. The Mac OS has built in security that prevents hackers from getting in, but with Lime Wire you open the door to the world to come and see what you have on your computer. So stay legal and buy your music or borrow CDs from a friend or the Library. Have you heard about the new MacBook Pros? They have the new Intel Core 2 Duo processor and can come with a 200GB hard drive. I have one coming for myself and will be using it to replace my old Desk Top G4. I have been using the first generation 17" MacBook Pro and like it very much except for the small (120GB HD). With the large HD I can have everything with me at all times. Now all I am waiting for is the new MacBooks to come out with the Intel Core 2 Duo Processor.

This month we have Bobzilla coming to do a presentation on audio recording. If you remember Bob from two years ago, he showed us what is possible with a microphone, a Mac, 8 CD recorders and, 8 copies of Toast. He said he would like to do an even bigger presentation this time. I just hope he bought a bigger car!



See you all this Wednesday
Dave

UPGRADING YOUR MAC

By Kyle Wiens

When it comes to upgrading your Mac, RAM is the easy choice. It's inexpensive, it's relatively easy to install, and it can make a noticeable difference. But as a quick visit to just about any Mac forum will tell you, RAM upgrades can also be horrifically frustrating. Here's how to do it right.

Why would I need more RAM?

The first step in upgrading your RAM is to decide whether you need to do so at all. Upgrading RAM doesn't necessarily help apps run faster, but it can speed up the processes of opening or switching between apps—something some of us do several times a minute. If those processes feel faster, so will your overall computing experience.

The reason for this is that OS X swaps apps and documents in and out of memory all the time. When the programs you're running require more RAM than you've got, OS X moves programs that aren't doing anything at the moment from active memory to temporary swap files on your hard drive, to make RAM available for the apps you're really using.

Let's say you have Photoshop and Mail running at the same time. Photoshop already has some memory allocated to it. If you open a large photo in Photoshop that won't fit in your available RAM, Photoshop will request more memory from OS X. Looking for memory from somewhere, the OS will recognize that you haven't used Mail in a while and will copy (or "page out") Mail's memory contents to your hard drive. That RAM is now free, and OS X can allocate it to Photoshop and load your photo.

Paging out is slick, but there's a catch—copying memory to disk is slow. A fast hard drive can write about 20MB per second. DDR2 RAM has throughput of up to 4GB per second. So as soon as you start using virtual memory instead of RAM, memory access times slow way down.

Let's say you decide to check your e-mail. OS X previously paged Mail out to disk, and you've been using Photoshop.

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The Apple Macintosh User Group of Hamilton is a non-profit organization that meets informally at 6:30 PM, the second Wednesday of each month at the Marlatt Family Center, 195 King St. W., Dundas. This group is made up of users of the Apple Macintosh family of personal computers, whose interests range from word processing to publishing, music, and games to formal presentations, art to accounting and often times . . . more. Our main purpose is to provide a forum for questions, solutions and inspiration for everyday computing. For more information about the user group, please attend the next Club meeting, contact a member of the executive, or visit our web site.

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Submissions for Next Issue

November 25, 2006

When you click on Mail in the Dock, the OS has to load it back into physical RAM and load that photo into virtual memory on your drive. This process could take a second or two, resulting in that dreadful spinning beach ball.



How much RAM do I need?

As you can probably guess, the amount of memory you need depends heavily on which apps you use daily. Most Tiger users should have at least 512MB; given the number of Macs that Apple has shipped over the years with just 256MB standard, that could be a lot of users. But for some professional applications, even 2GB may not be enough.

To find out how much memory you need, keep an eye on Activity Monitor for a day or so. If the total of free and inactive RAM reported by Activity Monitor is less than 10 percent of your physical RAM under a typical workload of apps and documents, you need to increase your RAM until those numbers are more in line. For example, if you have 1GB of RAM installed, and Activity Monitor consistently reports that you have less than 100MB of RAM free, you're a good candidate for an upgrade.

The Colors of RAM Activity Monitor is a great way to keep track of what applications are using your RAM (and whether it's overtaxed). But what exactly does that pie-chart (A) mean? Wired (red) Contents that must remain in physical RAM and can't be paged out to disk. Active (yellow) Processes using memory right now. Free (green) Memory available for allocation. Inactive (blue) Memory allocated to an open program but not in use at the moment

Then there's the question of how much RAM your system can take. That, in turn, depends on how much RAM you have installed now, what configuration it's installed in, and how many slots you have available. Let's say, for example, that you have one of the original first-generation iMac G5s, which shipped with 256MB of RAM. They also came with two RAM slots, to which you can add up to 1GB of RAM each. Assuming you don't want to toss that original 256MB, that means you can upgrade to 1.25GB.

The simplest way to find out whether you're overloading your RAM is with OS X's Activity Monitor. The Activity Monitor is located in Applications/Utilities. Open it up and click on the System Memory tab (see "The Colors of RAM"). If the pie chart is mostly green and blue (representing free and inactive memory, respectively), then you're in good shape. If the chart is mostly yellow and red (active and wired), then you're running out of RAM and may experience slowdowns.

Watch the Page Ins/Outs numbers. If page outs are increasing continually, you need more RAM.

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What kind of RAM do I need?

So you've decided that you need more RAM. The next step is figuring out what kind of RAM your system takes.

The simplest way to find out is to open up System Profiler. In OS X 10.3 and later, open the Apple menu, select About This Mac, and click on the More Info button. (In OS X 10.0 through 10.2, go to Applications/Utilities and launch System Profiler.) Under Hardware, select Memory. That should give you all the information you need.

Memory Slot This specifies the form factor of the RAM your system uses. Most desktop Macs use DIMMs (Dual In-line Memory Modules), while Mac laptops and some early iMacs take SODIMMs (Small Outline DIMMs).

Size This is, logically enough, the capacity of the RAM you have installed now. Consult MacTracker's Memory/Graphics tab to find out how much RAM your Mac is able to accept.

Type Until recently, Macs used DDR (double data rate) RAM. The latest Power Macs and iMacs use DDR2 memory.

Speed The number that comes after the letters PC refers to the RAM's bus speed. It's a common misconception that faster RAM will make your computer faster. It won't. Some faster RAM chips will work in computers that shipped with slower memory (for example, PC2700 chips will work in PC2100 Power Mac G4s). But while you can often add faster memory to systems that use a slower type, doing so won't provide any speed improvements. The computer will run the PC2700 memory at the same speed as the PC2100.

Where should I buy RAM?

Bargain-basement PC retailers may offer RAM that will work in your Mac—but I wouldn't advise buying from those sources. Macs tend to be pickier about good RAM than PCs, and OS X is particularly picky. (OS 9 tolerated some hardware defects that OS X's memory-management system will reject.) Bad RAM can lead to kernel panics and random application crashes.



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It's best to buy RAM from Mac-specific companies. Even within the Mac community, it's important that you buy RAM with a lifetime warranty. (Disclosure: my company sells RAM.)

How do I install it?

You can find that information online. Apple has instructions for installing RAM on many of its desktops; search for RAM and your Mac type.

NEW VIRUSES TO WATCH OUT FOR

Prozac virus

Screws up your RAM but your processor doesn't care.

Martha Stewart virus

Takes all your files, sorts them by category and folds them into cute little doilies to be displayed on your desktop.

Oprah Winfrey virus

Your 200MB hard drive suddenly shrinks to 80MB, and then slowly expands to 300MB.

Viagra virus

Expands your hard drive, while putting too much pressure on your zip drive.

Politically correct virus

Never calls itself a "virus", but instead refers to itself as an "electronic microorganism."

Adam and Eve virus

Takes a couple of bytes out of your Apple.

Airline virus

You're in Dallas, but your data is in Singapore.

Star Trek virus

Invades your system in places where no virus has gone before.