



Comments

• By Bob Ward, Secretary

WOW, I'M TOO HYPED to do this tonight, but Teri has other jobs stacked up. So forward we must go. You should never go watch a movie like "Speed II" and then come home and do anything. I was tired after watching the ocean liner beach itself. Also I was dismayed when they destroyed all those computers... the ones on the boat and the ones falling out of the van. Do you suppose they were only 286's?

We can thank Lynne Boisen for last month's presentation on LifeStyle Software. They have some great products! She gave us an inside peak at Micro Kitchen Companion and McClane's new Standard Fishing Encyclopedia. Both programs were put together very well, had friendly user interfaces, and chock full of useful information. The fishing encyclopedia did everything but clean fish. (Maybe they will include it with the next version.) I was especially interested in the fly tying module. No wonder my fishing flies look like road kills or something you might scrape off the front of a windshield. Needless to say, Lynne perked our interest and never touched a computer. She used overhead transparencies throughout her presentation. Thanks Lynne for a job well done.

We haven't heard from MicroRim about this coming month. It seems companies like to have one foot out the door before confirming that both

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<designing web graphics.2>

How to Prepare Images and Media for the Web, 2nd ed.

• Book Review by Teri A. Sorgatz, IBM/PCUG Redding

YOU HAVE HEARD ME SAY THIS BEFORE—the Web is a moving target. What you write about the Web today is usually obsolete by the time your words make it to the bookstores. The most timely source of information about the Web can be found on the Web itself. Publishing information on the Internet is not hampered by the physical constraints of the concept-to-press-to-distribution process which may take months. And, when you are talking about Internet time, months on the Web speed by like dog years.

So, I'm always skeptical that a paper-published book about the Web can give me the information I need to

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Club Calendar

JULY 13

Please note that the regular meeting has been rescheduled to the 2nd Sunday because of the holiday.

Jerry Mintz
will demo
networking PC computers
with Winows 95

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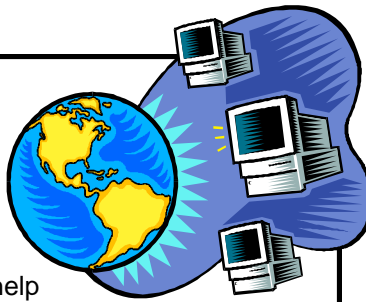
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The Surfboard

• By Dorothy Kirk, IBM/PCUG Redding



IF YOU ARE FORTUNATE ENOUGH to visit a foreign country this year, the following sites will help you to get around better by teaching the phrases that are most likely to be useful to you. Most of the phrases and words can be learned in a relatively short space of time. You may also print them out for use on your trip. Most of the sites include audio so that the correct pronunciation is learned. Or, perhaps, you and the rest of your family just want to have some fun by learning a few phrases and showing them off to each other.

FRENCH COURSE <http://www.ottawa.ambafrance.org/ALF> Brushes up your high school French even if it has been years ago. They claim you can do it in 6 hours by playing their little learning game. Of course, this is only the terms you will need for a vacation in France. To learn the correct pronunciation you need an audio card.

GERMAN FOR TRAVELERS <http://www.city.net/countries/leichtenstein> If you plan to vacation in Germany, Austria, Switzerland, Liechtenstein, Belgium or Luxembourg, or just want to toss a few phrases around for fun, this site has loads of phrases in different categories. Each phrase has audio so that your pronunciation is correct. In addition, there is much information for the tourist about Germany.

LEARNING THE RUSSIAN LANGUAGE <http://www.lmao.com/anastasia/index.htm> For the more serious student who wants an introduction to the Russian language, this site offers lessons with homework. All pronunciations are audible. You also learn Cyrillic letters.

SPANISH FOR TRAVELERS <http://www.city.net/countries/spain> If you visit Spain, Mexico, Colombia, Argentina, Chile, Cuba, Dominican Republic, Puerto Rico, Equatorial Guinea, Ecuador, Venezuela, Costa Rica, Nicaragua, Honduras, Guatemala, Panama, El Salvador, Peru, Bolivia, Paraguay, or Uruguay, you will want to know a few Spanish phrases. Provides audio and written phrases in several categories. Learn about Spanish speaking countries, too.

EASY WEB JAPANESE <http://www.wsu.edu:8080/~tsonobe/japan> Basic phrases in lesson form. Easy to follow with instructions "how to pronounce" but no audio.

SHORT PORTUGUESE LESSONS <http://www.Alu.ci.uminho.pt:8888/~si17836> This site provides easy to understand lessons with general instructions for sound and pronunciation, but no audio. The language is spoken in Portugal and Brazil. If you already know some Spanish it is easier to learn.

CENTURY SYSTEMS LATIN <http://www.centaursystems.com/demolist.html> Files for learning the Latin language to download: drills, dictionary, etc.

ITALIAN FOR TRAVELERS <http://www.travlang.com/languages/cgi-bin/langchoice.cgi> Lots of useful phrases for use in traveling in Italy with audio for pronouncing each one.

NOTE: If you are interested in another language to learn contact kirk@snowcrest.net and chances are that language can be found. Include your email address with the request.

Library News

• By Bob Williams & Bob Ward

HERE'S OUR SELECTIONS for this month. You may copy these disks in the museum anytime during the next meeting or buy them from our treasurer, Bill McNamara, for \$1.00 each.

#729

JUNOINST—Juno ver 1.38. Get your free email account now with their latest version of software.

#730

CPIC16—CompuPic: graphic, sound, and video file manager.

FECAL10—Free event reminder for Windows 95.

#731

ANIMAL21—30 color PCX clip art of animals.

CON20D—Professional unit converter for Windows 3.X.

#732

PSINV10—PS-Invoice. Business invoicing, sales/AR track

Here's some files that didn't make it due to their size. Remember they can be downloaded via the internet at www.cdrom.com/archive/locate.htm

16psco20.zip—Coin Organizer:
Organize coin collections

16pshd20.zip—Hardware Organizer:
Organize computer hardware

16psst20.zip—Stamp Organizer:
Organize stamp collections

16pswo20.zip—Wine Organizer:
Organizes wine collections

System Lockups

Many Windows95 users of the Internet have been experiencing system lockups or freezing on connecting or disconnecting with their provider. Microsoft suggests downloading and installing the file "krnlupdates.exe" as a fix. Goto www.microsoft.com/windows/software/krnlupd.htm to download.

Network II

by Jerry Mintz, SLO Bytes PCUG

LAST MONTH I SPOKE ABOUT THE COMPUTER NETWORK REVOLUTION that has occurred. We are using networks when we use our ATM card or VISA card, when the police check our registration, when we receive a bill or when we register to go to school. Last month I pointed out the cost advantage of using computer networks to save the cost of having two printers, two CD ROM drives, two back up drives, for two computers. More specialized equipment such as a Computer Aided Drafting machine can be used by many users instead of only one user thanks to networking technology. \$100 for a network card is much less than \$5000 for a specialized printer. Windows for Workgroups for those who don't have the 8Megs memory, the 100 megs of empty hard drive space, and fast 486s or Pentiums, will allow you to inexpensively (\$200 total cost) set up a local network in your home or office. How powerful the network card is can be demonstrated by running the network computer without any drives! Taking the drive controller card out of a computer allows the network interface card (aka network card), using its EPROM to start up the computer and bring in whatever operating system is on the remote computer you go to from the 'driveless' computer.

The largest and oldest network is the public switched telephone network (PSTN) connecting any two points in the United States. Twenty years ago the phone company was AT&T which owned everything. Today there is the subscriber who is responsible for his wiring and his equipment in his home or office. The non AT&T local phone company maintains the central office and the local loop, the wire connecting the central office to the subscriber. Long distance companies (carriers) provide services that connect local phone companies. The local phone company designs and repairs local trunk lines that interconnect nearby central offices.

There is a 'point of no return' called the demarcation point on the subscriber's premises that divides the wiring and equipment that is the responsibility of the phone company and the subscriber, who is responsible for wiring, telephones, and all equipment on the subscribers' side of the demarcation point. Most of the wiring is telephone twisted pair which slightly reduces magnetic induction and noise that diminishes signals on the telephone wire. Telephone wiring may not be suitable for reliable transmission of computer data (particularly at high speed in noisy environments). Telephone wiring passing through attics, walls, or crawl spaces in a conduit with noisy electrical service wires or passing over noisy fluorescent light ballast transformers may make telephone wires unsatisfactory for critical high speed digital communication applications.

Wiring, usually twisted pair from the demarcation point to the central office is called the local loop. The ring and tip red and green wires, the center pair in a RJ-11 or RJ-14 connector as well as the term Off the Hook are terms from the early days of telephone technology when the ear piece of the telephone rested on a hook when the telephone was not being used. The spring loaded hook without the listening device turned the switch inside the phone to on; with the added weight of the listening device on the hook the switch disconnected or turned off the telephone line. When the OH LED light on your external modem lights up, you may hear a dial tone because the telephone is "Off the Hook": your computer is connected to the central office through your modem.

The power and switching for your touch tone phone comes from the central office identified by your exchange number. Once exchanges were the first two letters of past presidents or other influential people; today we have all numbers. What is significant is the use of audio tone or click sounds to communicate from your telephone to the central office. The sound or voice each pair of wires can carry is limited to 3,000 Hz. Adequate for voice, a telephone line supports only 2,400 data signal changes per second. Higher speeds are achieved only through encoding four bits into each signal change. V.32bis modems run at 2400 baud and

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feet are coming to a SLO Bytes meeting. Therefore I've asked SLO Bytes' member, Jerry Mintz, to give us a hands-on demonstration of setting up two computers, networked with Windows 95. He will start with a "workshop" from 1 - 2:30pm in Fisher Science 289. Here he will demonstrate how to install and setup the network cards. This will be followed in our main meeting at 2:30 with a more general overview of networking, file sharing, and the capabilities of small network environments. We will have two computers, two projection systems and one large screen. He says it's easy. Come to the meeting and find out. I have a difficult time keeping only one computer talking to itself, let alone two. Show us how it's done Jerry. And yes, the meeting is the 2nd Sunday in July due to the July 4th, 3 day weekend.

At the last meeting we took a couple minutes to talk about declining membership and what we could do about it. After hearing your thoughts, I believe part of it can be attributed to what we offer as a club, or not offer that some people want. Many years ago we only had to deal with the C:\> prompt. Now it's past history, being replaced with a myriad of icons, bells and whistles, etc. The learning curve has increased with the complexity of the systems. You can't convince me that either Windows 95 or MAC System 7 is intuitive. I help people all the time who get their icons in trouble. So this puts a larger burden on the club. Not only do we have to answer questions about DOS and Windows 3.X but Windows 95 as well. Perhaps because we dwell so much on the complexity of the newer systems we forget that one still has to find the on/off switch to make things work. We helped a few very beginners last month in the museum. I suppose we would have had more onlookers, but I was 5 minutes late in getting started and some abandonment for Bob Hunt's more advanced look at Win-

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Network

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6 bits per baud to produce 14,400 bps.

In 1984 the telephone system was divided into local access and transport areas (the dreaded LATAs). Calls within a LATA are intra-LATA and are handled as local Central Office to Central Office connections. This is why your discounted long distance service rates do not apply to calls with the LATA. A call to an 805 exchange within your service area such as Santa Barbara is not billed by your long distance company. Calls to 805 outside your service area such as Oxnard are tarified by your long distance company. It may cost more to call a "shorter long distance call within area code 805 than a long distance call outside your (Central Office) service area.

Just as in some communities you can order a high capacity water line and meter that allows a greater number of gallons per minute to flow to the home or business, you can order a high capacity phone line from the telephone company. For the larger pipe (example if 5/8" is standard, a 1" meter and line is a high capacity line proving more than double the gallons of water per minute), the customer pays a higher base fee for the higher capacity connection in addition to the usage in gallons on the meter. Video data has created a demand for high capacity service lines. Medical imaging such as MRI which has not only a full screen image but produces a 3D or depth effect by continuous series of images a fraction of an inch apart, create enormous demand for a huge 'pipeline' to carry the data. Optical fiber networks are being used to satisfy the most demanding video real time applications. If you have to ask what optical fiber lines cost, you can't afford it!

Integrated Services Digital Network known as ISDN support audio, and digital services. ISDN uses channels sometimes referred to as bit pipes. The A channel provides a 4kHz voice (analog) telephone. The B channel provides 64kbps digital data.

The D channels provide 16 or 64 kbps service. The channel format for ISDN-BRI is two B channels at 64Kbps. Each channel carries one voice conversation or data, all data, voice and data, or two voice channels. Call waiting, and other services are available on these channels. One D-channel for data at 16 Kbps (2-8kbps) is used to control the B channels. The Pacific Bell ISDN information line is 1-800-472-4736. ISDN, centrex (big business) ISDN, home ISDN, switched 56 2 wire and switched 56 4 (1-800-770-5328) wire are available in San Luis Obispo City, Atascadero, and other sections of the county. The telephone number for Pacific Bell Network Integration is 1-800-400-7264. ISDN is giving the customer a digital line from your terminal to the central office. Instead of amplifiers, digital repeaters are used to bring the signal to the central office. A repeater is like a money machine that does not merely clean up the old dollar you put inside, it prints a brand new perfect 'clone' of the dollar bill you put into the repeater. Repeaters generate new bits in perfect shape exact perfect duplicates of the noisy dirty misshapen input. Voice, data, fax, graphics, and video can be carried on a common (ISDN) circuit. A digital ISDN modem or a router is necessary to connect up to two

telephone lines or your computer to your ISDN line. The cost for the ISDN modem or router to connect your computer and telephones starts at \$200. A dedicated line is similar to having Caltrans build you your own lane from SLO to LA.: only you can use this line. Only cost \$1260 to install. A switched line is similar to having Caltrans block off a lane with your name on it, but you can get a sorry, all lanes full, try again fast busy signal. Your current phone service is like using the freeway with no one setting any lanes aside for you.

The deregulation of the telephone business has had its advocates and criticism. The telephone companies have attempted to place extra tarriffs on lines used for digital communications since the 1970s. Digital communication services have been a cash cow for telephone companies. A million extra telephone lines just for fax machines. Sonet Synchronous Optical NETWORK is very high speed digital line. The basic optical carrier line can carry 28 Digital Service 1 lines. Each DS1 line has 64 voice channels. I did not ask the tarriff. Lets estimate...\$15 x 28 x 64 ??? I know I can not afford even the basic OC-1 Optical Carrier line.



Grid Ad Here

Mind Your Manners: Net-etiquette

• By Jerry Mintz, SLO Bytes PCUG

DON'T INTERRUPT ME! ARE YOU LISTENING! Pay attention! You haven't heard a thing I have said! Such lack of communication does not exist in a correctly functioning Ethernet (Coax or cable) network. Manners, politeness and dignity are the convention or standard, the IEEE 802.3 standard or protocol (an agreement between parties on a format and sequence of control messages to be exchanged between the parties). The simple cable (Ethernet) network works according to the social grace of a dignified high society tea party conversation. When a computer wants to transmit data on the network, the station does not interrupt. That would definitely be a no no! Not only are two stations talking at once undignified and socially inappropriate, two stations sending data at once results in garbage or 1+1 = 0 It is akin to listening to two people arguing at once with one ear and only enough mind to process one person without the ability to filter out the second conversation. Computers have acute ADD attention deficit disorder. A stray remark disables the concentration of the computer on the conversation. Politeness is necessary for the network to function! Imagine listening to two people who not only look alike, but whose voices sound exactly the same, voice, pitch, intonation, accent, volume etc.. It would be very confusing. When two computers try to talk at the same time on a network, confusion reigns. A very clever system was devised to restore order.

The computer listens to the cable for conversation (data traffic). If all is quiet, if the cable has no conversation or data traffic, the computer can converse with a remote computer i.e. send its data. If the cable is in use, the station monitors the channel (the cable) until it detects the idle state. Once the sending station or computer detects a quiet (idle) cable, it can begin to send data, and then check for garbage (1+1 two stations talking at once on one cable). What I call garbage IEEE 802.3 defines as a collision. 'Garbage (a collision) happens' when a station tries to transmit data at the same time as another station.

If a collision is detected the detecting station stops transmitting the data and starts transmitting an all quiet "Order in the cable!" pattern. After "Order in the cable!" is shouted a number of times for all stations (other computers) to hear the demand for collision avoidance, the station will re-transmit. Social decorum must prevail because two or more stations may wish to retransmit at the same time. A special procedure is followed to guarantee cable availability. A slot time is 512 bits long, or slightly longer for a data packet to travel through an 802.3 network. The slot time guarantees that the collision signals ("You are out of order, Order in the cable") are no longer on the cable when the next station attempts to talk (transmit data). If all is quiet on the line the station will start talking.

If two stations are trying to use the cable line at once, similar to a loud alarm waking all in our household at once and we all urgently need to use the one facility, we need a special guideline or procedure to prevent hostilities where no one ever

uses a bathroom! Each station picks a number unlike picking a number to be waited on at the deli. The number picking is actually like a race to use the bathroom at 7 in the morning where each sets the snooze alarm and at the sound of their snooze alarm they will get out of bed and run for the bathroom. If two try to use the line at the same time, the stations reset their snooze alarm and try again. This resetting to break the tie takes place again and again until the tie is broken or 16 attempts are made. "Pardon me for stepping on your toes, lets try again."

There are two schemes or systems to avoid collisions. Carrier Sense (is the line clear) Multiple Access/Collision Detection CSMA/CD to prevent two or more computers from attempting to talk through each other. Less frequently used is CSMA/CA, Carrier Sense-Multiple Access/Collision Avoidance, a protocol for sending data used on networks that allows only one carrier at a time on the line. Collision avoidance employs mechanisms that reduce the frequency with which collisions can occur. Local Area Network standards are absolutely necessary to keep order to connect computers to each other, the IEEE was assigned the task of defining LAN standards in 1980. By 1985 four standards were announced as the IEEE project 802 adopted by the American National Standards Institute and the Open Systems Interconnection Reference Model (a reference to a model used for creating standards for today's computer communications).

People Helping People

NAME	PROGRAM(S)	PHONE NO.	HOURS TO CALL
Jeffrey Mintz	Computer Networks, Win95, Netscape 3.0,Internet	547-9668	Sat 12-6, Sun 12-6
Jerry Mintz	Word 6	547-0774	Sat 12-6, Sun 12-6
Ross Kongable	MS Publisher	489-4046	M-F 2-6, Sat 2-8
Bill Roch	Ami Pro	466-8440	anytime
Don Morgan	Word 6.0, Equation 3.1	543-6241	anytime
Richard Weilacker	Win '95, DOS	967-2963	anytime
Dan Logan	Internet, MS Publisher	927-0515	M-Sat 8-6, Sun 12-6
Gary Peterson	All Internet apps	438-5837	anytime
Bob Ward	Netscape, Win '95, 3.11	528-0121	evenings

Adding More Memory

It's a Snap

- By John Prete, reprinted from the June 1996 issue of BUSSLINE, the monthly newsletter of the Central Florida Computer Society.

EVERY ADVANCE IN PERSONAL COMPUTER TECHNOLOGY has required more of that costly real estate called memory so now the once-generous 128K of random access memory (RAM) memory that came with the first IBM PC seems insanely small. Even so, there was a time when 1 MB was too much, 4MB was spectacularly self-indulgent, and 8MB? Well, maybe you thought it was enough also.

But now you're sitting in front of your 8MB machine wondering if it's enough. It seemed excessive when you bought the system, but that was before Windows 95 and the memory-hungry programs that bubbled up in its wake. Now it's taking significantly longer for your programs to load and for those handsome website screens to redraw.

The bad news — and it's not all that bad — is that doing it yourself is the most economical way to upgrade your system. The good news? It's easier than ever. I have upgraded several computers myself, and I took a long look at the various options so I could pass along my experiences, perhaps to your benefit.

Your job may be as simple as popping the lid on your machine and snapping a few chips in place. If your motherboard's memory slots are maxed out, fear not. Possibly some tricky workarounds await your, but the payoff may be worth it.

There are four key questions you'll need to ask yourself before you upgrade, and acquire all the information you'll need to answer them.

1. How much memory do I need?
2. What kind of memory do I currently have?
3. What if my memory sockets are full?
4. What kind of memory should I buy?

Don't confuse RAM memory with hard disk space. Both are measured in megabytes and both are used to store data, but data is retained in memory only as long as your machine is turned on. It's as though your desktop gets cleared off the moment you turn off the lights. Hard disks, on the other hand, are magnetized platters that hang on to the information you feed them and retain it even when you turn off your PC.

Memory chips move information a lot faster than hard disks do, so you want to perform as much of your work in memory as possible. Many programs, including your Windows operating system, borrow hard disk space to use as temporary memory areas. The more memory you give Windows, the less it will use or borrow from your hard disk.

HOW MUCH MEMORY IS ENOUGH?

First, forget about the claims of a 4 MB minimum for Windows 95. And even with 8 MB, it will run, but run isn't really accurate. It lopes and waddles. The requirements for multitasking — running two or more applications at once — are huge, especially if you want to take advantage of OLE (object linking and embedding), in which one program can call the functions of another. All other things being equal, you want at least 16 MB.

But let's look more closely at those other things. What's your CPU speed? A 486/33 is the rock-bottom processor for Windows 95, and if you're running it with 8 MB of memory, your first investment should be 8 more MBs of RAM and a new CPU chip — at least a 486DX2/66, although you'll find that faster chips like the DX4 series at 100 and 120 MHz clock speeds are very affordable.

Windows 3.1 isn't quite as demanding, and you can get away with as little as 4 MB of memory for most low-demand applications. Take it up to 8 MB and your whole system will run smoother. The bottom line is 16 MB for Windows 95

and 8 MB for Window 3.1 (minimum)—that is, if you like to work more than wait.

WHAT KIND OF MEMORY DO I NOW HAVE?

So you want to upgrade your memory—now what? First, take a look at the memory you have. Memory chips are located on the circuit boards and called single in-line memory modules, or SIMMs. Each SIMM can hold from 256K to 16 MB or possibly more, but you'll typically find them in 1 MB to 8 MB capacities.

These SIMMs are also currently produced in two key sizes: 30-pin and 72-pin. the 30-pin SIMMs send out 8 bits of information at a time, but because 486 motherboards process data in 32-bit chunks, you need to have a least four 30-pin SIMMs installed at one time — that means upgrades are made in four-SIMM increments. Each block of four 30-pin sockets is called a bank; on a typical motherboard with two banks (a total of eight sockets), the banks are numbered 0 and 1.

The wider 72-pin SIMMs are produced in 32 bits per module, so you can work with them one at a time. Newer motherboards use 72-pin sockets with some mixing 30s and 72s. You cannot mix their use without filling the 30s first. Keep also in mind that Pentium motherboards process information 64 bits at a time, so you will be installing 72-pin SIMMs in pairs.

WHAT SIZE DOES YOUR COMPUTER USE?

Let's look under the hood. SIMMs are arrayed in parallel rows, with the modules jutting out of white plastic sockets from the motherboard at a slight angle. Measure one of the sockets. If you have 30-pin SIMMs, the socket is roughly 3.75 inches wide; 72-pin SIMM sockets are 4.5 inches wide. If you have both sizes, which one is currently being used? You cannot mix sizes or add to them without following a few basic rules. Watch out! If things look different than we are describing, you may have

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SIPPs instead of SIMMs which is a whole different ballgame. SIPPs are an older technology and require replacing or upgrading your motherboard or acquiring a different memory chip.

To remove a SIMM, pick the one on the end that's angled away from you, carefully move the retaining fingers, and simultaneously pull the top of the module toward you. (This is a two-handed job.) Slide the SIMM from its socket. You'll notice that the lower edge on one of the sides is notched and fits into a corresponding bump on the socket. As long as you're careful, you can't install a SIMM the wrong way.

Identify what's in your system now by reading the chip. (See the SIMMs list at the end of the article to identify your modules.)

Here's the upgrade quandary. Let's say you want to upgrade from 8 MB to 16 MB in your typical 486 computer. If your machine has eight 30-pin 1-MB SIMM sockets (which is typical of older 486-based motherboards) and you already have 8 MB of memory you're full. Eight 1-MB SIMMs are already in there.

You can't mix memory sizes within each of the two four-socket banks, so four of those 1-MB modules will have to go. That means you will have to purchase a set of four 4-MB SIMMs, sacrifice four of the 1-MB units, and end up with 20 MB.

Selling your old SIMMs is an option, and some memory chip vendors will give you a reasonable deal on your old 1-MB modules. At best, you'll get a little less than half the price of comparable new units.

If you have a combination setup, 30s and 72s, your decisions are easier. Eliminate the 30s and use only the 72s.

Upgrading your motherboard is another way to go — it's the route I took because I was also putting in a 1.6 GM hard disk and needed BIOS support and I went from a 33 MHz clockspeed to a 120. I found one of

those motherboards with eight 30-pin sockets and two 72-pin sockets, allowing me to use all my old memory and add two 4-MB 72-pin SIMMs for a total of 16 MB. With a motherboard and CPU price of under \$200, I came out ahead of what I'd get by selling the old SIMMs. Note: 72-pin SIMMs are inherently more efficient because of their 32-bit data path. Be sure that the 72-pin banks are configured as the first to be accessed — as 0 and 1 — and that the 30-pin banks are set up as 2 and 3.

Another factor to consider, be sure the new SIMMs are the same speed as the old ones (typically 60 or 70 nanoseconds). The lower numbers are faster, but — especially if you're buying memory for a new machine — check the motherboard manual to see what speed rating is recommended or supported. There's no sense wasting money on fast chips that don't do you any good.

SIMM CONVERTERS

If you take the upgrade route, you can also recycle old memory with a couple of SIMM converters. Make sure your new motherboard has four 72-pin sockets, and order it with 8 MB of memory. That means it'll come with one filled bank (two sockets). Buy a pair of SIMM converters to use in the other bank. Each converter, priced from \$30 to \$40, is a 72-pin card, taller than a SIMM, with four sockets (there are also eight-socket models for other needs). Plug in your four 1-MB modules and you've got a 4-MB SIMM. Make sure that you've got enough clearance in your computer case to use the converters. Some motherboard and case combinations put metal drive bays just above the SIMM sockets. Because of their perpendicular height and weight, they have a tendency of wobble out of seating if your machine is moved around a lot.

WHAT KIND OF MEMORY SHOULD I BUY?

So, you've measured and inspected and decided how much additional RAM you need, but there's one last obstacle—memory type.

When it comes to buying SIMMs, you have three memory options; straight SIMMs; non-parity checking SIMMs; and EDO, or extended data out. What your computer can do depends on its motherboard's memory controller, although you may have an option in the BIOS setup program to enable or disable parity checking. Non-parity is cheaper. Check the motherboard manual to see what it can handle. If EDO memory is an option, you might want to spend the few extra bucks for the performance boost, although don't put a lot of value on it. It's not a huge performance boost.

Parity checking is a simple, somewhat effective way of making sure that data passing through memory isn't corrupted. Because your computer speaks in 0's and 1's, the values of each SIMM's worth of information can be calculated as either an even or an odd number. The parity check verifies that odd numbers stay odd and even numbers stay even. It may or may not be worth the few extra bucks. I don't think so.

Memory chips are more and more efficient, however, and chip makers are always trying to save money. Parity checking has been eliminated from some memory chips because they're a little less expensive but still function reliably. If the federal banking industry doesn't rely on your computer, you probably can get away without parity checking. Just be sure to turn it off in your system's setup program.

EDO is a different type of chip with a shorter read cycle. It promises a 10 to 15 percent speed boost over conventional chips, which use a technique called fast page mode. Again it depends on your budget and whether or not your motherboard supports it.

Ironically, once you know the size, type, and capacity, installation takes only a few seconds. Snap-in modules are a cinch to install, and the speed increase when you throw the switch is one fine moment.

If you feel confident enough to tackle the job, do so. It may be worth the experience. If not, there are

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plenty of professionals around the club who will tackle the job.

The price of memory has dropped so much (under \$5 a meg) that this is the time to do it. Memory pricing is very unstable and driven by supply and demand.

Before you head off to the store to buy your SIMM chips, select the correct specs for your system by using the following Check List:

SIM type (pick one):

30-pin (roughly 3.75" wide)

72-pin (roughly 4.5" wide)

SIMM Speed:

SIMM speed is indicated on the chips. Look for a long number with a suffix at the end, typically in the form of a dash and a number, e.g. -6 or -7, meaning 60 or 70 nanoseconds (ns): chip speed in ns (60,70,80)

Parity (pick one):

Parity is indicated on a 30-pin SIMM by the number of chips on each SIMM's board:

no parity (8 chips)

parity (3 or 9 chips)

Parity is indicated on a 72-pin SIMM on the module itself:

no parity (the notation x32)

parity (the notation X36)

[NOTE: *this article failed to mention two very important aspects of memory upgrades. First, make sure you are well grounded when handling memory chips. Even the smallest bit of static electricity will render them useless. I always leave my computer plugged in, with the switch off when the case has been removed. I can touch the power case which is grounded to house ground. It also helps to wear a grounding wrist strap or pad. Secondly, some motherboards will not work unless the SIMM contacts are either tin or gold. Always match the contacts of new SIMM's. Mixing gold contacts and tin contacts is not a good idea.*]

Bug in Internet Explorer

- By Hugh Bayless, Monterey Bay User's Group
Blinkin Cursor, May/June 1997

MICROSOFT NOW HAS A BUG-FIX for Internet Explorer 3.0 and 3.01 available for download at: <http://www.microsoft.com/windows95/default.asp>
Look under 'Product Updates' for an update for Internet Explorer.

The reason for this update is that a student at Worcester Polytechnic Institute, Paul Balle, discovered that Internet Explorer has an unintended gateway through which the operator of a Web site can secretly run programs or destroy files on the computer of anyone logged onto that Web site. Microsoft officials went into a panic as soon as word reached them, and they promised to have a bug-fix available "right away." For once, Microsoft came through promptly. The bug-fix was out in a couple of days.

This bug has the potential for doing more damage than any virus, because there are millions of people using Internet Explorer who are not going to hear about the bug and will not act quickly to update.

An additional bug with similar attributes has been discovered, but is not nearly so universal in scope. This second bug only endangers users of version 3.0 who are running Windows NT 4.0 with Service Pack 1 or 2. Another bug-fix will no doubt be released for those affected by this second bug.

Officials at Netscape immediately announced that their product does not have this security flaw and that users of Netscape have nothing to worry about.**

While no cases of damage to files or computers, via this bug, have been reported yet, now that the bug has become common knowledge, it could trigger an epidemic of abuses. The cure is to download a fix for Internet Explorer and install it as soon as possible.

** Netscape has to swallow their pride on this statement. Just last week as similar "bug" was discovered in Netscape which covers all versions. They too will be providing a fix soon. Check on the Netscape home page for updates.

Doing Windows 95

- By Lee Reynolds, Cont. Editor, Boca Raton Computer Society, Inc.
Boca Bits, May, 1997 [excerpt]

SHOWING FILE EXTENSIONS IN EXPLORER

The default for Windows 95 Explorer is to not show the file extensions in the "file list" view (which is similar to Windows 3.X File Manger.) If you would care to change this, there is how you do it: start up an Explorer screen, click on the Start icon on the taskbar, move the mouse pointer to the option Programs in the menu that "cascades" up. Now, in the second menu that cascades down, select (by clicking once) the Windows Explorer option. At the top of this Explorer window you will see a menu bar which include "View" as one of its options; click there. Move the mouse pointer on that menu and click "Options...". This brings up a dialog box that shows two "tabbed file cards" (like in a rolodex file) one behind the other, where one is labelled "View" and the other "File Types". On the View tab, you will see a check box for "Hide MS-DOS files extensions for file types that are registered". This should be checked; just move you mouse to that box and click once in order to uncheck it. Now all your MS-DOS file extensions will be shown.

Comments

Continued from page 3

dows across the hall. I did have a comfortable group of 4 individuals. We took over an hour and went through the very basics of Windows 95; how to install new software, remove programs correctly, delete icons from your start menu, multitask between more than one program, cut and paste, format a floppy, move the taskbar around the screen, create shortcuts, folders, the right mouse button and much more. Again it was the very basics which is what I will be teaching again in the museum this coming month and months to come. I advise bring paper and pencil to jot down some notes. It looks easy when I move the mouse pointer around the screen, but you will forget some of it without notes. Should there be enough demand, we can always move to a classroom and set up a second grayscale projection system. I hope to have a handout this month. It will give me an outline to follow and a place for you to take notes. Again, let me emphasize, this is for very beginners only. If you have a fair handle on Windows, move across the hallway to Bob Hunt's meeting. Since we had several questions about Window 3.X as well as 95, I will be running two machines with one monitor and a switch box. This will give me the opportunity to run both operating systems at the same time.


If you look on the last page of our newsletter you will find our financial section. Although we are holding our own, the Projector Fund is running out of steam. So here's a shot in the arm. **Now read closely:** At our September meeting, which is the 1st Sunday in September, some lucky winner will walk away with a new, single pass, 24 bit flatbed scanner... or an 800 MB tape backup system... or a Windows 95 keyboard. That's when our drawing and Projector fund drive will be over. We have printed a total of 400 tickets. Each ticket requires a donation of \$10. If you sell 5 tickets and return to us \$50, you will receive one free for your efforts.

If you buy 5 tickets yourself, you will receive one ticket free. If you bring us \$4,000 we'll give you all the tickets and the prizes for 1st, 2nd and 3rd place! All donations will be handled by Bill in the museum. You can sign out for as many tickets as you think you can sell. But please, don't take 10 or 15 tickets and come back with money for only 2 at our September meeting. Take no more than you can realistically sell. All tickets must be filled out with full name, address and phone number. The purchaser of the ticket keeps the receipt stub, the rest is returned to us either before the drawing at one of the meetings or by mail. We will take money right up to the drawing. We must have either money or your unsold tickets before the drawing in September. If you think you have exhausted all your friend's wallets by the August meeting, bring back the excess tickets so we can give them to other people. If you can't make the meeting call either Bill McNamara (466-9684) or myself (528-0121) and we will mail tickets to you. **YOU NEED NOT BE PRESENT TO WIN.** Bill will have a full set of instructions in the museum. The prizes will be on display at all our meetings.

You excited yet??? Hey, I could use a flatbed scanner. We also took a minute to talk about declining membership in our club. We've dropped about 80 members in the last 16 months. As an incentive to bring those numbers back up, a current member will receive 3 extra months added on to their membership for each NEW member they bring to the club who signs up with us. The definition of NEW member is any person who has NEVER been a member of SLO Bytes. It is important that your name appear somewhere on their membership application so we can properly credit you for your efforts.

I will keep the same map on the back of this newsletter, although they change traffic patterns around Utilidor like changing socks. It's different every day. Basically you know know your destination. Just follow the arrows around the con-

struction and hope you're not going the wrong way on a one-way street. I feel like I need a hard hat just to get from the H-4 parking lot to Fisher Science every day.


Those of you who frequent our BBS discovered that it was up and running by Thursday after the meeting. With the motherboard crash, we lost about 2 weeks of information. It could have been worse. The phone number, should you miss it on page 11, is 528-6172. 

About Juno

THE NEXT TIME YOU GO ON JUNO you may have a fifteen minute download of the latest advertising software. You will be told that you are receiving a fix to all the bugs in Juno. The only bug I had was the advertising was broken or non operational.

An alert. You will be asked to give a backup access telephone number to use. Unfortunately, if you list a non local telephone number, you will constantly have to watch the number on your screen being dialed. You can pick the same local telephone number if you select none when given a choice of other 805 long distance telephone numbers. **REMEMBER:** it costs more to call Santa Barbara than New York thanks to our phone billing structure and the LATA. Selecting none will give a dialog box then the complete list of telephone numbers. Select the same local access number as your primary number instead of a long distance secondary number.

What is "improved" is the new Advertisments menu and a copy of the Service Agreement in the Help menu. A disable access from other computers is also an option under Features menu.

Save your original disks. If you get tired of the ads, you can always go back to the broken version although Juno is smart enough to upgrade you back to version 1.38. 

<dwg.2>

Continued from page 1

keep my knowledge of HTML and Web publishing current. Well, in this case it doesn't pay to be a Doubting Thomas.

<designing web graphics.2>, by Linda Weinman (New Riders Publishing) not only gives you the timely information you need to design and prepare graphics for the World Wide Web, but provides you advantages that Web delivery of this information could not: 500 pages of beautiful full-color illustrations, tables and screenshots that allow you to compare techniques and platform issues side-to-side.

Here are some of the topics that **<dwg.2>** covers:

- how to create the smallest and fastest web graphics
- browser-safe colors for maximum cross-platform compatibility
- hexadecimal color, color palettes and transparency
- details about file compression formats, including the latest PNG format
- image maps
- scanning, color correction, aliasing/antialiasing, and Adobe Photoshop techniques
- interactivity and user interfaces
- navigation, rollovers and linked graphics
- Java, JavaScript, Shockwave, CGI, and plug-ins
- imbedding music, movies and animations
- typography as art
- working around HTML limitations in typography and page layout
- WebTV specs and authoring tips
- browser capability issues

Throughout the book are snippets of actual code (HTML, JavaScript, etc.) to incorporate graphic effects, such as rollovers,

into your Web pages. Weinman provides liberal URL references to sites that illustrate a topic, further explain a concept or technique, or offer code and graphic libraries.

I found **<dwg.2>**'s charts and examples of compression techniques vs. dithering method especially useful. In fact, I learned quite a few new Web design tricks from this book! For example, I learned a new trick for illustration-based artwork: how to prevent color-shift by painting with non-dithering patterns to simulate non-browser-safe colors.

If all this Web graphic jargon is confusing to you, Weinman has included an excellent glossary in the back of the book, as well as charts for design-specific HTML tags and a well-developed index.

<dwg.2> was written to accommodate an audience with a wide range of Web authoring skills. Experienced HTML jockeys can safely jump into the book at chapter 4—although if you skipped over the first three chapters you'll miss some interesting information about the author herself. The layout and design of the book (a gorgeous DTP example) facilitates browsing and skimming for information.

Weinman and her publishing team have accomplished two phenomenally difficult tasks in this book: (1) accurately portraying differences in screen colors (RGB) and color shifts within the restrictive confines of an ink-based (CMYK) gamut, and (2) accurately portraying dithering and compression artifact issues from low resolution screen shots or images in high resolution print halftones. Color books about color print media are a nightmare to produce; color books about cross-platform video color are virtually impossible, which makes this accomplishment truly special.

I am much impressed with Lynda Weinman as an author, instructor, and designer who specializes in graphics and design for screen-based media (visual arts). She has taught Interactive Media Design, Digital Imaging, Motion Graphics and Web Design at numerous seminars and colleges, including Art Center


College of Design, American Film Institute and UCLA. Lynda is also a frequent contributor to *Step-by-Step Graphics*, *New Media Magazine*, *Web Techniques*, *MacUser*, *Animation Magazine*, *Full Motion*, *Macromedia User's Journal*, and *Digital Video*, on subjects ranging from animation, multimedia, Web design and digital imaging.

You can visit Lynda's home page at www.lynda.com. Information about her other excellent Web design books can be found here.

<designing web graphics.2>
New Riders Publishing
201 West 103rd Street
Indianapolis, IN 46290
www.newriders.com

Top 10 Forgotten Computer Industry Trade Shows

From C/Net Digital Dispatch

10. Software Companies Bought Out By Microsoft Expo
9. VCR Programmers Convention (keynote speech is at 12:00)
8. ConvenCon, the convention for conventioners
7. SAW (Stupid Acronym World)
6. The URL Swap Meet
5. How To Make Money On The Internet! seminar series (cost of admission: \$5,000)
4. Mouse World
3. Quasimodo Con (formerly known as the Overfeatured Portable-Computer Producers Convention)
2. ZealotWorld (hosted by IBM's OS/2 division; sponsored by Apple)
1. Web Standards Expo (postponed; show committee can't agree on a location) 

Club Information

HARDCOPY is a monthly publication of SLO BYTES PC User's Group located in San Luis Obispo, California. Information in this Newsletter is derived from both our own membership and other PC User Group Newsletters. The purpose of this publication is to inform our members of meetings and provide information related to the use of IBM PC's and compatible computers.

Membership: Dues are \$25 per year. Newsletter only is \$16 per year. Full membership entitles you to our monthly newsletter, full use of the public domain software library and discounts at local computer stores.

Article Submission: Deadline for submission of articles is the 15th of each month. Articles should be provided in ASCII format without any type of formatting from your wordprocessor including tabs, indents, extra spaces, or highlighting. We prefer articles on disk but will accept hardcopies if necessary.

Disclaimer: Neither SLO BYTES PC User's Group, its officers, editors, or contributors to this newsletter assume liability for damages arising out of this publication of any article, including but not limited to the listing of programming code, batch files and other helpful hints.

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Meeting Times

GENERAL MEETINGS are held the 1st Sunday of every month, unless noted otherwise in the newsletter calendar, at **2:45 pm in the Cal Poly University Biology Department, Fisher Hall 286.**

Special Interest Groups (SIGS)
 meet at 1:00 to 2:30 pm.

General Info SIG / Internet SIG:
 Fisher Hall 286

Win95 SIG / Beginners SIG:
 Fisher Hall 287



SloBytes Officers

President	Geo. Campbell
Treasurer	Bill McNamara
Secretary	Bob Ward
Editors	Bob Ward & Teri A. Sorgatz



Treasurer's Report

SLO Bytes PCUG Expenditures May, 1997

Beg. Chk. Bal.	+ 1449.69
Expenses:	
Newsletter 05/97	- 42.48
BBS Phone	- 10.70
Long Dist. Cgs.	- 17.73
Raffle Prizes	- 358.16
BBS Hardware	- 155.00
VGA Splitter	- 18.37
Room Rent	- 375.00
Printer Ribbon	- 7.43
	- 984.87

Deposit 05/03/97	+ 158.00
Xfer from Proj Fund	+ 358.16
reimburse Raffle	+ 516.16

New Balance + 980.98

PROJECTOR FUND—GOAL \$4,000

Opening Balance	+ 845.18
Donations (May)	+ 26.00
Xfer to Checking	- 358.16

New Balance + 513.02

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