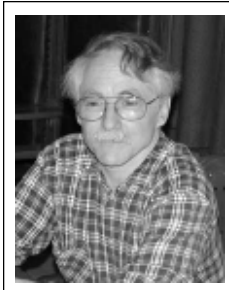




What's New
by Bill Avery

Hello, again, and welcome back to What's New for January 2002. I had a long and greatly appreciated break, thanks to Bob's surprise offer to fill this



space last month. I certainly tion to a fine issue of Hardcopy, as did many others, by the comments we heard at the meeting. With a new year we try to make new beginnings, so let us try again for brevity, and only a few choice comments along the way.

Alan played a promotional demo for Windows XP, which was full motion video and streaming audio, live from Microsoft, I think. He asked how many people were using XP, and only a few raised their hands. The majority is wait and see, so only time will tell, I suppose. I have only tried it on a friend's new Gateway, and it sure is different, and hopefully better. Bob cleaned out the equipment locker, and many giveaways found new homes.

As we start a New Year, it is fun to look back at the events of the past year, so Alan suggested looking at: <http://www.time.com/time/vip2001> from Time Magazine.

Alan noted the advent of Microsoft's Big Day, in San Luis Obispo, at the Vets Hall on Grand Avenue, from 8 AM to 3PM, Tuesday January 29, 2002. The

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**The Hard Facts...
of Hard Drives**

by Bruce Pechman, 1960 PC User's Group, Houston, TX February, 2002

It's really not that hard

If you have been following my articles lately, you know that every couple of months I like to center on a particular PC component and explain it in simple English. There are two components inside your PC I consider most vulnerable to failure from a mechanical origin. Those two components are your hard drive (HD) and your power supply. Translation: Your computer will probably die as a result of a hard drive malfunction, or a nondescript power supply breakdown. I liken this to the human brain and heart. You can absorb other minor injuries, but any concerning these two and both you and your computer will result in a blackout.

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**CLUB
CALENDAR**

February 3rd

1 pm
Early SIG.

Kitchen, Bill Avery
Main hall, Alan Raul

2:30 pm

George Lepp, field editor for Outdoor Photographer magazine and PC Photo magazine, will discuss digital imaging and where it's headed for both the consumer and the professional photographer

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event is free, with prizes given out at the end of the day. Registration is optional, (available by phone at 1-877-435-7638) or on the web at: <http://www.msbigday.com/register.asp> There are three discussions planned, and details are available at: <http://www.msbigday.com/agenda.asp>:

- 1) Windows Professional (Windows XP, Windows 2000 Server, & Small Business Server 2000) ,
- 2) Windows Office XP (Office XP, Access, Excel, MapPoint, Word, Visio PowerPoint, & Publisher) ,
- 3) Connectivity & the Internet (Outlook, Compaq iPAQ, bCentral, Vericenter, FrontPage, & SharePoint).

There will be 64 sessions in California, followed by 52 in Texas, 36 in New York, and 33 in Florida. All 51 States are included in the schedule through July 2002.

We have several members interested in their Family Roots and Genealogy, so Alan showed a site devoted to the tracing of names through the RootsWeb.com and Ancestry.com search engines: <http://www.rootsweb.com> . According to their site: " Ancestry Family Tree does what NO OTHER genealogy tool can do: it combines the personalization and ease of family tree software with the depth, speed, and power of the Internet. There's no better way to find your ancestors and record your discoveries."

So we tried it out on Avery, and came out with 1400 matches, then on Pilcher, which matched information on 21 of 42 databases, such as the Social Security Death Index, and the California Death Index. One person asked if they would show whether a person had any money coming! [Bob Ward noted that the State of California does have a site for that purpose, which he had used successfully to retrieve funds for a friend.]

The mention of Fry's Electronics / Outpost at <http://www.outpost.com> brought varied reactions from the crowd. Originally, Egghead Software tried to merge with Fry's, but failed, so a merger with Outpost followed late last year. In Sunnyvale, Fry's has close to 100 checkout lanes, and looks like a supermarket. The other locations are similar, and the company continues to open new stores in the San Francisco Bay Area, Northern and Southern California, Texas, Oregon, and Arizona. See <http://www.frys.com> for more information and store history. A review by Simon Firth for [salon 21st](http://www.salon.com/21st/feature/1998/05/cov_21feature.html), [http://www.salon.com/21st/feature/1998/05/cov_21feature.html], online commentary, describes Fry's: "You notice the most obvious element of the Fry's formula before you even enter the store: Each outlet is decorated according to a unique theme. While other Fry's stores are designed

to look like a Mayan temple, a Wild Western saloon or a UFO crash site, in Sunnyvale the standard superstore frontage is interrupted by a portico with a giant metallic "pulse" tracking across it. The theme here, it turns out, is "The History of Electronics and of Silicon Valley." Their customer service is also realistically described in the review: "According to many customers and observers who fault Fry's staffing practices and service standards, the store's "pile 'em high, sell 'em low" formula has a third element: "Treat 'em rough." So Buyer beware!

I have done business with them in the early days, when few retail outlets sold computer hardware, and never had a problem, but their stores must be seen, to be believed! Their connection with Outpost gives them a web presence, which had been lacking. The site does not mention the Fry's store locations at all.

Bob Ward noted that he visits the different locations for separate sales events, and that the Bay Area stores are cheaper than the LA outlets.

Someone spoke up, asking about the Internet Tutorials listed on Alan's Topical Hot List, which outlines all the sites he has picked for discussion in our " Early Meeting FAQ " session. It is located at the University of Albany Library, and prepared by Laura Fowler. The Guides cover most of the basics of Web Life: "A Basic Guide to the Internet, How to Connect to the Internet, Understanding the World Wide Web, Checklist of Internet

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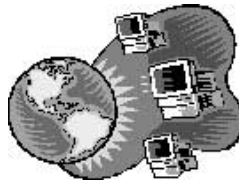
* * * people helping people * * *

NAME	PROGRAM(S)	PHONE NO.	HOURS TO CALL
Bill Roch	Ami Pro	466-8440	anytime
Marvin Baxendale	MS Access	481-8392	evenings
Jim Kiraly	Win 98, Office 97, Quicken, Map Programs	556-0301(pismo)	anytime
Bob Ward	Win 98, DOS, Internet, Eudora	528-0121	evenings
Ray Miklas	Any PC hardware or software questions	541-5633	anytime

We could use more volunteers here. If interested, contact Bob Ward!

The Surf Board

by Dorothy Kirk
ibm/pcug, redding, ca.
kirk@snowcrest.net



Where to go and what to do in winter. Well, of course, there are many things to do: skiing, snowboarding, shopping (always!), visiting museums and galleries, organizing your computer files, organizing you closet, etc. The sites this month feature California trails that may be hiked in winter and, if you are not a walker, interesting and beautiful drives, many of them in Northern California. Most of the sites below may be found at the huge GORP travel site www.gorp.com/gorp/location/ca/ca.htm. Peruse at your leisure; you will find many places and things about California that you never knew. If you can only enjoy California from your home then be sure to look at California Cyber hikes. If you like or would like to try pier fishing this winter there is one site about this subject. Many trails and drives are sparsely populated in winter. Get weather reports ahead of time and dress warmly. ENJOY!

CALIFORNIA COASTAL TRAIL www.gorp.com/gorp/location/ca/coast_tr.htm - Is the CCT finished from Oregon to Mexico? Find out at this site. Walking on the coast in winter may not be everyone's cup of tea, but short sections may be worth the hike.

HIKING THE LOST COAST TRAIL FROM THE MOUTH OF THE MATTOLE RIVER www.gorp.com/gorp/location/ca/coast_tr.htm - A beautiful day trip winter hike if the weather permits. Plan ahead.

CALIFORNIA GUIDE: DEATH VALLEY www.americansouthwest.net/california/death_valley/national_park.html - If you have never visited Death Valley now is the time to do so. An unforgettable experience.

GOLDEN GATE NATIONAL RECREATION AREA www.gorp.com/gorp/resource/us_nra/ca_gold.htm - Golden Gate NRA is actually a complex that includes Fort Point National Historic Site, Muir Woods National Monument, Alcatraz Island, and the Presidio of San Francisco. If you are visiting the San Francisco area, plan to see one of these sites.

PIER FISHING IN CALIFORNIA www.pierfishing.com/ - An introduction to pier fishing. Reviews a pier of the month and the fish of the month. Check if permit/license is needed.

CALIFORNIA CYBERHIKES www.cyberhikes.com/ - This site is an EXCELLENT resource for hiking trails in California, many you have probably never heard of. Most are weekend hikes. Each trail is represented by a map of the area and then a trail map with places that you can click to see what it looks like, thus, you may review before you go. Since mileage and difficulty are often included you may plan ahead for a long or short hike.

SCENIC DRIVES IN NORTHERN CALIFORNIA www.shastacascade.org/forest/nfsdr.htm - See a selection of scenic drives, most of which you may drive in winter. The Feather River Drive looked like a beautiful drive, but check the snow reports first. Or take the North Coast Heritage drive near the coast - a 7-hour drive.

SCENIC BYWAYS AND OTHER RECREATIONAL DRIVES CALIFORNIA www.gorp.com/gorp/activity/byway/ca.htm - Look through this group of interested drives. Not all of them are suitable for winter unless you are well prepared for snowy, icy roads. Try the Smith River Scenic Byway, 33 miles, or the Point Reyes National Seashore Drive.

TWO NORTH COAST DRIVES www.fodors.com/features/si/rg/index.cfm?drive=ca - These drives may be long, but you can drive them in winter: From San Francisco to Redwood National Park and Mendocino. [If you are in Mendocino there are a couple of art galleries that feature excitingly original art, furniture, and jewelry.]

Hard Facts

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Before I explain the fundamentals of HDs, you should be aware that most computer manufacturers use inexpensive models of both these critical parts. When it comes time to upgrade your HD or select your new computer, make sure you consider these facts. In this article I will explain how to interpret the most common HD specifications.

Just the facts, please

Because this article is intended for home consumers, I will forgo any dialogue relating to SCSI and RAID technologies, and focus on the ubiquitous internal 3.5-inch ATA EIDE hard drives (a hard drive is also known as a hard disk). The two acronyms you will hear most are ATA (Advanced Technology Attachment) and EIDE (Enhanced Integrated Drive Electronics). Don't be confused if you also see Ultra ATA or Ultra DMA (Direct Memory Access) because they all essentially refer to the same thing: ATA EIDE interface. And guess what? All that mumbo jumbo refers to is the rate of the hard drive interface and connection speed.

Today, the most prevalent EIDE drives are the ATA/66 and ATA/100. The numbers mean that an ATA/66 drive's maximum rated speed is 66 MBps. Don't get hung up on these numbers considering the real world performance difference between ATA/66 and ATA/100 is very negligible. By the way, the next generation in the ATA interface (we may see this by next year) is what's called Serial ATA. Serial ATA uses only two wires, to and from the hard drive at 1.5 Gbps. This will be a vast step forward, as 1.5 Gbps is significantly faster than ATA/100! One last thing to note about ATA EIDE hard drives is that if your Mother Board/Controller is not rated at the same speed as the hard drive (ATA/100 for example), it will not take of advantage of the hard drive's peak rate anyway.

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Research Tips, Conducting Research on the Internet, Evaluating Internet Resources, Search Engines, Subject Directories & the Deep Web, Second Generation Searching on the Web, Browsers, Lynx, and Software Training, such as 'A quick guide on saving Web graphics for your own use', and /or 'How to Use WS_FTP' " See <http://library.albany.edu/internet> for details. Similar material is available in the Usenet Archives on Google, containing 20 years of News postings up to present day, for thousands of topical newsgroups: http://www.google.com/googlegroups/archive_announce_20.html. Google consists of more than 10,000 Linux servers in several locations all over the country!

Queries regarding disconnects from Earthlink / One Main / X-TheGrid came from a concerned member. Alan reported he does loose a connection after 20-30 minutes of inactivity on their ISP lines. Another question about Zone Alarm intruder attacks, noted that the level settings of that program may be responding to spyware or cookies, such as Real Networks, or Real Player. That user noted that opening Outlook Express email seemed to trigger the attacks, so Alan suggested copying the Internet address locations from the Attack Log to a browser, to see their source. Also check with Steve Gibson's site, <http://www.grc.com>, for material on how check for spyware and protecting your computer from intrusions while on the Web.

Another person asked how we could get the information on our screen so quickly. I suggested looking at the "tracert" for a easy site, so Alan tried the command: "tracert google.com" from the Start / Run button. We saw a list and times for a round trip, hop-by-hop, x-ray tour of that connection. SLONET was the first item, with CallAmerica next, followed by several strange nodes in distant places.

I asked a question about the Boot Sector Virus, "B1". Alan said he had cleaned one like that, on a system recently, using the DOS command, "fdisk/mbr" to rewrite the boot sector. This prompted an inquiry as to who might not have an anti-virus program on their system, and only one member spoke out. There are two new programs mentioned on the Hot List, which seem promising: AVG at: http://www.grisoft.com/html/us_index.htm, and Virus Catcher at <http://www.vcatch.com>.

InoculateIT Personal Edition [<http://www.cai.com/antivirus/personal>] is still the club favorite, at \$19.95. It is common practice to only run one of these programs on any single machine, so be careful, and do not run multiple anti-virus programs on a system. Also daily updates are available on most programs, because so many viruses and worms seem to be appearing lately. Access to the update files is an important factor in selecting which program to use, and the larger sites may actually be slower to provide that support. Using Linux, or operating systems other than Windows, may be one way to avoid infections, for more advanced users.

At 2:00 PM, it was Cookie Time, our half-hour of Social Club, in the break room, arranged by Nancy Vrooman, with tea and coffee to perk us up for the Main Meeting at 2:30. Our guest speakers were local Web businessmen, who also host the monthly SLOLUG Linux group meetings at SLO Recreation Hall: Brent Gentner [bgentner@slolug.org], and Mike Pecan [mpecen@slolug.org]. Their company, TrueLink, Inc. [<http://www.truelink.com>], provides financial services over the Web, which allow a credit report to be obtained by a lender to create a score that reflects a borrower's credit worthiness.

The three major credit agencies are: Equifax, (1-800-685-1111), Experian (formerly TRW), (1-888-EXPERIAN (397-3742)), and Trans Union, (1-800-916-8800). All 3 Consumer Reporting Agencies (CRA) offer free credit reports upon request of an individual, according to the Federal Trade Commission and the Fair Credit Reporting Act, as amended, Public Law 107-56 (October 26, 2001).

[www.ftc.gov/os/statutes/fcraump.htm] .

TrueLink offers a 3-in-1 Credit Report available online for \$34.95 with Credit Score and/or Borrowing Power Analysis for \$4.95 each, additional cost, as listed on their website, www.truecredit.com. They also offer a basic online, single agency Consumer Credit Report for \$9.95 plus the optional Credit Score and/or Borrowing Power Analysis for \$4.95 each. Also available is a \$39.95 Credit Monitoring Service, an annual membership, with weekly alerts to credit report changes, and free Credit Report, Credit Score, and Borrowing Power Analysis included. It provides on-going monitoring of credit accounts to guard against inaccuracies and fraud. TrueLink compares their product to Quicken, which allows a consumer to manage their finances. Truecredit.com allows a consumer to manage their credit in a similar way.

Mike noted that TrueLink has developed an online credit reporting service for Home Equity Loans with CityBank, and that Rent.com also uses their services, when a person is looking for an apartment in SLO, for example. Beginning 1995, they pioneered in the electronic delivery of consumer credit information, beginning in a Mortgage Brokerage House, in Irvine, California., called Mortgage Logic. Two operations in that company separated to create two companies, and TrueLink was born. The consumer web site was in place by 1998, authorized by the credit bureau to

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provide online services to consumers.

A typical report was reviewed and explained, noting account histories, and debt-to-income ratio, and FICO reporting score. The credit-monitoring tool was also shown, to help keep tabs on a dynamic credit situation.

TrueLink also co-brands about 30 other sites, to look like someone else's site, but with TrueLink's functionality.

Mike explained his job as a multi-tasking operation to provide customer support, and interface between projects at several levels, including quality assurance and daily operations. Listening to customer's requests through Marketing, and communicating with Engineers in development cycles, are common events in his working day. Another group does the deployment of new online products, and they give feedback to the developers. Testing completes the cycle, which takes it back to the beginning phase.. Most of the work is done in HTML, the language of the web. A new way of doing web pages is called XML, which organizes the information more easily.

TrueLink operates with Linux as the system platform of choice, to allow stable, expandable computing, which can be networked. Because Linux is like Unix, where the design does not assume a trusted user, security issues are also handled better through a system of permissions, unlike Windows products.

The meeting closed with a Quick'n'Pic Raffle to reward the Die-Hards who stayed to the bitter end.

We gave away five free credit reports, leftover cleanup items, and donations from Celina Penalba

We had approximately 50 members at the meeting. The next meeting will be February 3rd, when we will have the Windows SIG in the break area, with my help, and the FAQ SIG in the Main Hall. Our featured speaker will be George Lepp, field editor for Outdoor

Photographer magazine and PCPhoto magazine.

He will discuss digital imaging and where it's headed, for both the consumer and the professional photographer. He will also talk about photo illustrations vs. representational photography. See Ya There !

Officer's BIO...

Last but not least, Bob Ward

Well, I've put it off long enough. There was always hope that the officer platform would change in January and I wouldn't have to write my own "officer bio", but who's kidding who?

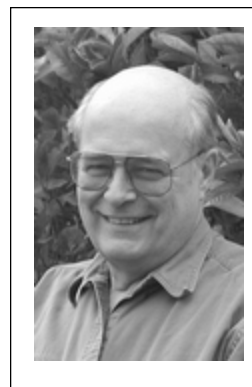
I'll spare you the details of where I was born, the fact that I lived on a street directly across from the LA river before they cemented it in and felt like Tom Sawyer in my childhood days catching crayfish and hunting for lost treasure.

My computing experience started with CPM. If Microsoft hadn't come to my rescue with DOS, I probably would have become disinterested very quickly diverting my interests to soap making or basket weaving. But let's back up a minute...

Working at Cal Poly there was an alternative to Microsoft. The mainframe was using BASICA language among others such as Cobalt, etc. I became interested out of necessity. Working in the Biology Department as their one and only Microbiology Technician I had a real need to develop a program for media inventory. At any one time we have about 100 different types of bacterial media (food for the critters to grow on) in our walk-in refrigerator. I was looking for a program where I could plug in the number of students taking a specific Micro course, all the types and number of tubes of media for each student for the quarter; then a conversion factor that would tell me how many liters of each media I would need to make for the quarter. It was laborious, it was a BIG program, but it worked. Since I was using a terminal with a monochrome monitor, there was no mice, graphics or anything else fun and enjoyable to see. Just lines and lines of BASICA code. The terminals had no floppy drives, although one's work could be saved to the mainframe. As an additional backup I would walk down to the computer department with my 180K, 8" floppy disk to make a backup of my work. It took 10 to 15 minutes to backup a 60K program to my modified Frisbee. The only other program I spent time developing was a banner program, where I could print out banners of text with some graphics on 8 1/2" X 14" fanfold paper on a dot matrix printer. I had to create each of the letters as a large ASCII graphic then develop a program where by the message I typed into the computer would print out the letters and graphics I developed. Wow, it was slow and I had my WD40 handy to "re-ink" my ribbons often.

My first computer was purchased from a good friend of mine, Jim McLaughlin. During the first Comdex... maybe it was my second... Jim came along, although at the time he hadn't been converted to PC's and was still messing around with the

**Win a copy of Windows XP Professional.
Purchase your raffle tickets at the meeting.
Drawing will be March 3rd. Winner need not be present to win.**



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Officer's Bio

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MAC. This was a very popular machine at Cal Poly at the time since Apple practically gave them away to the university to gain a foothold in the personal computer market. Although Mac's are still present in many departments, PC's are definitely the most popular machine on campus. Ahhhhhh, I'm rambling. Anyway, Jim and I dropped several business cards in the goldfish bowls dotting the fronts of many booths at Comdex. A few days after we returned from Comdex, Jim got a call saying he had won an IBM-XT computer. It had 8K or 16K of DRAM memory, a floppy drive, and monochrome monitor. Jim sold me the computer at a good price, as the "MAC" man had no use for it. (Either would I in this day and age). It came DOS 2.1 and a BIOS setup disk. You could not use the computer until you installed the setup disk and accessed the BIOS chip. Of course it didn't have a hard disk. I purchased a 20 MEG full height hard disk that weighed more than the rest of the computer. The price was \$499! If only I had taken that money and bought Microsoft stock :-{

Soon after my purchase of a personal computer I was started looking for a local User Group. Every month PC-Magazine would list user groups in about 6-10 states (no internet folks). It took me about 3 copies before California came up and SLO Bytes was listed. This was around late 1985. Rick Racoulette, a local attorney, and Byron Smith who was full time National Guard and Camp San Luis pretty much ran the show. They, along with Ray Miklas are the only people I still know associated with the beginning of SLO Bytes. The meetings were held in the vending machine room at Camp San Luis. After the first meeting, I approached Byron and told him I thought we could do better at Cal Poly. In those days they didn't have an administrator for everything, so it was just a matter of contacting my department head and asking for an empty lab where we could hold our

meetings. The lab had 24 chairs in front of benches. We hooked up a couple large monitors in the front of the room for our demonstrations and had a computer available in the back of the room where people copy floppy disks (360K to start with) from our shareware library. I ran the shareware library, taking the programs received mostly from solicitations through our club or buying the shareware disks outright. I was already up to a 6 page newsletter, printed on a dot matrix printer in condensed mode, cut and pasted into columns over a light table. I still have some of those past-ups if anyone would like to see them at one of the meetings.

It was at this time that George Campbell came into the picture. One meeting, here this "hippie" fellow shows up with a giant beard and sandals. Ohhhhh my gosh! Come to find that under that beard was a guy who was a real quick study in computers, was soon to be a columnist for PC World and started our first bulletin board. He also wrote some very popular shareware, some of which I still use today. He became our president for many years, met his lovely wife, Kathy during one of the Comdex meetings... and if you've been around long enough, know the contributions that George has made to SLO Bytes. Our Bulletin Board was struck by lightning one night at Georges house along with everything plugged into his electrical outlets. All his computers were damaged. Soon afterward, George became very busy with his column, other review articles and his shareware business. We moved the BBS over to my house where it resided for several years before the Internet made bulletin boards pretty much meaningless.

The club grew quickly, peaking at 325 members about 5 years ago. We moved into a Cal Poly lecture room in Fisher Science and set up our shareware library, now numbering over 500 disks, in the adjacent museum with about 6 to 8 computers where people could copy shareware. George

wrote me a nice interface for indexing the programs so a person could enter in any keyword and come up with a list of shareware programs in our library for copying. There was no cost to members. We supplemented our club income by selling blank floppies cheap (we would buy them in bulk).

We stayed at Cal Poly until about 3 years ago when we were financially forced to move, as part of Poly's new community relations. We were paying \$55 a month for a room without heat and dirty floors left by other clubs that met before us. But it was handy as all of our computers were stored in the building and on carts for easy access. When they said our rent would be raised to almost \$300 a meeting, we moved. The fact that a long established community organization was being forced to move even made the newspaper, but to no avail. We were fortunate to find a time slot at the IOOF hall where we've been ever since. Back to my involvement with computers.

My first printer was an Epson wide carriage printer for which I also paid some outlandish price. I was satisfied for the time being with my DOS programs, PC-File and PC-Write, both of which I still occasionally use today. They are still faster than Windows programs although not as sophisticated... daaaaa. I also developed a liking for EDLIN, DOS's line editor, mostly out of necessity. I was everyone's friend who bought a new PC with DOS, but discovered that creating AUTOEXEC.BAT and CONFIG.SYS files for them was easiest using something that everyone had on their computer, mainly EDLIN. I even gave a demo of EDLIN at one of the SLO Bytes meetings years ago and opened some eyes as to what that little program sitting on their hard disk could do. Hey anyone who worked with CPM could certainly learn EDLIN. Email on Poly's mainframe was also text oriented and one had to remember all the "shift" codes to get your email or send something to someone.

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Officer's Bio

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I could hardly wait for Windows 1.0 to hit the streets. I bought my copy, loaded it, and found that the only thing of value was the clock. There wasn't much software written for it, DOS still prevailed and was probably up to version 3.1 at the time. So it sat on my computer for many months until the next version was developed. Over time, Windows became my OS of choice, although you'll still find me dropping to DOS for the quick and dirty tasks. I can still type faster than I can reach for the mouse and move the pointer. My motto has always been not to go out and buy the newest Windows operating system or the latest version of software. There have been many times I've upgraded just to find the new version has become so sophisticated that it's hardly useable. I always tell people, if the software you are using has all the things you would possibly use, then don't upgrade. Why pay money for icons you'll never click on.

I have built several computers for others, and myself buying parts from Fry's Electronics in the SF Bay area and Miracle Computers in San Jose. I haven't put a computer together from scratch for several years now. It's not cost effective. You can buy one ready to roll for less than I can now buy the parts. I still enjoy helping others with basic problems, but do not keep up with the latest in operating systems and software anymore. I leave that one to my friend Alan.

I do hope to retire from SLO Bytes sometime soon though. After spending about 13 to 14 of the last 17 years writing a newsletter every month, even Bob gets tired. Most of my time is spent Net surfing (never tried it with real waves), writing a software review now and then, and shopping on ebay. I think I'll spend my next 50 years fishing.



Connecting Your PC to Your Stereo

by Bruce Fries

author of The MP3 and Internet Audio Handbook.

If you've taken the time to put your music collection on your computer, you'll probably want to listen to it through a good stereo system. Even if your stereo isn't in the same room as your computer, there are several options for connecting the two, including direct analog cabling, USB Audio devices, wireless audio transmitters, and network audio receivers.

The most basic concept of connecting audio equipment is that inputs must always be connected to outputs. Sometimes you will still get sound if you mistakenly connect a sound card output to an output of a stereo receiver. When in doubt, connect the sound card output to the CD jack on your stereo—it's always an input.

Connect high-level (also called line-level) outputs to high-level inputs, and connect low-level outputs (such as a microphone) to low-level (Mic) inputs. Do not use the receiver's phono input jack because this is designed for a very low-level signal and has a special equalization circuit. Avoid using the sound card's headphone or microphone jack to connect to other equipment unless you have no other choice.

Most consumer sound cards have 1/8" mini phone jacks. A mono jack is used for the microphone input, and stereo jacks are used for the line-in, line-out and headphone. Better sound cards may have separate RCA jacks for the left and right channels. These are the same kind of jacks found on most home stereo systems. High-end sound cards may also have connectors for digital inputs and outputs. The simplest connection between a computer and a stereo system is to run a cable directly from the sound card's line output to a line input of your stereo. To record from your stereo system to your computer, connect a cable from a line-out (or record) jack on your receiver to the line-in jack on your sound card.

If your sound card's line output is an 1/8" stereo mini-phone jack, you'll need an adapter cable (male 1/8" stereo mini-phone to dual male RCA). These cables can be purchased from most consumer electronics stores, such as Radio Shack, Best Buy and Fry's Electronics. USB audio devices perform the basic functions of a sound card, but outside of the PC, and are less likely to pick up noise from the PC's electronics. USB audio devices can be used for both recording and playback and are a good solution for notebook computer users who want higher quality sound.

The Roland UA-30 (www.edirol.com) is a flexible USB audio device that supports both Macs and PCs. The UA-30 works great and includes just about every type of input and output connector you might possibly need. Wireless audio devices can transmit a stereo audio signal up to 300 feet. These devices typically include a transmitter and a receiver with standard RCA line-level input and output jacks. Wireless audio devices provide more flexibility than hard cabled connections, but are much more prone to interference compared to other types of connections. The MP3 Anywhere Digital Audio Sender by X10 (www.X10.com) is a good wireless audio device for most users. It sells for under \$100 and uses the 2.4 GHz spectrum to reduce interference and provide a high quality connection. The MP3 Anywhere also includes a remote control and software, which allow you to control most popular player programs. The ideal way to transmit audio from your PC throughout your house is by streaming the audio from your PC via a network. A network audio connection eliminates the loss of high frequencies, interference and hum typical of analog cable and wireless connections.

CONTINUED ON PAGE 8

Stereo

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The Rio Receiver (www.riohome.com) is a very capable network audio device that allows you to access individual songs and playlists from your PC anywhere you have a telephone or network jack. The Rio has an LCD interface that displays song title, artist name and other information, and also includes a remote control.

Whatever your choice of PC to stereo connection, you will be able to use your computer as a digital jukebox and take full advantage of the latest digital music technologies to play high-quality music anywhere in your house.

For more information on connecting your PC to your stereo, pick up a copy of The MP3 and Internet Audio Handbook (\$19.95) from www.TeamComBooks.com or read it online for free at www.MP3Handbook.com.

Bruce Fries is a writer, technology consultant and entrepreneur who lives in Silver Spring, Maryland. He is an associate of the Audio Engineering Society and the founder of TeamCom Books, a customer-focused publishing company that combines the best of traditional print publishing with new media, such as e-books and the Internet.

This article is brought to you by the Editorial Committee of the Association of Personal Computer User Groups (APCUG), an International organization to which this user group October, 2001

THIS MONTH...

George Lepp, field editor of *Outdoor Photographer* magazine and *PCPhoto* magazine will speak about digital imaging and where it's headed for both the consumer and the professional photographer. He will have a number of inkjet prints to demonstrate the state of the art of digital photo printing and why he thinks that photographers are finally taking back the second half of photography. The second half being the final presentation of ones work.

Mr. Lepp will also discuss the ramifications of being able to easily alter any image in your computer and then having them published. This is called photo illustrations vs. representational photography.

Hard Facts

continued from page 3

Performance does matter when it comes to the platter

The platter is a rigid disk inside the hard drive that is covered with magnetic material that stores your data. Depending on the capacity, there may be several platters in your HD. A key specification that tells you about the drive's performance quality is what's known as "rotational speed". Rotational speed (also called spindle speed) is measured in rpm's (revolutions per minute), thus the 5,400 or 7,200 rpm specification you read about. Normally, the higher the rpm's the better the performance. It's generally accepted that a 7,200 rpm drive outperforms a 5,400 rpm drive by 33% because of its ability to read and transfer data more quickly.

The next specification to determine a drive's performance is the "Cache Buffer". Cache Buffer, more commonly just called cache, can be thought of as the HD's temporary RAM storage. The

cache of a HD plays a very important role; hence the larger the cache's buffer the better. A 2 MB cache buffer would be considered very adequate for a home PC. The final indicator of a HD's performance is called "Seek Time". In short, the seek time is how long it takes the hard drive to find a particular track on the disk. Seek time is measured in ms (milliseconds) and on average is 7 to 13 ms with the lower numbers being preferred.

One last tidbit if you read anything about a drive's "shock tolerance" it will be measured in G's. This may sound crude, but this measurement relates to how hard a wallop it will take before the drive suffers damage. The average is about 200 to 300 G's. Installing a replacement Seagate drive about a

year ago, my German Shepherd couldn't resist the anti-static bag the drive was in, proudly running around while chomping down on the drive.

After installing the drive and rebooting, nothing happened, but I digress.

The last two points to consider are related to the HD's reliability, the manufacturer's warranty and MTBF (Mean Time Between Failure). The MTBF is usually listed in hours and indicates the

manufacturer's expected life span of the HD. A nicely performing HD by today's standards would be an ATA/100, 7200 rpm, 2 MB cache, 40 Gig, 8.5 ms seek time, and offer a 3-year warranty. I personally prefer the IBM Deskstar GXP and Seagate Barracuda models. Happy Driving...um, make that Hard Driving!



club information

HARD COPY 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. Full membership entitles you to our monthly newsletter, full use of the public domain software library software drawing at the end of the meetings.

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.

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BOB WARD, SECRETARY
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meeting times

GENERAL MEETINGS are held the 1st Sunday of each month. Our meeting location is the San Luis Obispo I.O.O.F. Hall on Dana Street.

The general meeting starts promptly at 2:30 p.m.

Special Interest Groups (SIGS) meet at 1:00 p.m.–2:15 p.m.

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WWW.SLOBYTES.ORG

slobytes officers

R. Miklas (Pres) rmiklas@bigfoot.com
G. Kuncir (V.P.) gkuncir@bigfoot.com
B. Ward (Sec.) slobytes@surfari.net
M. Baxendale (Tres) marvin@surfari.net
B. Ward, editor
slobytes@surfari.net

for sale

Do YOU have some computer-related item you would like listed in this space? Contact Bob Ward, Editor at 756-2164.

treasurer's report



January 13, 2002

OPERATING FUND

Beginning Balance	\$2567.47
Income	
Membership Dues	100.00
Refreshments	20.50
Dividends	10.16
Expenses	
Room Rent	75.00
Newsletter Copying	64.74
Refreshments (3 mo.)	60.94
New Balance	<u>\$2,497.45</u>

SAVINGS ACCOUNT

Beginning Balance	\$154.20
Dividends	.87
Software Sale	6.00
Balance	<u>\$161.07</u>



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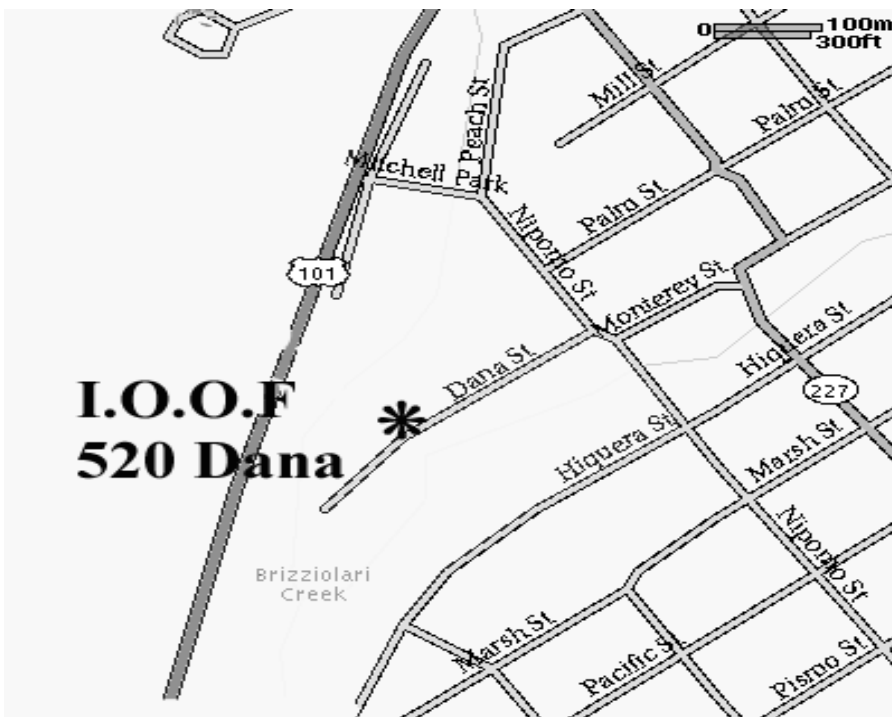
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Next Meeting
Sunday
February 3rd

1:00pm
Early SIGS
2:30pm
Geo. Lepp
Local Professional
Photographer