



OMUG

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NEWS



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Olympia Microcomputer Users Group

April 2004

April is election time for OMUG members

By John Marshall
OMUG President

At the April general meeting, election of officers will be held. Aside from write-in votes, there is only one nominee for each position, as follows:

- President: Bill Gortz
- Vice president: Shirley Bellinghausen
- Treasurer: Max Whipps
- Secretary: Vivian Forrester
- Newsletter editor: Sandy Pishner
- Webmaster: Pat Sonnenstuhl
- Librarian: Christie McCormick
- Director at large (two positions):
James Gunnells and John Marshall

Following the brief business agenda, there will be a presentation of a topic of much current interest; the new so-called



“Small Form Factor” computers.

These are the newest style of desktop computers. They are smaller, faster, cooler (literally and figuratively), and quieter! The major computer magazines have been advertising and publishing articles about these for several months now. You can find some informative articles about them on the Internet by going to www.google.com and searching under the title Small Form Factor.

The presenter will be Bill Marin, of

Marin Computers in Tenino. The title of his talk is *Smaller Is Sometimes Better*.

The presenter scheduled for the May general meeting is Chuck West, leader of the OMUG Linux SIG.

Chuck also gave us an enlightening presentation of the Linux operating system back in September. At the May meeting, Chuck will give us a presentation and demonstration of the OMUG FORUM, which is a web site he has designed to allow us to interactively deal with computer-related issues and problems. By attending this meeting, you will be able understand how this program may be useful to you and how to use it.

And as always, members are encouraged to provide input on topics they would like presented at one of our general meetings.

Web access should be open to all disabilities

By Billy Mabray
Oklahoma City PC Users Group

Many people, including a lot of Web designers, think Web-site accessibility is only about making sites work for blind users with screen reader software.

Accessibility should be about all of us. There is a wide range of physical conditions that can make using the Web difficult. The Internet can be a frustrating place when you have poor eyesight, color-blindness, or trouble using a mouse.

You may not fall into any of these categories right now, but consider this statistic: 100 percent of Internet users are growing older. At some point, we will all need help navigating the Web.

There are many things that can be done to make the Web more accessible. Some of those things are already built into

your Web browser. Others require Web designers to implement accessible features on their Web sites. If you are one of the many people who has difficulty using the Web, you will want to know what help is out there.

One of the biggest complaints people have is that text is too small. It is also the easiest to remedy. If you are using Internet Explorer, choose *View>Text Size* from the top menu. Also, if your mouse has a scroll wheel, you can hold the CTRL key and scroll up and down to change the text size. Now, this will not work on all Web pages – later, we will discuss why that is and what Web designers can do about it. The Netscape/Mozilla browser, however, can change text size on all Web pages. Choose *View>Increase Text Size*, or hold CTRL and press the + key.

See Disabilities, Page 5



EXECUTIVE BOARD

- President:** John Marshall
Vice President: Dan Colard
Secretary: Vivian Forrester
Treasurer: Max Whipps
Newsletter Editor: Sandy Pishner
Webmaster: Clint Steele
Librarian: Christie McCormick
Director at Large: Shirley Bellinghausen
Director at Large: Bill Gortz

KEY MEMBERS

- APCUG Representative:** Linda Mae
Budget Committee Chair: Bill Gortz
Database Manager: Max Whipps
Elections Chair: David A.C. Shephard
Historian: David Belles
Membership Renewal Coordinator: Max Whipps
Newsletter Distribution Coordinator: Loren Freeman
Nominating Committee Chair: Vacant
Scholarship Committee Chair: Bob Wing
SIG Coordinator: Shirley Bellinghausen
Visitors Coordinator: Elizabeth Ross
SIG Leader names are listed with their SIG descriptions

COUPON

FOR PRIMARY MEMBERS ONLY
 GOOD FOR ONE DOOR PRIZE TICKET



See you at the April 8 meeting

The ups, downs of playing around with a database program

By Sandy Pishner
 OMUG Newsletter Editor

At home, I use my computer mostly to play games; very little productivity comes from my house. I play on the computer at work too, only that "play" is generally productive.

At work I have the time, and the necessity, to use software for actual work. This past week, I've been playing with Microsoft's program Access.

I call it playing because while the what I'm trying to produce with the database software is needed, I really have no idea what I'm doing.

I love going into a program, deciding what I want to accomplish, and then just click, push, and pull the program until it does what I want.

Usually, I later find the more efficient way of getting the program to do as I command. But at that point, I've created my comfort zone.

One pitfall in my routine, however, lies in the very click, push, and pull method I use when learning a program.



I occasionally flush a lot of work and data down the proverbial toilet.

I spent a week building this very nice database for an event at work, and accidentally deleted a good share of it. All is not lost, but it was a set back. Of course, another way to look at it is I have more opportunity to play with Access. Yea!

Thanks For Renewing

- Peter & Perki Sweet**
Arthur & John Pruett
Joe Ryan
Scott & Sandy Friedli
Clint & Diane Steele
Bill & Eva Froude
Donna Snow
Bill Alpert
Bernadine & Robert Sullivan

Where are our New Members?

There aren't any this month.
Remember you get a three month extension of your membership for each new member you refer.

Elections, raffles, auctions and picnics

By Vivian Forrester
OMUG Secretary



President John Marshall opened the meeting at 7 p.m., in the Computer Room of the Senior Center in the Olympia Center. Other Board Members present were Vivian Forrester, secretary; Don Hertzog representing treasurer; Christie McCormick, librarian; Shirley Bellinghausen, director at large; and Sandy Pishner, newsletter editor. Also present were Pat Sonnenstuhl and Linda Mae.

The minutes of the Feb. 19 meeting were accepted as presented. Don read the treasurer's report prepared by Max Whipps, showing income of \$184, expenses of \$147.97, for a balance of \$36.03 for the month.

Suggestions for upcoming general meeting programs were a Raffle for September and Silent Auction in December. It was also suggested we ask Chuck West if he would prepare a program to illustrate the on-line OMUG Forum he has set up. The April program is Small Form Factor Computers.

Shelter #1 at Yauger Park has been reserved for the annual OMUG Picnic on Aug. 14th. Food will be served at noon.

A retreat for new and retiring officers will be held May 1, from 10 a.m. to 2 p.m. Linda Mae and Sandy will make arrangements. All interested OMUG members are welcome to attend and share ideas for progress in the coming year.

Sandy will enroll us for 2006 Rest Stop service, preferably in July, but the Board has authorized her to select the best dates that are available.

There was a discussion regarding the Reflector and including it in the Webmaster's responsibilities. Linda Mae attended this meeting to help in a smooth transition.

Meeting adjourned at 8:45 p.m.

OMUG Supporters

We are thankful for the many people, organizations, and businesses who support OMUG.

Below is a list of a few who have given back to the community by assisting OMUG in its mission to help computer users help computer users and their community.

Supporters provide services and discounts, give of their time, provide space for OMUG activities, introduce OMUG members to new products, share knowledge and expertise, provide OMUG with software and hardware, or provide educational opportunities. All of them are appreciated.

Senior Services for South Sound
Olympia Computer Central
IPMA
Thunderbird Computer Services
Adobe
Microsoft
PowerQuest
Jasc Software
Cartridge Care, Inc

OMUG Income & Expenses February 2004



Income: \$328.69

[Mbr Dues-\$272.00, Donations-54.00,
Interest-\$2.69]

Expenses: \$230.31

[Newsletter Copying-\$147.97, Membership Committee
Supplies-\$57.34, SSSS Donation-\$25.00]

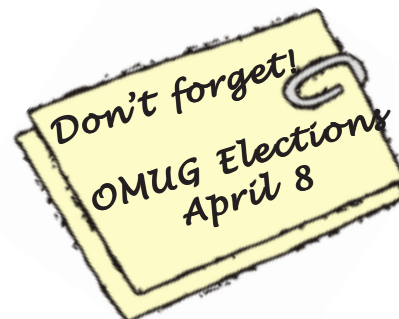
Net Income: \$98.38

Accounts Balance: \$4882.07

3/25/04

To Be Deposited: \$184.00

Current Treasury: \$5 07 (Incl. Scholarship Fund)



How much memory can a computer take?

By Brian K. Lewis, Ph.D.

Member of the Sarasota Personal Computer Users Group, Inc., Florida

Occasionally the question arises as to how much memory can be put in a computer. The answer is "it depends."

It depends on just what you mean by memory (RAM or hard disk), what operating system you are using and the capabilities of your computer's motherboard and its chipset. When I talk about memory I am not referring to the permanent storage of programs and data on the hard disk. Rather, I refer to the random-access memory or RAM.

This is the memory provided by memory chips seated in slots on the motherboard of today's computers. Anything stored in RAM disappears when the power is turned off, so it is referred to as volatile, or temporary, memory.

If you want to upgrade the memory in your computer you have to be able to determine the memory type as well as the size, pins and speed, the number of slots available on your motherboard and

the maximum amount of memory that your system can address. In general, this varies with the age of your computer. So let's look at these components in a little more detail.

Early

Pentium based computers had a CPU bus speed of 66 MHz (megahertz) and a PCI I/O bus speed of 33 MHz. These values relate to the speed of data

movement within the central processor and transmission to and from peripherals such as the memory bank. In some cases transfer to and from memory was at 50 MHz. Pentium computers generally had four slots which were arranged as two banks.

This meant that memory had to be installed in units of two. The memory chips were 72 pin DRAM (dynamic RAM) or SIMM (single in-line memory modules) modules. Many of these computers could support four DRAM modules of 32 MB (megabytes) for a maximum of 128 MB of RAM.

There were some motherboards built for Pentium 5 systems that had 2 or 3-168 bit DIMM slots in addition to the 72 pin slots. However, you could not use both the 72 pin and 168 pin slots, only one or the other. These systems would support either 128 or 256 MB of memory. However, at the time, many Pentium/Pentium II computers were sold with only 16 MB of RAM and Windows 95. Later, with Windows 98 the basic memory was 32 MB. In both cases, this is a less than optimum amount of memory for these operating systems.

The first Pentium computers had a 32 bit address space which was theoretically capable of addressing 4 GB (gigabytes) of memory. However, none of the motherboards manufactured for these computers carried any such memory capacity.

The next generation of computers carried faster CPUs and chipsets along with faster bus speeds. For example the Intel 440 series chipsets were capable of working with CPUs with speed of 233 - 333 MHz at a bus speed of 66 MHz or with 350-450 MHz processors at a bus speed of 100 MHz. These motherboards generally had 3-168 pin slots and would support a maximum of 384 MB of RAM. As the address space of the CPU was increased to 36 bit, the maximum addressable memory was 64 GB.

However, in practice some computers running Win98 would not recognize more than 256 or 384 MB of RAM. This problem has been ascribed to the chipset design and problem with the L-2 cache. So some caution is recommended if you intend to upgrade the memory in a Pentium II or older system

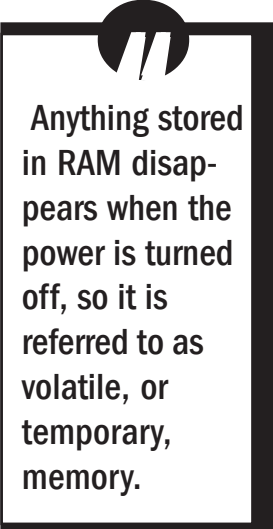
With some of the Pentium III class computers there was an additional increment in bus speed to 133 MHz. The motherboards had 2 to 4 168-pin memory slots. The maximum usable memory of such systems ranges from 512 MB to 1 GB.

These motherboards for this CPU class are generally able to use 100 - 133 MHz DIMMs. The 133 MHz DIMMS are capable of working at the 100 MHz speed. The Pentium 4 motherboards came with a whole new array of chipsets and memory chip types and speeds. The maximum memory now ranges up to 4 GB. Intel's initial Pentium 4 motherboards required the use of RDRAM or Rambus DRAM memory chips. RDRAM is a serial memory technology that arrived in three speeds, PC600, PC700, and PC800.

RDRAM designs with multiple channels, such as those in Pentium 4 motherboards, are currently the fastest in memory throughput, especially when paired with the newer PC1066 RDRAM memory. A Rambus channel is 2-bytes wide, so we get a maximum 1.6GB/s transfer rate for a single RDRAM channel using PC800 RDRAM or 2.1GB/s for PC1066.

The other form of memory chip is the double data rate DRAM. Intel and other manufacturers now have motherboards and chipsets that can utilize these memory modules. They are less expensive than the RDRAM.

DDR memory modules are named after their peak bandwidth - the



Anything stored in RAM disappears when the power is turned off, so it is referred to as volatile, or temporary, memory.

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DISABILITIES

CONTINUED FROM PAGE 1

There are many shortcut keys available for those who have difficulty using a mouse. For example, the backspace key will take you to the previous page, F5 will reload your current page, and ALT plus the Home key will take you to your home page (the page set to load when you open your browser).

Also, if you have gone back to a previous page, ALT plus the right arrow will take you forward again. Another useful key on any Web page is the TAB key. You can use the TAB key (and SHIFT plus TAB to go in reverse) to quickly navigate forward through all the links and form fields on a Web page.

Once you have tabbed to a form element, other keyboard shortcuts may come in handy. For drop-down boxes, you can use the up and down arrows to highlight your selection. For radio buttons or check boxes, use the space bar to select your choice. If you are using a recent version of Netscape/Mozilla, you can also use "Find As You Type." Start typing at any page and it will automatically do a search for what you are typing on that page.

Some people, particularly the colorblind, find Web sites hard to use because the color of the text does not contrast enough with the background colors. If the color scheme of your favorite Web site makes it difficult to read, you can override that as well. You will find this under *Tools->Options* or *Edit->Preferences*, depending on your browser. You can set your default fonts, font sizes, and page colors. You can also specify that your defaults always override what is set by the Web page.

While these browser features can be helpful, there is still much Web designers must do to make their site accessible to

the widest possible audience. A good example is text sizing.

If Web designers use fixed text sizes – sizes that specify an absolute unit of measurement, such as points or pixels – on their pages, Internet Explorer users cannot change their text size as I described earlier. Web designers can, and should, use relative text sizes to make their pages more accessible. Designers who prefer to use absolute sizes for text should provide a "style switcher." This is a link on the page that allows the site's visitor to make the text bigger and saves that preference in a cookie.

Another accessibility feature that some designers use is access keys. These are just like the shortcut keys I mentioned earlier; except they are defined by the Web page you are on. For example, the designer could define ALT plus 4 to take you directly to the search function. If you visit a site regularly and know their access keys, they can be useful.

Web designers should also use labels for forms. Labels make the text next to a form field clickable, just like the field itself. For example, if a form has a check box that reads, "Click here to subscribe," and that text is set as a label, the user can click anywhere on that text to check the box. It can be very helpful to have a larger target when trying to click things with a mouse.

We still have a long way to go before the Web is accessible to everyone. But now you know some of the helpful features you have at your fingertips already, and you know what to ask for from the Web sites you frequent. Hopefully, as users learn what they can do, and designers learn what they need to do, we can all enjoy the Web a little more.

The Editorial Committee of the Association of Personal Computer User Groups (APCUG), an international organization of which this group is a member, brings this article to you.

MEMORY

CONTINUED FROM PAGE 4

maximum amount of data they can deliver per second - rather than their clock rates. This is calculated by multiplying the amount of data a module can send at once by the speed of the front side bus (FSB). The bandwidth is measured in bits, and the FSB in MHz. Note that the RDRAM bandwidth is in bytes. One byte is equal to 8 bits.

A PC1600 DDR memory module can deliver bandwidth of 1600Mbps. PC2100 has a bandwidth of 2100Mbps. PC2700 modules use DDR333 chips to

deliver 2700Mbps of bandwidth and PC3200 - the fastest widely used form in late 2003 uses DDR400 chips to deliver 3200Mbps of bandwidth.

You may see the term "dual channel" applied to memory. When properly used, the term refers to a DDR motherboard's chipset that's designed with two memory channels instead of one. The two channels handle memory-processing more efficiently by utilizing the theoretical bandwidth of the two modules, thus reducing system latencies, the timing delays that inherently occur with one memory module.

How much memory should you have in your computer? The answer is: probably as much as your motherboard and chipset can handle. For the newest motherboards, that may be excessive unless you are involved in digital video editing or graphic design. For most home users running WinXP or Win2K I would recommend 512MB up to 1GB.

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