SacraBlue®

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SPCUG Reports

Columns

Feature Articles

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The Meeting Report

These are the highlights of the speaker portion of last month's meeting.

Resumes and Palms

By Brian Smither

September's general meeting featured Erez Carmel, Vice-President of Marketing at Winway, showing Winway Resume Deluxe, a multimedia product designed to impress human resource departments, get you that all-important interview, and show you how to successfully present yourself at that interview.

In 1992, when the company finished developing the product and was looking for somebody to buy it, the first place they went was to the SPCUG's Davis chapter, and they used the Davis chapter as beta testers for the software.

"They were very helpful and helped us validate we had a good product," Carmel said. The work with Davis took place in early 1992. Later in the year, Winway could not afford to exhibit at Comdex, so Carmel spent the show putting fliers on the cars in the parking lot. "Apparently, that worked because we soon started getting orders," he noted.

"Selling resume software is really different than selling other kinds of software. One time we went to Comdex when we had a booth and two people came to our booth: one's badge said he was the president of the company, and the other wore a vice-president badge. The president took our software and gave it to the vice-president and said, 'You need this.'

"We also get tips about mergers and acquisitions." Usually people who buy the Winway products are individuals, but they sometimes receive orders for 20 or 30 copies from a company's headquarters, and the next day hear on the news that the company was acquired or merged.

Winway initially tried to sell software at Egghead, then the leading retail software chain. Although there was resume software for DOS, Egghead maintained there was no need for Windows resume software because Windows was so easy to use.

"It took us about two years to convince Egghead to stock our WinWay resume software," Carmel said. "But now, obviously, people like resume programs and that's keeping us afloat. WinWay is our primary product and we sell lots and lots of them and we help many people find a job."

Although other companies make resume software, Winway's biggest competitor is Microsoft Word, Carmel commented. "Most people don't use resume software to write a resume. They use a word processor because that's what they have and they don't realize the benefits of using a resume program as compared to a word processor."

Erez Carmel shows Winway Resume

Although resumes can be prepared with a word processor, Carmel said, the user must create both the content and the format. Winway, on the other hand, helps with both. It is very useful with formatting, but does even more to help with the content.

Winway comes with numerous samples, which can be used as is or adapted. Carmel looked for a resume format for a nurse. "Here you see all kinds of different nurses that we already have a resume for—head nurse, floor nurse, office nurse, midwife, nursing assistant—and for each one of these there is already a resume available with everything this person does. We have over 12,000 resumes built into the product."

"If I look for a job as a teacher, here are different teacher's resumes—art teacher, music teacher. If I enter "tree"— tree cutter, tree pruner, tree planter, tree surgeon. You can find everything in here. If you're looking for a resume for a magician, we have one."

Continuing with a teacher's resume, he went on, "Let's further explore. Continue using this resume by adding your name and address, choosing a particular style from a list, and realize this is not something you can do in a word processor. The word processor may have a sample resume, but you will not be able to manipulate it as well as you can in our program.

"When you actually write the resume, there are fields available for the name of the employer, the location, and other pertinent data. We even have this feature called AutoWriter, which allows you to combine content from different resumes. If you remember, we chose a resume for a teacher but I can choose the resume of a preschool teacher, and I can take phrases from that resume and add them to this resume that I am writing. So, I have a full resume for a teacher that I have created and I have not typed anything other than the name into the resume. Everything else is already provided in the product."

Of course, a resume also needs a cover letter to go with it. Winway includes cover letters, too.

"Here are different kinds of letters that we can write. There are talking letters called 'Call Office,' 'Offer Acceptance,' and 'Ad response.' And then we have 'opening body,' 'closing,' so you can just choose phrases from the selection and put them in the letter. So again, I am writing a cover letter to go with the resume and I'm not really typing anything. I'm just choosing predefined text."

Once the parts of the resume have been selected, there are many areas to fill in to make it specific to you. "Some of the phrases describe what the person does. But some of them have fields that you can fill, for example, 'chosen as the such-and-such' or 'created and implemented this thing and that.'

"We allow you to customize the resume. We take care of all the grunt work. We put in everything that, say, a teacher or a tree trimmer does, but we also give you a lot of opportunity to highlight your own accomplishments. You must admit, this is a lot easier than staring at a blank screen of a word processor."

Carmel also demonstrated the various resume styles available. "The styles are actually very useful because some people have a re-

sume that is very short and they are trying to fill space so they won't put their name in a very large font that takes about five lines. On the other hand, if you are limited in space you can put your name in small letters using only one line. Our product also has a nice feature that will fit a resume to one page. It will do everything it can to tighten the resume to fit one page."

The program also contains a contact manager to track all the companies you are applying to. Letters can be merged with the contacts "and this is by far the easiest mail merge you can use. Many people use our product simply to mail merge because it is so easy."

"We even give you an opportunity to fill in blanks on your envelope," Carmel said. "These blanks include 'ATTN' lines and custom lines that may say things like 'Experienced Engineer' or even pictures of recognized certification emblems. So these envelopes go immediately into a priority stack."

Carmel also stated that most people think a resume should be designed to get the job.

"But that is not really true. The resume only gets you an interview. While we can help you fake a resume, and we can write the resume for you, we cannot fake an interview. For an interview, you have to prepare and present yourself. You have to impress the interviewer.

"So Winway includes interview simulations that prepare you for over 200 of the most common interview questions. Each answer can be modified slightly for a custom response based on the situation. Each answer has hints as to what the interviewer is actually asking for and the focus of what your response should be."

Even without using most of the program, just watching the three hours plus of interview simulations would enhance your chances of getting the job. Winway hired quite a few professional writers and used government reference materials to create the job materials.

The program also covers salary negotiations. "We have included many scenarios that will help you during this phase of your employment application. We explain how to address this scenario and how best to toss the ball back into the interviewer's hands with respect to actual numbers."

You can also use Winway to connect to the Internet and search for jobs. It searches about 20 sites for jobs that correspond to keywords you enter. You can also post your resume to those sites using Winway.

Winway Resume can be downloaded from their Web site. Although there is no demo version, there is a money-back guarantee. The product sells for $39.95.

Palm Essentials

The evening's other speaker was Tom Waters discussing Palm PDA devices.

He began by asking how many Pocket PC users are in the audience. Those that raised their hands were then asked to leave. ("Just joking," he says.) His presentation is about the Palm but admits that, in all likelihood, the Pocket PC does represent the future. But for the present and the immediate foreseeable future, the Palm is the device that offers the most in stability and functionality in a handheld device.

"Just for the record, if you do have a Pocket PC device, then you already know you are the beneficiary of some mighty fine resolution—there are some multimedia implications in a Pocket PC that don't really exist as a practical matter in a Palm. The resolution on a Pocket PC screen is double that of a Palm, so if you're sharing photographs, it's a lot more fun. To that, I say, 'Sony Clié.' The multimedia concept, and the high-resolution screen, and the fact that you can listen to MP3s and watch videos on your Palm, and a number of other things that might well indicate that you have missed the handheld boat—that can all happen on a Sony and you still benefit from the Palm OS.

Waters said he prefers the Palm OS to the Pocket PC because of the multitude of programs available for it. He cares less about the multimedia on a Pocket PC and more for the Palm benefits.

"Palm users no doubt realize that they can beam addresses, business cards, and other snippets of information to other Palm users and newer Pocket PC users and back. Like many things that are Palm-related, the way that you beam an address is that you get 'on' an address. You have to click on a particular record (tap on it) that you want to beam and then you tap the menu, then tap the option you want to do. That's pretty much how you do everything on a Palm.

"There are a couple of advantages to making a particular address record a 'business card.' Typically it's your own address. Regardless of what record you are actually viewing, beaming the business card will always beam that pre-selected address. Even better than that, you don't even have to go into a

menu. In fact, you can have the Palm turned off. Pressing and holding the 'Phone' button for about a second and a half automatically beams the business card record."

Benefits of SilkyBoard

"One of the big subjects I want to talk about is SilkyBoard. SilkyBoard, among other things, replaces Graffiti. Regardless how proficient one becomes at Graffiti, SilkyBoard users will always be twice as fast. The SilkyBoard is a durable plastic overlay that covers the Graffiti area of the display (but does not prevent one from using Graffiti). There is a corresponding suite of utilities and drivers that correlate the tap positions of the display to the diagrams on the overlay. It really works well and is a nice solution.

"Eliminating Graffiti isn't the only objective here. It also gives you macros on a Palm. For example, slide the stylus along the width of the space-bar (a space-slide), then choose 'E' for e-mail. (I happen to have a Bluetooth card installed on my Palm, and I have a Bluetooth-enabled phone, which is connected to my Bluetooth-enabled headset. I can dial the phone with my Palm and instead of going to my phone, I can tap the little button on my Bluetooth headset and carry on a conversation.)

"In this case, I chose 'E' for e-mail, which dials up on the phone's GPRS to the Internet and makes the connection for me. It then pulls down my e-mail and logs off for me. In one stroke, it's all done. The point here is that SilkyBoard allows me to do this in one stroke.

"It's also a launcher. I use AvantGo a lot so if I do space-slide-A, it brings me right into that service. AvantGo is a great way to synchronize information and content into your Palm. Go to AvantGo's site and sign up for a free account. Indicate what subjects you are interested in, what Web sites you want to pull down, and every time you hotsync when connected to the Internet, it goes out and gets those pages. You can browse those pages using just your thumb. Hint: Go into the menu and from Options, choose 'Enable hard keys.' What that will do is make the first button the 'Back' key and the second button the "Forward" key. Now you can navigate the pages using nothing but your thumb.

With both Pocket PCs and Palms, the synchronization issue is "huge," Waters said.

"If I have a dozen users and they all want to share the same database, that's when I turn to a product like Act! We can have them all sharing the same database in

Act! even though they have separate calendars. They each sync to their individual calendars but they're accessing the community database.

"There is what I call the 'secret keystroke.' It has nothing to do with SilkyBoard, but rather with MagicText. There is a specific, sweeping stylus stroke that brings up a pop-up menu. That pop-up menu does all kinds of things. There's a 'phone lookup' feature—for example, if you are in the Calendar on a certain day (other than today) and you tap 'Contacts,' you would lose your place in the Calendar. Upon re-entering the Calendar, you would be back at today's date. The 'phone lookup' feature lets you access information from anywhere in your Palm. Do the secret keystroke and choose phone lookup, you are taken to your address book where you choose the desired record, and all that information is automatically transferred back to where you were. You can double-tap a last name to highlight it, do the secret keystroke, choose phone lookup, and the record matching that last name is automatically captured and copied to the task at hand.

"I also use Launch 'Em as my program launcher. It makes so many complex issues drag 'n' drop. If I want to delete an application, I drag it to the trashcan and let go. It's gone. If I've got a game that you want, I can drag that game over to the beam tool, let go, and it beams over to you.

"I also have drag 'n' drop icons as a result of Launch 'Em. That means when I tap the Menu button, I have tabs that are organized along the side. They're called Apps, Extras, Games, PQA, System, TOM, and Utilities. They're nicely organized and I organize them with drag 'n' drop. You can take any program and drag it to another tab and drop it and it disappears out of the group that it's in and joins the group you dragged it to.

Useful Hacks

"Does everybody know what a hack is? You can't use a hack unless you have a HackMaster. HackMaster is a free program that either is on your Palm or should be on your Palm, and when you have HackMaster installed, you are free to load and utilize hacks. I'll give you an example of a hack that nobody but a SilkyBoard user would care about. There's this free program called MiddleCaps. For people who are using Graffiti, if you precede any graffiti stroke with an upward motion, that makes the next letter capitalized. With Middle-Caps, the left side of the Graffiti area

makes lower-case letters, the right side is numbers, and right on the line between is all caps. So it saves that upward stroke.

Palm Expert Tom Waters

"I use only one hack regularly: it's called MagicText. It gives me another kind of drag 'n' drop. People who have a Palm know they can't just select text, then drag it somewhere and drop it. And yet, with MagicText enabled, that's exactly what you have. You can double-tap a word, or a sentence, or triple-tap a word to highlight the paragraph, or quadruple-tap a word to highlight the entire field or memo, pull it where you want, and it's moved.

"And of course there is AvantGo. I stay reasonably informed as a direct result of AvantGo. I don't have a subscription to a newspaper. I've got the Sacramento Bee and Wall Street Journal synced into my Palm. These are scaled-down versions of these products, but I notice that after I'm done reading my Palm in the morning, there's nothing new on the radio for me. There's news from MSNBC, Yahoo, and other different sources you can sign up for and it just gets synced into your Palm. You'll never be bored at the doctor's office again.

"Since I'm connected to the Internet on my Palm, I use Blazer to browse. Blazer is much, much faster than AvantGo for browsing. But of course, typically when you're using AvantGo, you're not browsing. You are perusing cached content.

Documents to Go

I think it's kind of ironic that in a world filled with Pocket PCs, that the Palm would so outdo the Pocket PC on the subject of compatibility. As you know, you have Pocket Outlook, Pocket Word, Pocket Excel. If you take a document with any kind of sophisticated formatting at all, and you sync that document to a Pocket PC and

make changes, there's a pretty decent chance you are going to lose some or all of that formatting when you send it back to the PC. If you do exactly the same thing, you sync a document to your Palm that's still in Documents to Go, you make changes to that document and sync it back, it doesn't lose any of that formatting. It's just a remarkably tight interface into Word and Excel, and it also does Powerpoint.

"So, this PowerPoint presentation you're seeing is also on my Palm. Admittedly a little bit useless there. What are you going to do? I suppose you could be on a plane sitting next to somebody and give them a presentation.

"This right here is a Navman. In my car, I plug the adapter into my cigarette lighter, so I don't use up the battery power. When I snap the Palm into it, and plug it into the cigarette lighter, it charges my Palm.

"Have you ever gone to a client's house in a residential neighborhood, and when you're ready to leave you are too embarrassed to go back and say, 'I can't get out of your neighborhood? Can you help me?' Here is my chosen tool: Trip Pilot. I don't use the software that came with my Navman, because it requires me to route myself when I'm at home. This is completely useless for a guy like me who spends a good 30% of his life completely lost. I need to be able to do it in the field. I've got a Bluetooth connection, I've got a wireless connection to the Internet. When I get lost, I look at the nearest address and I punch it in.

"Trip-Pilot also lets me select addresses from the address book in the Palm. Other products allow you to get your routes while you are out in the field. This particular product is the only one that let you select your 'to' and 'from' address from your address book. Which is awesome—just tap your client, tap your other client where you happen to be, and it routes it. And then you have the maps that lead up to that trip in the device, you put it into the GPS system, and it creates an overview route. Using GPS, I can step through each segment in detail.

"Trip Pilot doesn't require GPS but with GPS, I know that your address is coming up in 2000 feet… 1500 feet… 200 feet… oh, there it is! For me, it cuts down on my u-turns.

"Then there is the phone and a variety of ways to work it. This is an Ericsson T39. There is a lot of hype over the T68i product that has a little camera attachment. That same camera will attach to this—but

seriously, a real digital camera that takes real digital camera pictures—only takes up this much room anymore. This is a Minolta DiMage 10. What's great about it is that when you turn it on, it takes less than one second for it to be ready to take the picture. And the picture is stored on a postage stamp-sized SD-RAM module. SD-RAM is the reason I don't own a Sony. I would have a Sony Clié if they would just get off the memory stick thing. They want you to have a memory-stick Clié so you will have to get a Sony laptop that has memory stick support, so that you'll buy your next home stereo with memory stick support, etc.

"If you recall the BetaMax days, Sony created a far superior VCR playback con-cept. It was better sound, it was higher resolution, and you couldn't say enough good things about it. But they were so in-terested in making sure that nobody would steal from them that they cut their nose off to spite their face. "That's not the stan-dard." We just said, "You know what? It is better, but we're Americans and we don't care." And we just went and did our own thing. [Ed. Note: That's not quite how it went down.]

"So I don't know why they make such a fine product you can't use. I had to ship to Ja-pan when I had a Clié to order Bluetooth. Which means I didn't get the Palm software that comes with the Bluetooth, which seam-lessly integrates a dialer that can dial your phone from your Palm. If you are into Blue-tooth at all, the Palm product is really good. But I'm going to take out my Bluetooth, and I'm going to put in my picture, and just inserting the card causes the product that comes with Docu-ments to Go to automatically display any pic-tures. Of course, this would look better on a Sony Clié, but this memory card wouldn't have fit in a Sony Clié Now you have to buy a Sony camera, and you get where I'm going there.

"Regardless of what all can be loaded, added, appended to a Palm device, realize that it's main function, which it does very well still today, is to manage your personal contacts and other information."•

Business Report

By Brian Smither

In Ken Hopkins' absence (he's work-ing on a project in Tennessee), Tom Anderson reported that work on *Sacra Blue* is proceeding, but at a slow rate. He said he hoped the newsletter would be ready for downloading from our Web site by the weekend.

Don Frieze reported that if anyone downloaded our July-August newsletter, it may have had a defective advertisement for HSC. The issue was repaired as soon as we noticed the defect. The ad was for a giant anniversary sale set for September 21st at their Bay area store. HSC is a store that specializes in acquiring and reselling sur-plus electronics. Their selection ranges widely from the near useless to near state-of-the-art technology. Be careful in your selection, as their return policy is rather restrictive.

Q. I do quite a bit of business on the Internet. I am curious, as I think the Inter-net is slowing down. As an example, Ama-zon.com tried free shipping if you bought over $50. Amazon did so well with that, they dropped it to $25. Well, I believe businesses do not do that unless they need to pump sales. So, I believe business is slow. Internet merchants are worried about security where someone uses someone else's credit card. And the customer is al-ways worried about giving up the credit card number. So, Visa has a new secure credit card that they are using on the Inter-net. Has anyone here used that new secure card?

A. The process is called virtual credit card numbers. You begin by going to your credit card issuer's Web site and initiate a transaction. This transaction generates a one-time-only credit card number. This number is valid only for this transaction for this vendor. This number will never be repeated again. Your real credit card num-ber is never released to the vendor. And the vendor is virtually guaranteed a good num-ber because it's a number generated by your credit card issuer.

Q. How does one get MSN Messenger to go through a router?

A. Milt Hull promises a full article on instant messaging technology.

Milt brought up a discussion about hardware firewalls. "There are ZoneAlarm and Black Ice, and those are nice firewall programs for individuals on the Web. For example, a user on ATT Web or other ca-ble access where you are sharing your feed with the rest of the neighbors, these prod-ucts are quite satisfactory. But if you are bigger than that, such as a larger company, and you want to have industrial-strength blocking, I recommend a hardware-based firewall/router such as SonicWall."

Milt said he had no idea how powerful this product is. Since his purchase, he has attended several classes to learn more about its capabilities. The actual firewall has a wide area connection, a local area network connection, and then a DMZ zone where you can put your servers. But what is cool about this firewall is that it has con-tent filtering, anti-virus, and several things you can add on. For example, the content filtering is an optional subscription service or manual entry.

Milt's clients were challenged to try to ac-cess any porn site. When they tried, the firewall sent back to the browser a message that said, "You have been blocked by the SonicWall filter, your attempt has been logged, and your superiors have been notified."

The logs are stored in a SQL Server database and are accessible at any time. The logs reflect bandwidth use on a per-user basis, their destinations, and the source of visitors coming to your Web site, and attempts at restricted access.

The reason a company would need a router like this is because of instant mes-saging abuse. Instant messaging applica-tions use a lot of bandwidth. IM applica-tions typically have a buddy list with 10 to 15 entries, and it polls all of these targets every few seconds. The amount of traffic due to queries asking if this specific person is available and if there are any messages is huge. That much outgoing traffic kills a significant portion of inbound bandwidth. So, many businesses restrict instant mes-saging use.•

Steering Committee Notes

Last Month's Special Issue

By Brian Smither

For those took notice of the page count for the July-August-20 Year special issue of *Sacra Blue*, you should know that the SPCUG had plans to have that issue printed in hardcopy form as an important publication that would be used to promote the group. We would send issues to libraries, business organizations, and pass them out at COMDEX. Of course, members would get a copy as well.

Unfortunately, those plans were derailed because we couldn't find anyone to print the issue for us. Seems everyone is being tasked to print political propaganda. By the time we can get ourselves in the queue, half of the issue would be a few months out of date. The other half, the 20-Year retrospective, might not stand on its own.

In addition, Mike Zellmer provided a ballpark cost estimate of $3,300, or about $6 per copy. The Steering Committee felt this cost was too high for the benefit gained.

So, we decided to shelve the hardcopy project and returned to mulling over the possibilities of having all available Sacra Blue's put on CD-ROM. Keep watching this space for further information. If you have any ideas on the matter, please let us know.

The Webmaster hopes there are no unresolved problems with members accessing the password-protected areas of the Web site. There seem to always be a few members who don't remember the information e-mailed to them, and a few members who, for whatever reason, didn't or can't receive these necessary e-mails. The Webmaster uses a program designed to send bulk e-mail, but it's not configured to obscure where the e-mail is coming from in any way. The SPCUG hopes to discover why these members are having difficulties.

About six months ago, the Steering Committee sent advisory letters to all the chapters and SIGs detailing certain reporting requirements. The information provided by these reports is needed for tax and insurance purposes. As of today, only the Orangevale-Folsom Chapter has submitted their report. That means those that did not submit their reports are in imminent danger of losing their association with SPCUG. If you are a member of an SPCUG chapter or SIG, please start pestering your group's leadership to follow through on their reporting requirements.

The SPCUG is red-faced about the way we handled the door prize tickets at the August Main meeting. One of our presenters graciously offered as prizes discount coupons to a class in digital photography. Tickets for those coupons were drawn immediately after that speaker's presentation. There were other prizes that were to be distributed at the end of the meeting.

Now, we know that not everyone is interested in taking such a class and so dreaded winning what would be to them a worthless prize. We sincerely apologize for what happened and will soon adopt a strict policy regarding the drawing of tickets as soon as we identify and iron out all the variables.

Andy Pischalnikoff of Snap-A-Rific tutored the audience on a certain aspect of digital photography: layers and the manipulation of special effects in a photo. Unfortunately, many who attended that night's meeting were under the impression that Andy was to give more broad coverage of several digital photography subjects, including how to best take photos using a digital camera. We hope to have Andy back soon for another informative, and more basic, presentation.

We meet the third Wednesday of each month at 7:00 PM

Sacramento Association of Realtors
2003 Howe Ave., Sacramento (across from Kmart)

Doors open at 5:30 PM
Beginners tutorial from 5:45 PM to 6:30 PM
Membership, library, and Q&A tables open at 6:30 PM
Main meeting starts at 7:00 PM, and lasts until 9:30 PM

Chapter and SIG Reports

Davis Chapter

Blood On the PC

By Tim Feldman

I am looking at my own blood. No, don't worry; it's really not bad at all; it's only a single drop, under a microscope. Still, it's quite exciting.

Not because it's blood, you understand, but because the microscope itself is exciting.

I've played with a number of microscopes over the years, but this one really is a gem. It's an "Intel Play QX3" video microscope. It plugs into a USB port and sends live video images to the PC, where they are displayed, manipulated, and saved by custom software.

The microscope has a platform to hold samples, and two built-in variable-brightness lights. You can use one light at a time; one shines up from inside the platform to light up translucent subjects, and the other one shines down from above for examining opaque subjects. You use a simple knob to focus the telescope, and you turn a big knurled ring to select 10, 60, or 200 power.

All of the magnification settings work very well; even the 200 power setting is very usable. It reveals the fine details of small insects and other natural subjects, and since the end result is a video image that shows up on your PC screen, you can easily point out features to people and know that they are really looking at the right thing, in focus.

The lower power settings are great for coins, stamps, large insects, microcircuits, and so on. But one of the most fun uses comes when you lift the microscope body out of its stand: the microscope automatically switches to the upper light, and reveals clear details of whatever you hold it up to. Its body and lenses are designed so that you don't need to focus the telescope when holding it in your hand, and a convenient button on the body of the microscope makes it easy to take a snapshot. It reveals the details of your skin, ear, nostril or eyeball very nicely. Kids really love this feature most of all.

And that's the target audience for the QX3: kids. It has a bright blue transparent plastic body, easy-to-use knobs, and a *very* simple and "friendly" software interface. (In fact, the software is a lot of fun itself: the controls make funny sounds when you press them, the help system speaks out loud, the colors are bright, the shapes are rounded, the functions are simple, and so on.)

The microscope was created by Mattel for Intel, and they did a first-rate job. It even comes with some sample subjects mounted on slides; tweezers; and so on; they fit into a hidden compartment in the microscope's stand. And there's a book of fun science activities, too.

I've built telescopes and video microscopes for a hobby, and I'm very impressed with the QX3. The microscope is so easy to use, and yet works so well, that only one thing puzzles me: Why did Intel stop selling it soon after its introduction? For you see, I purchased it earlier this year from a surplus electronics dealer. I have no idea why Intel dropped it; perhaps they weren't making enough profit on it. Regardless, their loss was my gain; I bought the microscope in May for about $60.00 by mail order from H.S.C. Electronics.

Their Web site is:

http://www.halted.com/

but their Web site doesn't always list everything they sell; you can call them at (800) 442-5833. Other vendors were also selling the QX3 earlier this year; some may still be out there.

The microscope even came bundled with another Intel Play toy: a battery-powered solid-state sound recorder. You can record voices or other sounds, and later plug the recorder into your sound card to transfer the sounds to your PC. Its software lets you morph the sound in many ways (my PC now announces that Windows is shutting down in a deep voice like the "Master Control Program" from the old Disney movie "Tron"). The sound recorder is fun, too, but the microscope is my hands-down favorite.

When I showed the QX3 to the Davis chapter in September, everybody liked it a lot, but one member in particular was especially interested: it turns out that our very own Harry Low services microscopes professionally. I didn't know that, and so it was a real pleasure to hear Harry's thoughtful remarks about the QX3.

Our members continue to surprise me, even after many years!

If you want to read other opinions about the QX3, or just explore a truly excellent microscopy Web site, then you absolutely must check out this site at Florida State University:

http://microscopy.fsu.edu/optics/intelplay/

They have thoroughly dissected (literally!) and analyzed the QX3, and their site is a treasure trove of information about it, along with great ideas for getting the most out of the microscope. Highly recommended!

Robots and CDs

I recently attended the Seybold trade show in San Francisco. This is *the* big trade show for the desktop publishing and pre-press industry. If you use Acrobat Distiller, PhotoShop, laser printers, big plotters (I mean *really big*: picture a plotter that can print on paper 6 feet wide, or more), and so on, then Seybold is a real treat. I've been attending it for years, on and off.

This year, some gear in a booth caught my eye: it was a little robotic arm in a CD-duplicating machine. Basically, a PC controls the robot arm and two to eight CD burners. The arm picks up blank CDs from one spindle, drops them into the burners for recording, and removes them and stacks them on another spindle when they

are done. The machines are sold by CopyPro Inc. (www.copypro.com), along with a nice little thermal printer that can print labels directly onto the finished CDs. They also record CDs as a service, for those who don't want to buy the equipment outright.

CopyPro also demonstrated a funny little gadget that I'd never seen before: a "CD Destroyer." This battery-operated machine feeds a CD between two rollers. Each roller is covered with small blunt teeth; when the CD comes out, it is intact, but the pressure of the teeth had made thousands of dimples in the thin aluminum layer inside the CD, rendering the disk absolutely, irrevocably unusable (I tried a sample: my PCs could *not* read the CD after it had passed through the rollers). I passed the CD around for inspection at our September meeting.

The CD Destroyer is certainly better than the ways that I use to get rid of outdated yet sensitive business-related CDs: I usually put them between a few sheets of paper, then snap them into pieces. But physically breaking them as I do is dangerous and messy: shards sometimes fly out, and little flakes of aluminum sometimes make a mess on the floor. The CD De-stroyer got me to thinking that a set of old golf shoes might be a better way to "read-protect" old CDs.

Next Meeting

Demonstrating the QX3 was such a success that I may bring in more interesting gadgets that can be hooked up to a PC. So come on down to our October meeting; it will be held as usual on the fourth Wednesday of the month, 7:00 p.m. at the Davis branch of the Yolo County Public Library.●

President's Thoughts
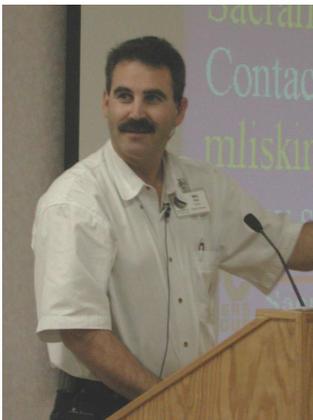
Pop-Up Stoppers

By Milt Hull

Years ago back in the 80's when I worked for the University of California, I had the Internet for e-mail and we used Gopher programs to search the Internet for documents and other such items through-out the U.S. Around the early nineties, a World Wide Web program called Mosaic was developed at the National Center for Supercomputing Applications at the University of Illinois in Urbana-Champaign. It used something called "HyperText Markup Language" (HTML). After the Internet became public, many companies including Netscape and Microsoft helped develop this markup language into what it is today. The first versions were just word processor-type commands like bold and italics, and of course different type sizes were supported.

Soon after the first release came a version which supported tables, and soon after that frames were introduced. Each time, a new version of browsers was introduced to support the new feature.

We are up to version 6.0.2 of Internet Explorer, version 7 of Netscape Communicator, version 6.05 of Opera, and version 1.1 of Mozilla, Netscape's open-source version. They support most of the newest features that HTML commands have made available.

One new feature is the ability to bring up a new page while downloading an existing page. Most companies are using these commands to pop-up ads from their sponsors. These announcing ads called pop-up ads are the most irritating thing that has happened in the last year.

Soon after the introduction of these pop-up ads, startup companies and existing companies started making filter programs that would stop the ads from popping up. I have not installed any of these programs until recently. So I set out to find the best one for the price. I searched Google and AltaVista for one that did not give me too much interface and ads themselves. For example, Ad Subtract ran in the toolbar area and popped up to show that it was running in the background. To me, this is no different than a pop-up ad. So I kept looking. These are just some of those I looked up:

Ad Shield
Ad Subtract
Zone Alarm
Pop Ad Filter
Ad Purger
Exit Killer
Pop-Up Stopper Companion
AdsGone Pop-up Killer
StealthBrowser

The prices of these programs ranged from $13 to $39.99. I set out to look at what I was getting for the price.

ZoneAlarm and StealthBrowser are programs that offer more than just pop-up killers and banner ads suppression. Ad Subtract was one I really hated because of the way it ran and how many resources it took. It was also one of the more expensive programs as well.

I looked at the least expensive one, which is called Ad Purger, which costs $13. It worked within the browser and took up very few resources.

I downloaded many of these programs, because you can install them for thirty days on a trial basis before purchasing them. I did not chose ZoneAlarm because I have a true hardware firewall from Sonicwall. Nor did I even try "StealthBrowser" because of all the extra stuff it had, like a cookie manager and an anonymous ftp client.

It has now been 30 days and I chose Ad Purger as the one I want to keep. The only problem with this one is that it only works with Internet Explorer, and not Netscape or AOL's browser.

Whether you have already purchased one or not, I always look for a program that takes very few resources and requires little interaction with the user. ●

The Volunteer Page

Printer Cartridge Recycling Volunteer

By Stan Morris

I have just finished some investigative work into the possibility of starting a new volunteer position. This volunteer would be in charge of gathering member-donated, used laser printer cartridges at the general meetings in specially provided containers. The volunteer will be coordinating with a local printer cartridge recycler, Laser Recharge, in order to receive the special containers and, when the containers are full, have them picked up. The volunteer will also be responsible for managing the containers between meetings.

The SPCUG will receive a small payment for each cartridge, based on the type and brand of the cartridge. This income will go into the SPCUG general fund to cover other costs, as no cost has been anticipated in providing the Printer Cartridge Recycling service. Of course, all this will need to be approved by the Steering Committee.

What I want to do at this point is to see if anyone would be interested in doing

ining Media Librarian

The Training Librarian maintains the Training Media Library and sets the library up at the general meetings on the third Wednesday of each month. This material is available to members only (a definite benefit). At the meetings, material is checked out, a refundable deposit taken, and a record is made of the material the member checks out. Deposit amounts are determined by the librarian based on the value of the material, but generally not less than $10. When the material is returned at the following month.s meeting, the deposit is returned.

Contact: Mary Lint (mjlint@hotmail.com)

Entertainment Editor

This is the position Chris Seip once held for many years. Actually, he was the above job as a volunteer. The position should take little of your time and would be done during the general meetings, with a phone call once in a while to contact the recycling vendor. I believe this will be a good opportunity for the group to do something for the community and provide us another member service. If no one is interested, then there is no reason to take up the time of the Steering Committee concerning the proposal and I will drop the idea.

A thanks goes to Ken Hopkins for the suggestion. Thanks in advance for considering the proposal.

Contact: Stan Morris (stan@gohawk.com) if you can help or have a better idea.

What About Volunteering?

The SPCUG could not function without its volunteers. We depend 100% on our volunteer force. And we will need an even stronger force in the days ahead to meet the challenges of ever more sophisticated computer users. Our members depend on us to get the information out; we depend on them to supply us with new volunteers to replace those who are overworked.

See if you can help! Check the SPCUG Web site at www.sacpcug.org and our *Sacra Blue* and *eBlue* Newsletters for new volunteer openings each month. Also, let me know if you are interested in volunteering for a new position at stan@gohawk.com.

Games Editor, but we expanded it to Entertainment Editor (indicating not just games but leisure-time software) when Diana DeMuth took over the position from Chris. Diana now needs to be relieved by a new volunteer. Can you help?

Contact: Tom Anderson (tom@etoma.com)

Group Benefits Coordinator

We need someone's help right away. Marsha Leonard was the last GB Coordinator and did the job of listing the many benefits available to members that you may not be aware of from month to month. Is anyone interested in filling the Group Benefits Coordinator position?

Contact: Stan Morris (stan@gohawk.com)

Volunteer Openings

Please take a look at the following volunteer openings. If you think you can help, contact the "contact person" for that position or e-mail me at stan@gohawk.com.

Sacra Blue Newsletter Co-editor

We will need two new co-editors to fill these vital SPCUG volunteer positions by December. There will obviously be some training time involved for those who wish to become the new editors, so don't delay if you are interested in this type of work. If you start the training now, you may need little editorial experience beyond the basic reading, writing, and computer skills.

Contact: Tom Anderson (tom@etoma.com) or Ken Hopkins (hopkins@hopkinscomputing.com)

Public Relations Coordinator

This job entails collecting information on each month's speakers, potentially re-writing a press release, and faxing or e-mailing it to contacts at various newspapers, magazines, and TV and radio stations. Contact information for newspapers and magazines, TV stations, radio stations, and other organizations is provided.

Contact: Tom Anderson (tom@etoma.com)

Tra

Sacra Blue Newsletter Writers

Writers are needed for both *Sacra Blue* and *eBlue*. You would be writing tips for tips column (may also be used as filler). Also would write news articles about current events. Evaluate hardware and/or software and write product reviews, and write stories on how to you solved some computer problem.

Contact: Ken Hopkins (hopkins@hopkinscomputing.com).

Many of us have found volunteer work rewarding and it can even create some interesting opportunities. You may be surprised how little time is involved in some of these volunteer positions.•

Stan Morris is the Volunteer Coordinator for SPCUG, and can be reached at stan@gohawk.com.

Tech Talk
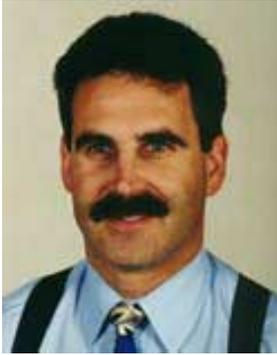
Quality of Service

By Milt Hull

Since I started using Windows XP on my main workstation, I have noticed many changes in this Windows release. Since XP is based on Windows NT technology, I have been very used to all the core ingredients of the OS itself. Most of the dialog boxes have been rewritten to give the same ease of use that the rest of the release has.

One thing that stands out is in the network settings. Starting with Windows 2000, Microsoft put all the network settings into a Network Connections screen and made all dial-ups and network interface cards available for configuration in an easy-to-use screen.

In Windows XP, they added an Incoming selection for IRDA or parallel or serial connections. Everything is there. So if you have a portable and you connect to your office using a network card, and then when you travel, you use a modem, every connection is there. You can have multiple dial-up connections for your ISP in many cities and states. You can have a setting for your PDA, allowing you to transfer files using the built-in infrared port on the back of your machine, and you can have multiple NICs in your portable like I do. I use one for my client connections and one for my own Network at home/office.

QOS

One major add-on that started in Windows 2000 was the implementation of QOS, or "Quality of Service." This has been a topic of much discussion in the last couple of years. Many people are implementing this within their organization. This is controlling the bandwidth of the local machine by using controls on the server or other Internet connection device.

For example, let's say you have a scenario where you have a server that has two network cards: one card is directly connected to the Internet and the other NIC is connected to all users within your office. You only have half of a T1 connection, and you do not want everyone using the entire connection speed. You can implement QOS and control the bandwidth to allow only 128 Kbps for each user. You do this by setting up this service and control this bandwidth as a Bandwidth Manager. Each user has his/her bandwidth set on the server and they cannot use more than that setting.

Of course, in a home/office you would never do this because you would want the best connection speed you can get, including DSL. However, in larger companies where you have more than twenty users, you might want to control bandwidth usage and QOS is the way to do it.

There are many bandwidth managers available, including some that are built into a managed switch. Some routers have them as well. They even sell boxes that are built especially for this purpose. Linux supports this standard, and some of these special boxes are based on Linux. So whether you are interested in being a bandwidth manager or you just want to control how much of your connection speed is being used by your employees, QOS is for you! •
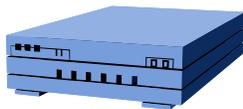
Router
768Kbps
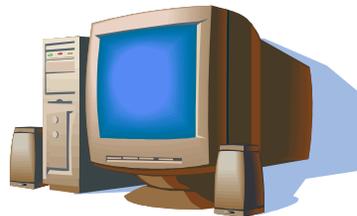
Server with QOS
768Kbps

Workstation
128Kbps

Milt Hull is President of the SPCUG and proprietor of HullSoft Enterprises. He can be reached at *milt@hullsoft.com*.

Virtual Network Computing

By Brian Smither

Some of you have seen this in action: You call tech support and they ask that you accept and install a small utility that will be sent within a few seconds. Once running, this utility allows tech support to see your desktop and control your computer. Quickly and efficiently, the support tech opens windows and control panels, adjusts settings, and makes right what once went wrong.

How do they do that? Virtual Network Computing. VNC is an established protocol that allows the host (server) computer—that's you—to be controlled by a guest (viewer)—that's the tech. There are several applications and utilities that can do that. *Sacra Blue* reviewed NetOp Remote Control in an earlier issue as an example of a comprehensive and secure system.

Unfortunately, host and guest licenses are typically purchased by the seat. And whatever system is implemented by the tech support departments of software and hardware vendors, odds are it cost them a significant chunk of change. But for quick fixes by your friendly SPCUG Answer Guys, here's a free utility that will help us help you fix your ailing system: WinVNC.

WinVNC makes the desktop of a PC available remotely. WinVNC (as well as other derivations of the parent VNC code) runs on Windows 95 or better without the need to add or replace any system files. It is a standard application that can run from the Start menu and be closed down just as easily.

VNC's various incarnations are released under the GNU license scheme. Anyone can create their own custom version based on the parent code, but any derivations must also be released under the GNU license. Essentially, GNU license programs are free.

WinVNC (information, documentation, and downloads at http://www.uk.research.att.com/vnc/winvnc.html) is but one of several ports to other operating systems. Versions of the VNC host also exist for Unix, Mac, and a couple others, and viewers exist for Mac, Unix, Java, WinCE, DOS, OS/2, PalmPilot, Geos, BeOS, and more. RealVNC is a new venture founded and staffed by the original AT&T team who created VNC. The mission of RealVNC is to act as the focal point for open source VNC. For the most part, VNC is hosted by the University of Cambridge, Department of Engineering.

VNC is super-simple. There are no installation issues and communication between computers is over TCP/IP, the basic method of Internet data traffic movement. There are, however, issues that must be addressed when a VNC connection must go through a firewall and/or router. The following suggestions will help you make a successful connection.

If you are the viewer (the guest, invited into someone else's computer), there is really not much you have to do. When you start the VNC Viewer, your firewall will probably throw up an alert window announcing that VNC is attempting to send outgoing traffic. All you have to do is allow it, either temporarily or permanently. Your router should already be set up to track the private LAN IP address to the public IP address and manage the port.

If you are the server (the host, inviting someone else into your computer), your firewall will throw up two alerts. Allow both, either temporarily or permanently. The viewer is the half that first interrogates the server. Therefore, for your router to deliver the viewer's requests, you will have to "port forward" (*aka* "port redirect") from the public DSL/Cable address, to the private IP address (e.g., 192.168.0.X). Consult your router's documentation to set that up.

VNC also can also start in reverse mode where the viewer (guest) is listening for invitations by servers (hosts). Servers can start as a "service," an aspect of remote control beyond the scope of this article. WinVNC transmits data unencrypted, but survives being wrapped in SSH and VPN layers.

With a few exceptions, what the viewer sees is exactly what appears on the server's desktop. In order to minimize the overhead, the server can turn off certain desktop properties—the background wallpaper can be eliminated and any changes to inactive windows can be ignored. The server can disallow control by the viewer, disallow any connection attempts by any viewers, and restrict access via password protection.

As with any networking application, VNC is most usable when both machines are networked to broadband connections. A modem connection causes the viewer to seriously lag behind the server's screen display updates.

The machine acting as guest can have several viewers open at once. You can even have a daisy-chain: The screenshot shows the desktop of PEER4 being viewed by PEER2, in turn being viewed by PEER5. A server can only communicate with one viewer with controls enabled. Any other viewer that wishes to control the server will cause that server to disengage the prior viewer's connection—like tossing one guest out of the house when another wants in. I'm not sure how one prevents that automatic switch-over.

A particular derivation of the base VNC code is "TightVNC," an enhanced version optimized to work over slow connections such as low-speed modem. With TightVNC (http://www.tightvnc.com), you can work remotely almost in real time in most environments. Besides bandwidth optimizations, such as JPEG compression of the desktop, TightVNC also includes many other improvements, optimizations and bug fixes over standard VNC. As mentioned above, the GNU license requires that TightVNC also be free. There are ports for several operating systems, it is cross-platform and compatible with the standard VNC.

RealVNC (WinVNC is the name given to the Windows-specific version) is small, and quick to install. There is nothing inherent about it that will cause your system to be any more unstable and prone to crash than it is already. I urge all SPCUG members and the general public we serve to consider installing VCN. The motto of the Sacramento PC Users Group is, "Computer Users Helping Computer Users." Help us help you through this invaluable utility.

Transitions

By Tom Anderson

Bob Wallace

Bob Wallace, creator of one of the first major shareware programs, PC-Write, died at his San Rafael home on Sept. 20. The cause was not immediately known. He was 53.

Wallace attended Brown University, where he worked with a group of researchers on a project known as Fress, the file retrieval and editing system. Many ideas common to computers today came out of the Fress group, which designed early text editing and word processign programs. Their vision was of a world of linked documents which Ted Nelson, another member of the group, named hypertext.

Wallace "was one of the key designers of Fress," Andries van Dam told *The New York Times*. Van Dam was another member of the group and is now vice president of research at Brown. "He had this very gentle flower child demeanor and philosophy," van Dam added.

He went to work for a company then called Micro Soft in 1978, when it was in Albuquerque, New Mexico. He was the ninth employee. His first project was to connect a computer to an IBM Selectric typewriter so Micro Soft could print its software manuals.

After developing an early version of Pascal, he left in 1983 to start his own company, Quicksoft, to sell PC-Write using a plan he called commission shareware. The term shareware had already been used by Jay Lucas in *InfoWorld* to describe software that was distributed free or for a small copying charge. Wallace sold the program disk for $10, and allowed users to register and receive a manual for $75.

Although he was unsure whether the scheme would work, within a few years Quicksoft had 32 employees and annual revenue of more than $2 million.

He was the first Microsoft employee to leave the company with stock. At one point, his wife said, his original 400 shares were worth $15 million.

Paul Allen, cofounder of Microsoft, remembered Wallace as "a gentle soul who was soft-spoken, but creative, persistent and meticulous in his programming and thinking."

Wallace was known for participating in legendary pranks with Bill Gates. They once broke into a construction site together and drove bulldozers around, almost running over Gates' Porsche.

Wallace also had a long-time interest in psychedelic drugs, and founded Mind Books in 1996 to provide a source for books on the topic. In 1998 he founded the Promind Foundation to support research and education about psychedelics.

Jim Seymour

Jim Seymour, an influential technical columnist for PC Week and PC Magazine, died October 8 in Austin, Texas, where he lived.

He was born Rogers James Seymour, and worked briefly as a jazz musician and freelance photographer but became fascinated with computers even before the first IBM PC in 1981.

When computer magazines started to appear, he became a columnist, writing about the PC as a tool. He had a down-home, folksy style and shunned the hype and exaggeration surrounding the industry to focus on the usefulness of this new tool to businesses and individuals.

He frequently cut through promotional hyperbole with blunt, even acerbic observations.

He had a major influence on Dell Computer, introducing the young Michael Dell (who assembled his first computers in his dorm room at the University of Texas in Austin) to Lee Walker, who became the first president of Dell. *The New York Times* quoted Dell as saying, "Jim shared his wisdom more generously than we could have

ever hoped for. His guidance helped shape our early success."

Seymour was the first editor of *PC Computing*, which was a finalist in the National Magazine Awards for general excellence. His wife is a former editor of the same magazine.

Keith W. Uncapher

Keith W. Uncapher, who oversaw the engineering work that led to the Internet, died October 10. He had a heart attack while flying from Washington to Los Angeles.

Uncapher joined the RAND Corporation in 1950 and became head of its computer science division. He was a hands-on engineer and had a reputation for being the only one who could make RAND's Johnniac computer work properly.

Another strength was in recruitment of skilled and talented personnel. One of his engineers, Paul Baran, specified the fundamentals of bundling and transmitting data, later known as packet switching. Baran's work was used to establish the Arpanet, which then became the Internet.

Uncapher left RAND in 1972 to start the University of Southern California's Information Sciences Institute. Under his leadership, the Institute developed the Internet's name system, including the suffixes .com, .edu, and .net. He also oversaw a project, still in existence, which tried to develop cheaper ways of making silicon chips.

When he left USC in 1987, he helped found the Corporation for National Research Initiatives in Reston, Virginia, which researches information infrastructure.

Born in Denver in 1922, Uncapher served in the Navy during World War II, working in aviation maintenance and radar technology. He received a degree in electrical engineering from California Polytechnic University in 1950 and joined RAND after graduation.

My Computer Monster

A True Story

By Jack Gross

Editor: Your last issue is great, as are all the previous issues since I joined this group a year or two back. Being a computer dummy, I don't understand most of it. But, like my computer, it has an impressive look and enough big abbreviations, impressive sounding content, and articles about what makes computers tick along with What's New in the computer world even though I don't know how to apply and use it. I look forward to reading it every month.

Once in a while, you offer a tidbit I can work. Like, when I totally screw up, "just turn the damn thing off, like the power went off, (count ten, as a very frustrated Microsoft "help" lady advised me), turn it back on, and watch the lower yellow slide graph work from left to right as it fixes itself. Voila!

My computer turned out to be a monster. What I paid for it, I wouldn't admit to a Catholic priest. I bought my Compaq Presario at Sears—from a fast-talking nerd-type who reminded me of slicky-slick car salesmen—who told me "everything I didn't want to know" about it. I walked in looking for a computer, printer, and scanner that would copy and easily transpose fonts, etc., of a dancing horse training book I wrote years ago. That's all—except I also wanted to be able to find Web "horse"

info, do research, e-mail, and (secretly) watch porno shows, too (just kidding).

The hot-shot salesman rattled on about Sears' many different computer models. There seemed to be an acre of them. Like buying a car, I settled on a big, fancy-looking one in chartreuse plastic. "How much is this?" My sharp-shooting salesman totaled up the cost, including a compatible printer and scanner. "Way too much," I said, but thanks for taking time with me. "Just a minute," quoth the salesman, "let me see if I figured right. Oh! It's not that high, it's only ($xx)." "Sorry," I replied, "Maybe later." He diddled on the cash register. "How about this—I just remembered we're putting these on sale tomorrow." Sold. Put it all in the car.

My son came over to help me set it up. The printer and scanner cables wouldn't fit. I called Sears. They didn't have the right cables. I was mad. I took it all back, told them to take it out of the car, and give me a refund. The loading dock guy took it back in. The salesman appeared. Offered me another make "better than this one" at the same price. It wasn't as pretty as the one I wanted, but I traded. Back at the loading dock, they put the "new" units in my car. "Where's the monitor?" The stock room boy said they had to get one from another store and I could pick it up in a couple days. "To hell with that. Take it out of the car and just give me my money back." He put it back on the cart and took it back in.

Too mad and upset to go back for the refund papers right away, I sat on the bumper and had a smoke. Lo and behold, here cometh the salesman. He was sorry about the cable foul-up and extra trip I had to make. Said he talked to "the boss." They had one complete setup: computer, monitor, printer, scanner "but a much more expensive outfit" I could buy for just a little bit more. No way. I just wanted my refund. "Wait a minute," he said. Went back in. Came back out and said he could let me have the "better" unit for the same price. Sold. Put it in the car. Same kid wheeled the new stuff out, gave me a sympathetic grin, and loaded it in my car. I took it home—my son hooked it up—I turned it on. Voila! It all worked. Still does. But it's a monster—can do things I don't care about, like making CDs; it plays videos and music, gets thousands of stations, etc. Sometimes I hit the wrong key and it takes off on its own. Like a monster. When that happens, I yank its plug. That'll show it.

[Editor's note: Jack, experience has shown that yanking the plug on a PC, although offering temporary satisfaction to the user, doesn't help any and, in fact, will hinder your PC use. Your Temp folder is probably chock full of stuff Windows puts there when there is an unexpected shutdown. You should clean out the .tmp files that clutter up your Temp folder every couple of months. If you haven't done this before, give your User Group's resident tech a call and someone will walk you through it.]

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Maizell's I/O

Jerry's Great Printer Adventure

By Jerry Maizell

Like so many great inventions, the laser printer started as an experiment in someone's kitchen—Chester Floyd Carlson's kitchen, to be exact.

And to be accurate as well as exact (because exactness and accuracy aren't necessarily the same thing), that is not quite correct. Carlson was working out the principles of what he called "electrophotography." That, in turn, led to the first photocopiers, which were produced in 1949 by a small company called Haloid. Haloid called the process "xerography," taken from the Greek words for "dry" and "writing," and later renamed itself Xerox.

Carlson died in 1968, having donated $100 million to charity and, more importantly, changed the world. A nicely done summary is "Xerography: the invention that no one ever wanted" (http://members.tripod.com/~earthdude1/xerox/index.html). A more thorough biography is here: http://www.lib.rochester.edu/car/ Chester-Carlson/hallbio.pdf.

So what does electrophotography have to do with anything? Read on. As I read computer columns, magazines, and trade papers, I often wonder who the heck is interested in most of the stuff they cover. And why they don't write about the things that interest me. Or when they do write about things that interest me, why is it that they so rarely understand exactly what it is about these things that I really want to know? I don't mind if they cover more than I want to know, as long as my main interests are included. And beyond my main interests, about which there may be little new to say, what about the nuances that make an important difference?

Because I've been struggling with them recently, I have printers on my mind. Every so often there will be a round-up review of a dozen or more printers, pointing up the advantages/disadvantages of each. There may also be a chart comparing the units' facilities, pros, and cons. The bigger mags will even award a score and an "editor's choice."

That's all well and good. But where do they discuss the relative merits of kinds or classes of printers? As I travel around visiting clients, for example, almost all of them use inkjet printers of one kind or another, from the $30 cheapo to the several hundred buck multifunction printer/scanner/fax/copier/oven-cleaner.

Not one in 100 home users that I know uses a laser printer, and I'm hanged if I understand this predilection for the slow, sloppy and expensive-to-run inkjet technology.

When HP introduced its first DeskJet, I ran to buy one for about $400. It was miles ahead of the impact/dot-matrix units that had been the standard for so long. Laser printers then sold for $1500 - $3000, way beyond my budget, and the DeskJet's output was darn near indistinguishable from a laser. However, when I had to print presentation graphics and newsletters, the slowpoke production, plus time to dry the wet ink, forced me to spend hours on jobs that should have taken minutes. I often had to work through the night to print out a project to take along on a 7:00 AM flight.

Enter the Laser

Eventually I found an HP LaserJet IIP for "only" $1075—including a toner cartridge!—and snapped it up. It changed my life, and continued to serve me well for the next 10 years without a serious glitch. That HP was built like a tank—a steel body, with real controls right on the top. Built to last and built for ease of use, unlike today's printers of all sorts that use so-called "modern" technology, i.e., software control rather than human control. When something went wrong with the HP, it was (usually) fixable by any relatively intelligent user. It didn't require a software engineer to kick-start it, just a gentle physical shove or cycle through its control panel.

Newer laser printers are nowhere near so sturdily built, but I'll come back to that shortly. I'm willing to bet that less than 10% of the readers of this column use a laser at home. The question is: Why? Is it the need to print in color? Color lasers remain a luxury item, at least for individuals, and frankly, the technology ain't there yet. For color, inkjets are the best option. But how often does one really need color?

Lasers Are Cheaper, Better

Inkjet printers today all print in color and cost peanuts. At least, the printers themselves are inexpensive, but the cost of consumables—ink cartridges—is very high on a per-page basis. A black ink cartridge, for example, that costs around $30 typically yields 600 pages. Some of the cheaper inkjets use a combo color/ black cartridge that will be used up much faster than that. Replacement cartridges for a typical low-end inkjet printer like the Lexmark 1100 or Z22 may cost as much as the printer itself. As such, printers are often further discounted or even given away with a new PC purchase, the cartridges costing more than the printer. In some cases one could buy a new printer every time the ink runs out for the same price as a new cartridge. Or less. It's the old marketing ploy—give away the razor, profit on the razor blades.

Inkjet cartridges tend to dry out if not used regularly, so may require frequent replacement. Changing ink cartridges is not only expensive, it's a time-consuming hassle. A laser printer can churn out pages faster, cleaner, crisper at a typical cost of three cents (or more) cheaper per page than an inkjet. I can usually make do with one or maybe two toner cartridges per year. Average cost is about $60 per cartridge for new ones, or $45 for remanufactured ones (which are just as good). A typical laser toner cartridge will print about 2500 pages, compared to an inkjet's 600. If my arithmetic is right, laser costs are under 2 cents per page, compared to about 5 cents for inkjets. Over a three-year period a laser printer can save you hundreds of dollars, more than enough to pay for its higher initial cost.

(If you're concerned about buying remanufactured laser cartridges from an unknown source, the major office supply stores now also sell them, at competitive prices.)

How Does All This Stuff Work?

Let it be noted, before I get deluged with e-mail decrying my ignorance, that not all printers designated as "laser printers" really use lasers. Some use LEDs or LCDs, for example. Which is one reason I began with all that stuff about Chester Carlson and his invention of electrophotography. Another reason is that laser printers work very much the same as photocopiers, differing largely in the light source, i.e., a laser instead of the bright light of a copier. The light or laser creates an electrostatic image onto a charged photoreceptor, which then attracts toner in the shape of an electrostatic charge. Canon developed the specific technology, which was introduced by Hewlett-Packard in the first laser printers in 1984.

The point is not the particular technology implemented, but that (generally speaking) laser-style printers, with or without "real" lasers, act and operate the same as far as their use and costs are concerned. Here's a good explanation of how a laser printer works: http://www.how stuffworks.com/laser-printer.htm. And a similarly straightforward and useful exposition on inkjets: http://www.how stuffworks.com/inkjet-printer.htm. Not to discriminate against those who have a bubblejet: www.howstuffworks.com/question163.htm. For an overview of how the LED technology works, see http://compu direct.net/oki/led_versus_laser.htm. It touts the LED as superior, which is debatable, but the explanation is interesting.

Though I complain above about there being few such things available, M. David Stone recently did a good guide to printers in *PC Magazine* (look down the left margin for product guides and select printers)

Curses, Foiled Again!

Now having said all that, making it abundantly clear that I prefer laser printers to inkjets, let me also admit that for the last week I have spent many hours cursing Hewlett-Packard and all laser printers and their progeny unto five generations. I specifically cursed my HP 5L, which decided to taunt me with the mother of all paper jams. Unlike my trusty, but now departed, HP IIP, with Man of Steel sturdiness, Captain Marvel character and a spiritual sim-plicity of operation, the 5L is mostly....plastic. With plastic innards to snag the unwary.

Most paper jams are mere trifles, annoyances resolved by gentlemanly pulls or ladylike tugs. But this time the laser devil rose up in all its dreaded gore and crumpled the paper under the fuser assembly. I made the situation worse by pulling too hard on the paper, thus succeeding in shredding it so that there was almost nothing reachable to grab.

Hot Fusion vs. Cold Fusion

The fuser is the hot spot that melts the goo onto the paper. But even when cold it is an infernal nuisance to deal with. The only way to dislodge the torn bits of paper that get wedged under the fuser is to remove the fuser entirely. At first I thought it would be a mere nuisance, in the way that all computer tinkering is—frustrating for a bit, tedious always, but when it comes right down to it, entirely doable in a more or less logical way.

To remove the fuser one must, of course, disassemble the printer. A straightforward task, one would think. One would be wrong. For nowhere in the HP manual is there anything resembling a diagram of which is connected to what, how or where.

Fortunately, I was prepared for that, having on hand in case of just such an emergency, a photocopy of a technical manual ordinarily available only to the anointed ones—HP technicians and their robber baron cousins. (I have twice had occasion to take a laser printer in for repair, and twice been ripped off.) Unfortunately, the copy was not too clear. And the places it designated to "remove 2 screws and remove the assembly" didn't seem to match anything on my 5L.

When I finally found and removed those elusive screws the fuser cover should have just lifted out. But as with so many computer things, "should have" doesn't translate to "does" in the real world. Unless that cranky plastic cover is removed there's no way to reach the jammed paper shreds, or to remove the remaining three modules to lay the shreds bare. And no amount of twisting, turning, pulling, or wiggling would move the cover.

A Moral For Our Time

If you're getting bored by these details, hold on. There's a moral to this story that may serve you well when you finally move up to a laser printer. I was ready at this point to spend $400 on a new HP 1200, which, I am reliably informed, has a more intelligent paper-handling system than the 5L/6L series. But the very thought of admitting defeat, not to mention dipping into my wallet, spurred me on.

I managed to lift one side of the fuser cover, keeping it elevated an inch or so with the knuckles of one hand, simultaneously grabbing the paper remnants with the fingers of both hands. Then I ever so gently nudged the shreds towards me, a fraction of a millimeter. I felt it "give." If it could give one millimeter it could give two. A few minutes of this slogging and voila!—or as the semi-literates who post similar success stories on the net like to say, "Viola!"

But one tiny shred remained, and just one is plug-ugly enough to gum up the works. It was time to turn to a low-tech tool. No, not a hammer. Tweezers.

Not for the first time in my life did I experience "tweezer joy," the triumph of low tech over high tech. The last paper bit emerged in the tweezers' grip. Having placed each set of screws in separate shot glasses, each labeled with the diagram numbers, putting the printer back together was a minor challenge. I only wound up with one leftover part, which forced me to undo the back cover again.

I saved myself $400 and learned a great deal about laser printers in the process. There are some morals to be learned from my experience: When a printer jams, take a kinder, gentler approach to begin with. Rather than ripping the paper out in one go, tease it out a bit at a time. In 12 years of using laser printers, I only had to disassemble a machine once. (Once is more than enough, of course.) I still have no doubt that lasers are far superior in every way (except color) to inkjets. But most important, never forget the wise words of The Computer Guru of Ottawa, Illinois, Doug Allen, "Never underestimate what can be done by a determined person with tweezers."

The Army Way…

…to Get New Computer Stuff

By Bill Wood

I am amazed that some of the things I hated about the Army back in the seventies are now making sense. As a young officer, I thought I knew better. To my dismay, some of that Standard Operating Procedure (SOP in Army-speak) really made sense. It still makes sense. It even applies to the legal aspects of obtaining computer hardware and software.

The Reverse Planning Process was SOP for many military tasks. The last step in your project is the first step in your plan. Decide where you need to be and when. From that result, work backwards to the present by making sure that each intermediate step fits into the plan. Don't do it the other way around. That same technique works wonders in the computing world. Start with the results you want, then decide how to get there.

To put it in a legal context: decide what you need (or want) and when you need it. Getting those two elements on paper will save you and the vendor hours of time—especially if it becomes clear that the proposed product will never accomplish the goal. And if a dispute arises between the vendor and purchaser, a clear statement of the end objective (the specifications and requirements) in a contract will be a key element in sorting out the legal responsibilities.

Simply put, a contract requires a "meeting of the minds" on various elements. It is an offer to sell something on certain terms, an acceptance of those terms followed by delivery and payment in accordance with those terms. Lawsuits on contract matters usually involve nothing more than proof that one or more of those elements were missing. My guess is that failure to pay is the most frequent breach of contract in most fields of law except for computer law. For the technology world, I suspect the biggest glitch comes in proving that there was a meeting of the minds regarding the specifications.

The biggest complaint has to be disagreement over what the program or hardware was supposed to do. The purchaser thought that the new gadget or program would do certain things. The vendor claims it never made that promise because they carefully disclaimed any warranties not expressly stated in the contract. Of course, you may have trouble finding any specific warranties in most "standard form contracts." In most cases, a lawyer for the seller prepares the contract and it is designed to keep that lawyer's client out of trouble.

Specifications and Requirements

In the contracting process you should prepare the specifications or requirements first. It is important to do so even if it involves a mass-market product and there will not be any personal negotiations. The buyer can still compare requirements to the specifications on the box. It may be a poor way to negotiate a contract, but it is the one that works millions of times every day. Also, if the product doesn't work, the buyer has strengthened any potential claims under consumer protection laws.

As the purchaser you want a product that accomplishes your tasks on certain hardware. If you have a Pentium Windows machine that only runs at 90 MHz (like my old Compaq) then you need to stay away from software and peripherals that specify a P200. I recently faced that very choice when I tried to find a new modem for that machine. Luckily I checked the system requirements before I placed the order. Otherwise I might have had trouble getting a refund. My argument that I thought it would work on my machine would be met with, "Look at the box where it indicates it must be run on a P200. So, no, you don't get your money back. We gave you exactly what we said we'd give you." In my case, I broke off negotiations and went elsewhere.

If you are the vendor (or as a software developer) you want to be sure that your product or services will work in the buyer's environment. In some cases your widget may work well on one type of computer but not others. Clearly stating the limitations up front helps to avoid many arguments. In more than ten years of practicing technology law, I have experienced all too many situations where the product would work but it didn't work very well. It was too slow or the vendor had to customize the product to work. Trust me, whenever the vendor or software developer has to "work around" a problem to make something run on your computer, the chances are good that it will never work the way either party thought it would. If a workaround is the only way to get to your objective, then make sure the "fix" is well documented to ensure that the steps can be duplicated (or reversed) in the future.

I do have one tip for purchasers of custom software or specialty hardware. Make sure that the specifications are clear on how the product will be tested. Vendors usually have a test program using dummy data. There is nothing inherently wrong with that. If the test data matches the real world then the test results are valid. In the real world, however, the purchaser only cares about its data. If possible, the purchaser should make a duplicate set of real data and insist on the right to test the product using the real data.

Support and Warranty

I consider these two items as one in computer technology. They should be considered at the same time as testing to ensure that both parties know when the warranty clock starts ticking. A purchaser may find that the testing and debugging time actually came out of the "free" warranty period because the contract stated that the product was accepted when it was used with real data.

I was fortunate enough to attend a computer law seminar many years ago at which an owner of a software company was very candid. When he was asked why most software warranties were so short he answered, "I'll make the warranty period as long as you want but I'll adjust the price for the product and extended maintenance." Most software warranties are very short and the remedies are few. Ninety-day warranties are not uncommon. Coverage for a year would be very long in my experience. That fact may not be too bad when you consider the rate that technology has advanced over the last ten years. I

don't really care that my old copy of Multiplan that ran on my TRS-80 Model II is out of warranty. I stopped using it long ago.

Conversion

Make sure you understand how you will switch over to the new product. Will the vendor or software developer do it as part of the contract or do you have to do it? Make sure you understand if it means that you will have to stop using your system while the conversion takes place. If so, factor in that lost time in your calculations. I know of a conversion where it took a year to re-enter the old data into the new system because they were converting a paper system to electronic. They had to hire a temporary to type in all of that data, one book at a time. If the working crew needed the book, they had to go stop the temp worker because there was only one official copy of the record. On a big project, budget plenty of time and make sure the details of the parties' responsibilities make it into the contract.

The Contract

And a last tip is to get it in writing. Even if both parties shook hands and agreed to all of the details, a contract for more than $500 should always be in writing. In many cases that contract is not enforceable unless it is in writing. Recent (and proposed) changes in the law will give effect to contracts that are only in electronic form. But those may be good topics for future articles.

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This article is for general education only and is not intended as specific legal advice. He is not in private practice and is not soliciting clients. Anyone concerned about any legal questions covered by this article should consult a private attorney that is familiar with the field. This article is solely of the personal opinion of the author.

A Question On…

Unauthorized Modification of Web Pages

By Brian Smither

Q. Can anyone go to a Web site and add a link without the permission of the site's Webmaster? Friends of ours claim that a link was added to their Web pages without their knowing about it.

A. There is no limit, I suppose, to the ingenuity of hackers. It's certainly possible hackers could have entered your Web space and modified files. Even the White House's Web site has been hacked many times.

There are several other possible ways your Web pages are modified without your knowledge: user error, ISP administration, and third-party browser add-ons.

Depending what you used to create your Web site, you may have inadvertently added links that you did not intend. For example, FrontPage offers a toolset that makes it easy for you but has a level of complexity that may create more problems than those you are trying to solve. Sometimes, those who are experimenting with the page layout may inadvertently leave parts of their experiments in the page when it goes online.

Your Web hosting provider, especially free sites such as GeoCities and Yahoo!, may reserve the right to add content to your pages. This is explicitly mentioned in the Terms of Service agreement and so, while you might not like it, you have in fact agreed to your page's modification.

Lastly, browsers and browser add-ons may add or even replace images and links on your pages. There is current litigation involving Gator and its propensity to modify Web pages. See this list of news reports provided by Google: http://news.google.com/news?q=Gator+ads . There are other services where you enter a Web address and it returns that page, having converted nearly every word into a link that points to an online dictionary (www.vocabulary.com). Other browser add-ons that block popup windows, flashing graphics, in-line ads, etc., also modify pages before the browser renders them.

There is nothing one can do about pages that are modified after your hosting provider sends them on their way ("serves" the page). But for instances where your actual files have been replaced by others (a "hacked" site), your best defense is to regularly monitor your pages.

There are programs that can make scheduled connections by FTP to your Web space and perform file comparisons. See http://www.ftpvoyager.com/ for that program's FTP Scheduler function. There are other FTP programs with this capability as well. I may be wrong, but I think Microsoft's FrontPage extensions are able to quickly determine if any files have been corrupted. You can subscribe to services that compare files for you. (See http://www.freshwater.com/). Depends how critical your site's integrity is to you.

Reveal Codes in Word

A How-To

By James Alexander

In 1997, I had a VB script program another user had created and made freeware so that MS-Word users could enjoy most of the advantages of the WP Reveal Codes feature. Sadly, I have not been able to find the script code.

However, I was recently made aware of a commercial product originally announced in 2000, that will provide the true functionality of Reveal Codes for MS Word. Here is a blurb about CrossEyes, and then following is the best of how to make do with free simulators that can be used in MS Word 95 onward. The ability to edit is not available with these work-arounds.

CrossEyes v2.0 from "Levit & James" (http://www.levitjames.com/).

CrossEyes will support all recent versions of Word, starting with Word 97. Single unit pricing starts at $75. Discounts are available for large orders and site licenses.

Lawyers forced to migrate from Corel's WordPerfect to Microsoft Word can stop whining about the lack of reveal codes in Word, with the release of CrossEyes, from Levit & James. An interface for Word that reveals the underlying code structure, it allows users to see all the coding that affects the formatting of text, says the Leesburg, Virginia, company. The coding appears in a window at the bottom of a document, clearly showing all the formatting that defines how a Word document behaves, says L&J. "CrossEyes solves the biggest complaint of Word users: figuring out what features in Word have been used to format text. Unlike WordPerfect, which has a reveal codes feature, Word does not provide a native feature where a typist can see all of the codes and formatting options used to format text, in line with the text. CrossEyes provides this capability, and a number of other editing and navigation tools that simplify the use of Word."

When a typist clicks on the CrossEyes button in Word, a window is created at the bottom of the document window that shows all formatting information in line with the text. Each of the formatting options in the Word object model, such as character and paragraph formatting, section breaks, etc., is shown in a different color. In addition, a typist can view table infor-mation, such as the cell address and all forms of field codes, each in its own color. CrossEyes shows each formatting option the way it is stored in Word. For example, paragraph infor-mation, such as a style, is shown next to the paragraph mark character, both in the same color. Information associated with sections, such as columns or page margins, are shown with the section break.

Simulating Reveal Codes in Word

The closest you can get to reveal codes is to display the complete formatting information that Word is applying to a character or para-graph. You can do this by following these steps:

•   Press Shift+F1. (In Word 6 or Word 95, you can also click on the toolbar tool that shows a mouse pointer with a question mark. In Word 97 and up, you can choose What's This? from the Help menu.) This causes the mouse pointer to change to an arrow with a question mark beside it.

•   Point to the character or paragraph in question and click the mouse button.

When you do this, Word displays a "balloon" that looks like the dialog bal-loons used in some cartoons. The balloon contains detailed information about the formatting of the character you pointed to, as well as the paragraph in which the char-acter appears. You now have two options: Click on a different character to see more formatting information or press ESC to make the balloons go away and return the mouse pointer to normal.

The book *Word 2000 Concepts* ex-plains why there is no native Word Reveal Codes for WordPerfect users.

•   Editing and formatting text: unlike the formatting codes used in WordPerfect, Word applies formatting directly to text, so text in a Word document displays exactly as it prints.

•   Correcting mistakes: Word users can correct formatting errors by using the Undo command (Edit menu), or they can trouble-shoot problems by displaying a description of the formatting applied to selected text.

•   Editing and Formatting Text: Word 2000 follows a paragraph-based formatting model, which associates formatting properties with objects. In Word, paragraph formats apply to the entire paragraph.

A formatting guide/template is applied di-rectly to the text. If text is cut and pasted in a new location, its attributes move with it. Char-acter formatting, such as bold, italic, and under-line, is attached to the text characters to which it is applied. Paragraph formatting, such as inden-tation and tab stop locations, is stored in a non-printing paragraph mark at the end of each para-graph. Whereas WordPerfect uses templates also, the templates can be amended or altered without conflict, which is where Reveal Codes provide very finite control over what is or is not formatted.

Working With Paragraphs in Word

When a user presses ENTER, Word auto-matically inserts a paragraph mark and applies the current formatting to the next paragraph. If a user deletes a paragraph mark, the text merges with the next paragraph in the document and takes on its paragraph formatting.

(Tip: To display paragraph marks, tab stops, and other nonprinting characters, click the Show/Hide button on the standard toolbar).

Displaying Formatting Information in Word

Word users can take note of basic format-ting information by observing the indicators on the Formatting toolbar. Additional formatting information is available by opening the Font and Paragraph dialog boxes.

The Find feature has an option for choos-ing the special characters you want to locate. Open the Edit menu, choose Find, click the More button, then click the Special button. Lo-cate the code, special character, or formatting option you want to find and choose it from the list. You can delete the codes as you find them, if necessary.

One last trick is to open a Style View side-bar. View the document using a Normal view (View/Normal) and then go to Tools/Options/View, and change the style area width to 2.5" or so. The style descriptor that is applied to each paragraph is displayed in the left margin of the screen. Close the Style sidebar by reducing the width to zero.

James Alexander is a member of the Utah Computer Society, from whose newsletter, *Blue Chips Magazine,* this article is reprinted.

Oh My Aching Head!

Screen Refresh Rates and Migraine Headaches

By Elizabeth Dial

Most of us work with computer screens nearly every day of our lives. Whether it is e-mail at work or surfing the net at home, working with computer screens can lead to visual fatigue, eyestrain, burning, irritated eyes, blurred vision, tiredness or irritability, headaches, migraines, and nausea. Medical experts typically consider these symptoms as a temporary discomfort rather than indications of any long-term disease, but they can seriously impact work performance. There are several very simple things you can do to reduce eyestrain.

1) Make sure your vision is properly corrected for close-up work.

2) Use floor or table lamps instead of overhead lighting.

3) Use a monitor that has a good anti-glare coating.

4) Use the monitor for no more than four hours of screen-based work per day.

5) Make sure that you schedule regular rest breaks during screen-based work.

If you've taken all these precautions and still experience any of the above symptoms there may be one more very important thing you can do: adjust the monitor's refresh rate. First, a little explanation is in order.

How It Works

For the typical CRT-type monitor screen, the inside of the front glass is coated with a phosphor that glows when electrons emitted from another part of the tube fly into it. In modern color monitors, the inside of the front glass has a very fine array, in a specific pattern, of red, green, and blue phosphors. Each phosphor dot will glow briefly when an electron released from one of three electron guns (one for each color) strikes it. The guns spray these electrons from left to right, beginning at the top of the screen and moving to the bottom covering the entire array of phosphor dots. For each time the array has been covered, the monitor has displayed a "frame." The guns are repeatedly spraying these electrons throughout the array so fast that the human eye can barely detect it. Barely.

The ability of the human eye to "fuse" separate frames together into seamless motion is called the "persistence of vision" and it's the phenomenon all motion picture projectors rely on to work. The eye's light receptors and the human brain retain an image's impression for a fraction of a second longer than the light from the image was actually there.

When you watch a movie, what you are actually seeing is individual still frames of film projected at 24 frames per second. Each of these frame impressions is separated by an interval of darkness. While watching a film, you are actually sitting in a pitch-dark theater about half of the time. Persistence of vision makes one image blend into the next, giving the illusion of movement and continuity. The dark intervals are "ignored" by the brain. Or so it was thought.

Saccades

Sometimes, however, the human eye can detect the dark interval. When reading text, the human eye moves to focus on the lettering by making a series of imperceptible jerky movements along the object being read. These jerky movements are called saccades. (See http://ibs.derby.ac.uk/gallery/types.shtml for an oversimplified [not!] explanation of saccades.) The eyes make these movements so quickly that there is time for only one or perhaps two frames during the transition. Clinical tests have shown that the brain smoothes out these jerky motions by ignoring or blanking-out the image of the text. This process is called "saccadic suppression." When we see text on a computer screen, the pulsation of the image, called the screen's refresh rate, interferes with this saccadic suppression and increases the number of rapid eye movements required for reading. This in turn causes eye strain and can lead to migraines in some individuals, especially those individuals who are already susceptible to headaches.

Fortunately modern computers are becoming faster and the newer machines allow you to modify the number of times the screen refreshes (flickers) each second. The refresh rate, the number of times per second that the entire screen is redrawn from top to bottom, is typically measured in Hertz (Hz). If a monitor refreshes the screen 10 times per second, it's refresh rate would be 10 Hz. It has been shown that a refresh rate below 70 Hz causes many people to suffer from eyestrain. As a result, the industry has settled on a standard 75 Hz refresh rate for nearly all monitors. The rate of saccadic suppression varies from person to person and some people may not notice a flickering that sends others to the emergency room with a migraine.

In Windows 95, changing the refresh rate depends heavily on a separate control panel supplied by the video card drivers. If this extra control wasn't supplied, there is very little you can do to change the refresh rate. To change the refresh rate of your monitor in Windows 98 and above, reducing the potential for eyestrain, follow these steps.

Right-click on an empty area of your desktop and select Properties from the menu that pops up. Click the Settings tab, then the Advanced button. The Adapter tab contains a drop-down list of all available refresh rates supported by the combination of your card and monitor. Be aware that this list will not be present if Windows does not know what kind of monitor is being used.

The Monitor tab contains the brand and model of the monitor Windows thinks is connected to the system. If it says "Generic Monitor" or "Unknown," changing the refresh rate is disabled. Why? Because running a monitor at a refresh rate for which it wasn't designed can actually cause the monitor to destroy itself.

Be aware that changing the refresh rate may also cause the position and size of your desktop to shift within your monitor's display area. You will have to use the positioning controls on the monitor's front panel to re-center the display.

Note: The eye's retina is essentially divided into two zones: the central vision area (macula) and the peripheral vision area. The central vision can discern fine detail, has long persistence, but isn't very sensitive at low light levels. The peripheral area is just the opposite. The persistence of the peripheral area is very short, so that a monitor display that does not seem to flicker when looked at directly, will flicker horribly when looked at askance, especially in poorly lit rooms or office cubicles.

There is also a sub-level flickering that is produced when two flickering objects, one flickering slightly slower than the other, both make their impressions on the retina. The resultant flicker is about two to three flashes per second and is highly discomfiting. To reduce this sub-level flicker, use a bright incandescent lamp placed off to the side. Fluorescent lamps are the worst back illumination one can use in a computer office. The best is sunlight.

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The Ultimate Utility

Which Came First: Code or Coffee?

By Dennis Stacy

Microsoft has its headquarters in Seattle. Come to think of it, so does Starbucks. Coincidence? I don't think so.

In fact, the connection only makes sense. Just as you wouldn't try operating heavy machinery—say, an SUV with a sun roof—neither would you try writing code without a cup or two of good ol' Joe in the internal fuel tanks. Computing and coffee go hand in hand, which is to say that Starbucks' founders recognized a captive audience when they saw one.

Now, wherever Windows goes in the world, Starbucks and $4 frappacino are sure to follow. Or maybe it's the other way around. Instead of coffee following computer geeks around the globe, maybe the geeks tailed after the coffee shop. After all, Starbucks, founded in 1971, is now celebrating its 30th anniversary, whereas Microsoft wasn't founded until, what, 1985. Nor is it like coffee hasn't been around since the end of the 17th century or so. No egg and chicken issues here. Clearly, caffeine paved the way for Windows.

Starbucks now broasts (that's a combination of boast and roast) some 4,600 stores in 21 countries spread over four continents. If I heard a program correctly on National Public Radio recently, they're now expanding, somewhere in the world, at the rate of three shops a day.

But we aren't gathered here today to dissect or deconstruct the synergy between computers and coffee, but to come up with the ultimate utility. So, let's percolate, shall we? While it may be a cliché to say that this or that piece of hard- or software does everything but brew coffee, I think technology is presently at an advanced enough stage to seriously consider acknowledging the considerable debt owed to the humble coffee bean. In other words, it's high time that computers actually do coffee, preferably in the time it takes Windows to load.

Since water and electrical components haven't traditionally been considered compatible, I'm not sure how the ultimate utility—a desktop computer that actually brews a mean cup of coffee—will work, but isn't this what we pay engineers for, when all is said and done? If they pretend to be stumped, we simply cut off their caffeine. This is not rocket science.

The way I imagine it now is something like this. You pour a cup of water into a hole in the top of your desktop tower, which gurgles its way down to a heating element attached to the heat sink, in turn attached to a 2GHz Pentium IV chip. Along the way this passes through the CD drive compartment, IBM research scientists having found a way to coat a laser disc with a fine layer of Folgers' finest coffee grains. Double click on the desktop Coffee icon and the laser beam liquefies the coffee emulsion so that it blends with the water and runs down to the heating element. (Properly configured, the slide-out CD tray could even double as a cup holder.)

Recalculate a spreadsheet on startup, and I figure you're pretty much done. The now brewed cup of coffee could be funneled through another plastic tube leading to a spigot on the front of your computer, preferably located somewhere beneath the built-in Zip drive and USB ports and way left of the keyboard.

Admittedly, the ultimate utility would be limited to brewing one cup of coffee at a time. But that single jolt should be sufficient to empower the end user to employ the traditional methods used to brew up a full pot of the liquid computing aid. If not, repeat the above steps until sufficient quantities have been consumed.

I envision improvements to the ultimate utility as well. For example, the cup warmer. Plug it into a PC card slot and modulate its temperature via Windows' Control Panel. As for a coaster, there's always those ubiquitous AOL CDs. The other ultimate utility.

Dennis Stacey is a San Antonio writer. E-mail him at dstacy@ texas.net. This article is reprinted from **PC Alamode**, the newsletter of the Alamo PC Organization.

Making Forms in Word

By Thomas F. Fischer

Have you ever wanted to make a form that you could send to friends, clients, or others? Wouldn't it be nice to be able to set this form up so that they could complete it in Word, without having to worry that they might mess up the formatting or erase the form completely?

Now you can! Word 2000 (and, perhaps, previous versions of Word) allows the creation of forms using Word's "Forms" toolbar. Best of all, it's easy.

Sample Form

Suppose you would like to develop an order form for individuals to order widgets from your newly-formed widget company. A very simple form would require two areas, unchangeable items and changeable items. The Unchangeable Items area would include such things as:

A stationery header and footer.

An area indicating the customer's name, address, phone number, etc.

An area to indicate the name of the item and the price.

A return address.

The Changeable Items area would include the areas that the client needs to complete.

Step One: Form Design

The first step in any adventure is to design the form. What do you want it to look like? What information do you need? What styling do you wish to include?

Step Two: Create Headers and Footers

Using Word's "View/Header and Footer" command from the menu, create the header and footer that you wish to have for your form. Fonts, graphics, borders, shading and all kinds of other features may be used at your discretion. When completed, exit the Header and Footer area.

Step Three: Display And Learn The "Forms" Toolbar

In order to create the form you will need features that are available on the "Forms" toolbar. Go to "View/Toolbars..." for a listing of all Word toolbars. Activate the Forms toolbar by clicking on "Forms" with the mouse.

This toolbar has several features. To display their names, hold the mouse pointer over each of the icons.

Ab: This is the "Text Form Field" icon. Clicking on this icon will create a gray-colored "fill in the blank" text field.

: This is the "Check Box Form Field" icon. Use this feature to make check-off areas in your form.

"Drop-Down Form Field" icon creates a drop-down box. When individuals click on the arrow to the right of the box, a customized listing of items appears from which they can select.

"Form Field Options" icon is used to customize the properties of each of the three options above. This icon is available

only after a text, check box, or drop-down form field is inserted.

The "Draw Table," "Insert Table," and "Insert Frame" commands are the same as those on Word's Standard toolbar. However, these are placed on the Forms toolbar since tables are often used to simplify formatting and design in forms. A common use of tables is for any kind of multiple-columned items.

"Form Field Shading" icon toggles the color of the fields between gray (default) and white (no shading).

The "Protect Document" icon "protects" the formatting of the unchanging parts of the form so that users can access/alter only those areas that require their input. Users cannot change the formatting of the document in any way when the document is protected.

Step Four: Make Your Form

The fourth step is to make the form that you designed using common features of Word and the Forms toolbar.

"Tables" Icon: Tables can be used to simplify the formatting of a form. For example, if you have areas of the form requesting "Name," "Address," "City," "State," "Zip," and "Phone," these can be most easily placed into the left column of a two-column table with a row for each item—in this case, six rows).

Widgets Order Form

In the right column of the table insert the desired field type (text field, check box

field, or drop-down box field) from the Forms toolbar. To insert the desired field, place the mouse pointer in the column and row desired. Then select the desired field type from the Forms toolbar. In order to customize the fields (appearance, font, default text, etc.), one can either right-click directly on the form field, or go to the "Form Field Options" icon on the Forms toolbar.

Note that the Text Form field can be fully customized for text or numbers and automatically put them into numerical formats (e.g., parentheses and hyphens for phone numbers). Default text, numbers and formatting can also be added.

"Insert Frame" icon: This feature is helpful for putting extra text or pictures on the form. This is especially helpful when using tables as the basis for form design.

Format the table to whatever size is desired for the form. Format the text for each item in whatever font, color, and format are desired.

Step Five: Protect the Document

When the form is complete, select the "Protect Form" icon. This will protect the form you have just created from being changed. Unfortunately, this protection is not foolproof. Those who know how to use the Forms toolbar can simply unclick the "Protect Form" icon and edit the form any way they wish.

But you can protect the document with a password. To enable password protection for the form, select the command "Protect Document" from Tools on the main menu bar. Here you can add password protection to your current form.

Step Six: Save and Send the Form

The form is now ready for use. Just save it. Then use this form by attaching it to e-mail or whatever usage you may have.

Just ask them to complete the form, save it, and return it to you. It's that simple!

Limitations

As helpful as Word's Forms feature is, the major drawback is that it cannot be linked to Excel, Access, or other databases. It is simply a stand-alone feature for enabling simple completion of forms. Those desiring greater functionality may find the forms features in Access or other databases much more satisfactory for their uses.

Those who do not require this functionality will find Word's Forms feature to be quite adequate as well as designer- and user-friendly.

Try it!

Forms are helpful. Whatever your purpose, Word's Forms features can help provide functionality to easy form design and completion. And anything that makes life easier is certainly worth it. Try it today!

Thomas F. Fischer is a member of the Saginaw Valley Computer Associaiton, from whose newsletter, *Blue Chip News*, this article is reprinted.

What This Country Needs…

Is Good, Cheap Dial-up Access

By K. Joyce McDonald

This column usually presents a scan of current technology-related articles. Occasionally I like to present something new that hits closer to home. When I have a positive or negative (or in today's case, frustrating) experience with an object of technology, I like to report it firsthand to my readers.

The following describes the type of dilemma we have all experienced at one time or another: that of trying to get one technology to work with another technology. The zone in which those technologies actually connect is a no-man's land that you must invariably traverse alone.

For example, if you install an HP CD-Burner on a Compaq Computer, and it doesn't work, do you call HP or Compaq? It depends on whom you ask. HP says to call Compaq. Compaq says to call HP.

This is just a rhetorical question not based on real experience—you could substitute any name for Compaq or HP.

A real-life experience worth repeating did recently find me in this no-man's land (or maybe no-woman's land) between my Internet Service Provider and the System Administrators at work, leaving the responsibility for making them work together solely up to me.

So I say: Internet providers of the world, take heed! Cable modem and digital subscriber lines are encroaching upon your territory. They offer the addictive combination of quick access and constant connections. After using Cable or DSL for Internet connections, it is very hard to go back to the miseries of dial-up.

But at least for a while, you have a niche market: the traveling user who has cable/DSL at home. Hotels are beginning to offer the business traveler T1 lines for fast, reliable access. But the hotels that offer such are few and far between, and if they exist in areas where I travel, the room

costs lie outside the price range that my company will pay.

Our family is one of those "early adopters" who installed a network and signed up for cable modem. We're quite happy with our service. It's not without glitches, but the RoadRunner guys are both earnest and honest, try hard to fix what gets broke, and even warn us in advance when they are doing maintenance so that if they break something, we'll know what's going on.

They did initiate a dial-up service several months ago. I immediately signed up, but was unable get in due to the buggy password authentication routine. I waited a couple of months but never heard anything more about it. Recently I e-mailed customer service asking why. I received a prompt reply from Daniel D. Kerr with the following message: "Right now, the older product has been dropped for the exact reasons you saw with having problems connecting. RR is looking at another vendor and is trying to get the support set up for that product. I hope to have something

shortly that we can begin testing here and then release to the customer base. That's the tough thing about a beta test. We didn't know what issues would pop up until we had customers on it, but there was the risk of the project being canceled (which it was.)"

I have a long-standing dial-in account with ATTGlobal.net (formerly IBM.net) so I wasn't in any particular hurry to switch to another service. Until now.

I would have discontinued my ATT-Global.net account a long time ago if it weren't for three benefits: first, I use it for Internet shopping so all the junk mail goes there. Second, at $4.95 a month, it's cheap and reliable. Most important, I can still use it when I travel, since my cable modem doesn't have a cable that will stretch to Seattle or Minneapolis.

Until recently I used a Gateway laptop on the road. Running Windows 98 with a Pentium 120 processor, it was slow, but I don't get that much mail on the road, and I'm not much in the mood for anything but a quick e-mail check after a 14-hour work day.

Recently my company issued me a Dell laptop running Windows NT Workstation. When I first got the Dell, a conflict between network card and modem card kept me from using the modem at all, so I continued to carry the Gateway for communications purposes.

When my system administrators got the modem working on the Dell, I thought I could retire the Gateway until I tried using my ATTGlobal dialer. I could hear the modem working. It sounded like a modem should when dialing in and connecting.

But during password authentication, I kept getting an "Error 000057" message. After three such messages, I used my cable-connected machine to log onto the ATTGlobal Web site and did a search on "Error 000057." The site gave me the useful explanation "Unhandled Event." Period. No "See also." No "This means that..." No "Take two aspirins and call me in the morning... "

Since my modem had never behaved to begin with, I took this to mean more modem problems. When I was pretty sure the modem was working correctly, I assumed an incompatibility between Win-

dows NT and the ATTGlobal dialer program (I still think it a small miracle that anything works with Windows NT.)

For days I fiddled with the system settings, read the documentation on the ATTGlobal site, and tried to patch together what I knew about Windows NT, modems and dialers. I came up with a blank.

When all else failed, I tried to log on using my trusty old Gateway. It failed, too. Not the same error message, but during the same event: password authentication. Thus began my relationship with ATTGlobal customer service.

Hoping to avoid hours on hold, I sent an e-mail describing the problem in detail and asking for help. After eight days, I still had no reply except for an automated message logging an incident report.

I gave up and called ATTGlobal.net. To my surprise, they answered quite promptly and after about 20 minutes, we had my Gateway laptop working again. Since it was about 6 p.m., and since I got through so quickly, I told customer service I'd call back the next day to work on the Dell laptop.

The next day, I called back and again got a prompt response. Since my Dell laptop is administered by the System Administrators at work, the customer service representative suggested that I only write down the settings that needed to be made or changed, then discuss them with my SA before making the changes.

The SA and I made the required changes the next day. I reinstalled the Global Dialer in hopes that it would correct any dialer setup problems. A day later I stayed home to test the dialer on my Dell laptop.

Holding my breath, I dialed and waited. "Error 000057." On my third phone call to ATTGlobal.net I waited about 30 minutes to talk to a Customer Service Representative. The representative told me to make further changes, which I made as he talked. But I had to hang up to test them, since I no longer have a second phone line in my office, and he was unwilling to call me back on my cell phone. I dialed again.

"Error 000057." I borrowed my son's cordless phone and called again. Another wait: 20 minutes (I bet they ID the repeat

callers and when they come up in the queue, it's a signal to take a coffee break.) Another Customer Service Rep walked me through a few more changes. I was able to test them right under his nose. No matter what he did, old 000057 remained with us. The Rep said he had done all he could and told me he was referring me to the next level of Customer Service. He took my number and told me that they would call me back. It took me eight days to realize they were not going to call back.

I e-mailed a second problem report, using some very frustrated language. A couple of days later, I received an e-mailed reply suggesting that I check WSP Client in Control Panel and disable the WinSock Proxy Client. After I un-checked one checkbox and rebooted, my dialer sprang to life.

I wish I could say my story is happily over, but that is just another step toward progress. The whole purpose in having a dialup account is to save my company long distance expenses by dialing a local number via my ISP, then using the connection to get into my company network. This is called Virtual Private Networking using the Point-to-Point Tunneling Protocol (VPN/PPTP). The System Administrators and I have not quite established compatibility between my ISP and our network, so we're still tweaking.

Until we're successful, I have several options available to me, none of which I like.

1. Dump ATTGlobal.net and go with an ISP with demonstrated compatibility at four times the price.

2. Limp along with what I've got till RoadRunner has a dial-up service, hope they don't charge an arm and a leg for it, and hope that their dial-up is compatible with my network and VPN.

3. Dump ATTGlobal.net and pay the long distance charges for direct dialing my network, hoping that the charges won't add up to as much as an ISP's monthly service charge.

4. Don't connect with the network when I travel. Hope no one needs me.

Any suggestions?

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Bonehead Burner 101

By Dale Swafford

So, you bought and installed a CD recorder/rewriter (a burner) in your PC. You might have expected it to be a simple plug-and-play (like a VCR) operation. Big surprise! For most folks who install the drive themselves, you're entering the unknown zone. Almost everyone needs help with the technology terms in the drive install instructions. There are many good glossaries available online. I recommend you try www.adaptec.com/tools/glossary/cdrec.html; it has always worked for me.

Three cords and a jumper must be plugged in and set for the drive to function properly. Plug in the power connector—it's Murphy-proof (can only be inserted one way). Next decide if the drive will be the master or slave in the EIDE hookup. The boot hard drive will always be on the primary IDE ribbon cable and set to master. The burner will be set to master and the ribbon cable attached to the secondary IDE connection on the motherboard if no other drive is attached. If a CD-ROM or other IDE drive is already installed as master, set the burner jumper to slave and plug in the ribbon cable to the burner using the middle connector. The master device is plugged in to the end connector.

The ribbon cable has a colored stripe down one edge to indicate the #1 pin connection. Some connectors are Murphy-proof, some are not. If you plug it in backwards, it could damage your drive. The last cord is the audio or sound cord that will be plugged into your sound card. Are we having fun yet?

Getting Windows to recognize the new drive in Windows Explorer is the next hurdle. Follow the install instructions with the drive to the letter. Windows 95/98 will recognize the new hardware and install its own driver in most cases.

The best thing you can do for yourself, hardware-wise, is make sure the firmware in your burner is the most up-to-date. Firmware is the interpreter of commands from your operating system and software to your burner. It is a flash bios that can be updated with downloaded files from the burner maker. I know, it's brand new. Why would it need to be updated? Because as fast as the maker discovers a problem with his instruction set, he can fix the problem with a new firmware version. It's a good thing, as Martha would say.

Installing the software bundled with the burner is pretty simple, thanks to the Windows installation wizard. I recommend installing the software into a partition that has about a gigabyte of unused space to create image files. The only problem is, most bundled software is either abbreviated or crippled versions of the regular software. Not to worry, it will get you up and running, and maybe give you an opportunity to burn a few coasters (that's what we call failed attempts to record a disc).

Also, go online to your burner software maker and check for updates to your software. Most software firms are constantly updating their software to improve it and remove bugs. Every time they fix something, it makes your life a little better. Get in the habit of checking every month or so. If they don't offer free updates, start thinking of getting different software. Things are changing fast in this young industry. If a firm is not constantly making their product better, they're going out of business.

Now go to your favorite discount computer store (I use CompUSA) and buy a 100-pack or 50-pack spindle of 74- or 80-minute 8X or better recordable discs. Might as well pick up a few rewritable discs with the same rating as the middle number in your burner description, usually 4x (8x-4x-32x refers to the maximum speeds the burner will record recordable discs (R), rewritable discs (RW), and read data, one x being the speed at which music is played (1,411kbps). Might as well get some CD labels while you're there, so you won't have to write with a pen on the successful disc. (Watch the Sunday inserts of CompUSA, Best Buy, OfficeMax, and Office Depot for free (after rebate) disc offers. I haven't got a bad one yet, and try never to miss a free offer.)

Your education must start now. Read the manual that came with your burner. Then read the manual or help files that came with your burner software. Then download the best all-around primer at www.fadden.com/cdrfaq/. It's updated monthly by Prof. Andy McFadden's students at MIT. Keep it handy, you'll need it frequently on this little adventure. Also, go to the Web site of your drive and software maker. Seek out the frequently asked question (FAQ) section and read the questions and answers.

Now we've got our stuff together, so it's time to organize for a burn. Keep in mind, the rules are slightly different for each type of disc you burn. For copying data from your hard disk, you have several choices. You can burn an ISO 9660 in two flavors (with 8+3 or long file names) that when closed, will play on any CD-ROM (except for really old drives—pre-8x). Or you can choose a multi-session burn that allows you to fixate the current session and later write additional sessions until the disc is full, then close the disc and it will play on any CD-ROM. Or you can use DirectCD (packet write) and format the disc to use it just like a 600-MB floppy using Windows Explorer.

If the UDF reader file is included on the disc, before it is closed, it can be read by any CD-ROM. If you want to make an archive copy of a program disc, you will probably run into some form of copy protection. Please do not try to copy a Microsoft disc; they will punish you. For all data burns, both recordable and rewritable discs work fine.

Planning for an audio disc is way different. You can record from an analog source (your sound card) and not be concerned about copy protection. You will pick up noise artifacts that are not present in a digital copy, but you can record from any source that you can plug into your sound card. The analog-to-digital converter in the sound card will determine, to a great extent, the quality of the sound recorded to a wav file. Or, you can record digital from an existing CD. You then have a choice of using digital audio extraction (DAE) or downloading a replacement Windows virtual CD file system from www.sonicspot.com/alternatecdfsvxd/alternatecdfsvxd.html that will show the wav files on the source music disc. This allows you to drag-and-drop using Windows Explorer to move wav files to

your hard disk. Be sure to clear the read-only file attributes by right clicking on the downloaded wav files and selecting Properties.

For some unknown reason, copy protection has not complicated any of my burns since I began using drag-and-drop. Copying the same files using DAE resulted in a coaster, except with the best heavy-duty burner software (Nero). When you have all the wav files on the hard disk, you can improve the sound by running the filters in your burner software to clean up the tracks or just normalize the sound level of all the tracks.

Always listen to the music in the sound file to make sure it is the quality you want to burn on a CD. This is the place to fix it, or plan to start over. Now it's time to set up the computer and the software for the burn. This is the most unforgiving part; a mistake here and you've wasted a lot of time and burned a coaster.

First, check your software manual. It will tell you that Windows' Auto Insert Notification (AIN) should not be active. To check its status in the Device Manager, click on CD-ROM/Properties/Settings. A check in the box by Auto Insert Notification means it's active. To deactivate it, click to remove the check mark and reboot the computer for the change to take effect. The Settings page also has the version number of the installed firmware.

Also, take a look at what the Windows is running in the background. Hold down Ctrl + Alt and tap the Del button which will bring up the Close Program dialog box. Anything that can interrupt the burn means trouble. Selecting an item and clicking End Task will shut it down. If DirectCD is active, shut it down. It interferes with many burner programs.

Now it's time to fire up your burner software. Most decent programs have a wizard to provide a little hand-holding until you become familiar with the program. Use it!

Don't be in a big hurry to hit that burn button. Before every burn, open the properties, options, or settings section to make sure the burn will interface with the operating system, hardware, and software. Memory utilization should always be set to the partition with the largest block of contiguous open memory. A little defragging will put all the existing file pieces together and make access faster.

For a music burn, select disc-at-once, which will close the CD to make it playable on most CD players. Use track-at-once only if hard disk space is at a premium. For a data burn, you can select multi-session to keep adding groups of data until the disc is full, then close the CD to make it readable on nearly any CD-ROM drive.

Do not use multi-session for music. CD players will only recognize the first session, even if more sessions are recorded on the disc. Until you become familiar with the limitations of your burner setup, let the test and burn (or simulation, if available) function set the burn speed. As you add more RAM or a faster, bigger hard disk, or a later operating system, gain experience with your rig, then experiment with the burn speed.

The most bullet-proof burn will be from an image file on your hard disk. The speed rating of the blank disc should be the same as or higher than the record speed. The rewritable discs are really touchy about this. The recordable discs are not as fussy. There is a 99.9 percent probability that if a burn failed, it was not caused by the blank disc.

Now is the time to select and organize the files you want to burn in the burner window. Load the blank disc in the burner so the software will know the time available on the disc (74 or 80 minutes). Click the burn button and in most software, a dialog box will allow you to set some burn options. Click "write" or "burn" or "record" and leave the computer alone. Do not bump it or run another program.

Creating a CD is a very resource-intensive operation. It uses most of the resources of the entire computer. One little burp in the data chain and a buffer under-run will occur, which in almost all cases makes a worthless disc. Except on a burner with the burn-proof feature, or software with the simulation feature, the laser does not tolerate any interruptions and kills the disc.

When the software opens the tray and announces a successful burn, the fun is only beginning. It's time for the crucial test. Most closed data discs will play on CD-ROMs due to the emphasis on error detection and correction. With music discs, it's another story. Will it play (and sound good) in all of your CD players? I first play the CD in my CD player hooked up to my main sound system. I listen to part of every track. If it passes that test, then I put it in the car CD player, my most finicky player. If it recognizes the TOC and sounds OK, then I have a good CD.

Some software, when coupled with using DAE, causes about half of the burned CDs to not play in the car (a two-year-old Honda). Most will play in the CD player (Sony) in my sound system. Even music on rewritable discs will play on the Sony. Go figure!

I know you don't believe it, but this is the basic course. If you're like most of us, you'll burn a few coasters, get frustrated, go online and read the frequently asked questions, reread your manuals, and then realize help is available from others in your PC users group.

Benefits and Special Offers

Technology At Work

By Bob Click, Greater Orlando Computer Users Group

My wife and I worked as security for a trade show somewhat different than we have ever worked: The National Business Aviation and Aeronautics show. It was split between the Orange County (Florida) Convention Center (trade show displays) and the Orlando Executive Airport, a smaller regional airport in Orlando, where about 150 business jets— some state-of-the-art, some used, and other jets refurbished for business use—were on display. It's fun to see all the corporate-type jets, but something that really caught my eye had nothing to do with the jets. It was a giant projection screen outside mounted on 30-foot towers. It was 4 p.m. and I could see the movie on the screen as plain as day, even though the sun was shining on it.

I asked the technicians where the projection was coming from, and it turned out it was an LED-type screen made up of 10" x 10" modules, and the entire screen was 10' x 16'. It's easily repaired if there is a problem just by replacing the faulty module. I was impressed by this technology (made by Seiko) that could be plainly seen in spite of the sun shining on it. It is valued at a million bucks if you are interested, or you can rent it from Seiko like these AV people did. Nice for the home movies, wouldn't you say?

SRUG Fun Weekend

My wife and I traveled to Atlanta for the Southeastern Regional Users Group (SRUG) conference and had a great time. The organizers—Michael Rogers, Steven Morgan and Rose Lynn—put in a great deal of time, along with the many other volunteers, and it paid off with a successful event. Here are some interesting numbers. They had 68 attendees representing 24 user groups. Eleven user groups were Mac, thirteen were Win/DOS and one was Linux. 24 registrants were Macintosh people and 44 were Win/DOS. Two also represented the Linux group. Pictures at http://www.gcmac.org/srugc.

Atlanta PC UG and Gold Coast Macintosh UG (from south Florida) each had nine registrants. The camaraderie was great and even a short refreshment break was planned between the roundtables for a bit of chitchat. Lots of raffle prizes. It's already in the planning stages for next year and I recommend it. It was not part of the event, but the Interop/Comdex show ran during the preceding week and a few attended that show. All the meal events (starting Friday evening) had vendor sponsors, and even the refreshment breaks between the roundtables had a sponsor. Michael said they were proud to note they came out in the black, and with some seed money for next year. Way to go, Mike! The Sunday luncheon, vendor fair, and prize drawings were kind of rushed though, because many attendees were from Florida and wanted to start the long drive home.

Many people made it a point to come over and talk to me, thanking me for all my work. Talk about getting the big head—I hope I stayed humble. It was sure encouragement to keep the column going.

Still Good

All investors should know that the High Growth Stock investing solutions deal is still good for this month. If you go for the FREE 60-day trial, it is fully functional software along with the data download and the market analysis newsletters, and it's good for a full 60 days from the time it is registered. This is only for the serious investor, but that doesn't mean a novice can't learn, so try it. If you are in the mood to check it out, go to http://www.highgrowthstock.com/Order/Trial.asp?from=Click to order your free 60-day trial. If you choose to continue the subscription after the free 60 days, your one-year subscription will be extended to 14 months for the one-year price. Wow, 16 months total service for the price of only 12, what a deal. I'm just getting started with mine, but I'm excited.

The Centuriansoft package (SoftClan e-cryptor & Steganos 3 Security Suite bundled together for just $39.96 including S&H) is still good and all the information is still posted on my Web site (http://www.dealsguy.com). I thought they would put together another package, but perhaps next month. http://www.cen turiansoft.com.

How About Some Animated Gifs, If You Do Them Yourself!

Do you find yourself wanting to create an animated gif for some purpose? Take a look at Barbarosa Gif Animator 3.2. Taken from their Web site: "Babarosa Gif Animator provides the fast and easy way to create compact gif animations for the Web. Animations can be quickly assembled from imported images (13 formats). You can also design animation directly in the program using vector graphics, image, and text edit tools. Palette optimization, data compression and colors reduction give you a possibility to obtain small size GIFs."

There is more about it on their Web site as well as some ratings, and until the end of the year you can get it for just $29.95, regularly $39.95, at http://www.liatro.com/download/download.php. My thanks to Clarke Birde of Alamo PC Organization for bringing this one to my attention.

How About a Freebie From Executive Software!

I imagine all user groups received this announcement from Colleen Toumayan about the release of Diskeeper Lite, their manual defragmentation companion to their highly popular automatic defragmenter, Diskeeper 7.0. The following is part of their description:

"The new version of Diskeeper Lite can be run on all Windows® operating systems from Windows 98 on up. The new version of Diskeeper Lite was built with the same advanced defragmentation technology as Diskeeper 7.0. As a result, it's far faster than any manual 'built-in' defragmenter. However, it has no networking capabilities or scheduling features.

"John Kimmich, Diskeeper Product Manager, said: 'While the old Diskeeper Lite educated people about fragmentation, the re-release educates people about the limitations of manual defragmenters. It's a good introduction to the power of full-version Diskeeper, because, truthfully, automatic defrag is the only way to go, especially for enterprise users.'

"Diskeeper Lite freeware is available for immediate download at www.exec-soft.com."

Phone numbers are (800) 829-6468 and (818) 771-1600. A variety of system management tools, trialware and free utilities are available also.

A Free Office Suite For Cheapies

Look what you get for all your hard-earned money <G>. It offers a word processor, a spreadsheet, a presentation tool, an HTML editor, a drawing tool, and a mathematics equation editor. This one is called OpenOffice and they don't even care how many PCs you put it on. I doubt it's quite as full-featured as the other popular office suites that you pay good money for, but at least using OpenOffice will not have anybody looking inside your PC to see if it shouldn't be running there.

You can download this freebie at http://www.openoffice.org/dev_docs/sourc e/download.html. I have not looked at this suite, but what do you have to lose? And you won't have to ask for your money back! OpenOffice will run on Windows, Linux, and Solaris, and I just noticed there is also an alpha/developer version for the Mac OS X. There is information there on the development of OpenOffice, which is an outgrowth of Star Office.

That's it for this month. Meet me here again next month if your editor permits. This column is written to make user group members aware of special offers I have found or arranged, and my comments should not be interpreted to encourage, or discourage, the purchase of products, no matter how enthused I might sound. •

Bob (The Cheapskate) Click [Bobclick@mindspring.com]. Visit my Web site at [www.dealsguy.com] for past columns. There are also interesting articles from user group newsletters on my "Articles of Interest" page for viewing or downloading.

Guest Opinion

Seven Habits of Highly Annoying Software

By K. Joyce McDonald

Has the software industry become a bunch of patronizing know-it-alls who think users are too stupid to make any decisions for themselves? Do developers add "features" whose only purpose is to control the user or even sell services?

The following list suggests a trend in recent software releases. Will this trend increase profits for the industry or drive users away?

Draconian Copy Protection

It struck me early in the Windows 95 stage as I was trying to make some sense of a 400-page registry: You're not supposed to make sense of it. The registry allows software makers to store all sorts of information on your computer to which you have no intelligent access.

Oh, yes, they say, you can edit the registry—"We gave you the Regedit utility, after all." Then why is Regedit run via the command line and not the Control Panel? It really doesn't matter because once you get into the registry, there isn't much you can do unless you have a Microsoft Magic Decoder Ring.

Software companies use the registry to lock up their programs. One such program, RoboHelp, I use at the office to edit help systems. My company owns a one-seat license. A few months after installation of a new copy, the person who was assigned to use RoboHelp got laid off and I took over that function. When I fired up his machine and logged on as myself to run RoboHelp, all functions were disabled. I had to ask the System Administrator for this person's login and password before I could get RoboHelp to work.

When I started traveling, we ported my software to a laptop, dutifully uninstalling RoboHelp from the other machine. To facilitate remote communications, I have two Windows NT profiles: one local and one remote. RoboHelp is installed under my local profile. Although a single copy

resides on my laptop, when I am remote, all RoboHelp functions are disabled. I have to reboot to my local profile and endure a lot of connection attempts and error messages before I can get into RoboHelp.

If the purpose of copy protection is to keep unauthorized users from using it, why make legitimate users suffer so much?

Using Up Resources Because You Can

Thus far, the biggest waste of system resources (not to mention development time) in all computerdom is "Clippy," the Microsoft Office paper clip. Clippy pops up suddenly when you type the word "To" and asks you if you want help writing a letter. I write computer manuals, and a standard sentence preceding each screen shot is "To access the blah blah screen, use these menu items:" To date, Clippy has popped up on me 5,672 times. Had I the computer equivalent of an axe, I would be awaiting execution as a serial killer.

Web sites can waste even more resources because they rely on bandwidth as

well as RAM and drive space. If a Web site is slow to load over my office T1-line, will my laptop's 56K dial-in connection deliver CNN.com before midnight? Even at the office, whenever I think about logging into a Web site, I ask myself if the site is worth the wait.

Several years ago I was tasked with developing a Web site for another employer. Before I wrote one line of code, I told him the principles under which I would operate. First: keep it simple. Second: make navigation intuitive. Third: use special visuals and other bandwidth-hogging features only when they serve a functional purpose. Fourth: since this is an advertising Web site, don't insist that your constituents load new applets onto their computers for the privilege of viewing our advertising. Since we were in the business of writing technical sales materials primarily about bandwidth, we should practice what we preached.

Two years after I left the company, a former coworker told me about the company's new gee-whiz Web site. When I logged on, I had to download Shockwave. Several minutes after the download, the screen displayed a revolving visual on a black background. It was interesting, but didn't offer a clue as to the purpose of the site. A few more minutes elapsed before I discovered that holding the mouse pointer over the graphic displayed a link to the Web site's main menu. When I clicked the link, the screen displayed a picture of the owner.

I suppose I should congratulate myself for convincing this executive to move from paper to online media, but somehow I feel like the inventor of gunpowder.

Making the Only Documentation a Phone Call Away

I recently developed a help system for a handheld computer running the Windows CE operating system. Before I developed the system, I surveyed some existing help systems to see what other handheld help systems were doing. On attempting to access some help systems, my unit prepared to dial in to get the information. The help was not stored on my handheld; it was sitting on someone's site a phone call away. After successfully logging onto the site (5 minutes) and finding the information I want (15 minutes) what are the odds that I'll remember what it was I wanted to know?

Server-based help systems might make sense for units that use wireless connections (unreliable as they are), but those units with only phone line modems are in real trouble. It kind of defeats the purpose of a handheld device if the user has to carry several miles of phone cable to get instructions.

Assuming It Knows What the User Wants

As if I weren't spooked enough about the Big Brother-ism in features like Clippy, now we have the morphing toolbars in Office 2000. Honest, I'll take Clippy back if Microsoft will leave my toolbars alone. Isn't the purpose of a toolbar to allow you to put the icon where you can find it fast (even without looking) to increase your productivity? Now, in Word 2000, my carefully customized toolbars appear different every time I open Word. I never know when or if an icon will appear, and if it doesn't, I have to go looking for it as if this were the first time I used the software. Someone please tell me how to turn this feature off!

Hiding Stuff in System Startup

The user doesn't need (or want) most of this. The worst culprits: the Iomega Zip folks. They jerry-rig your machine to load a lot of stuff upon startup (and I'm not talking about just drivers). They put a checkbox in the software itself that lets you decide whether you want to load all their programs. Thus, when you look in the Startup menu to remove all the junk, nothing is there to remove.

Selling You Something

I can forgive MusicMatch for trying to sell you something every time you start it up, shut it down, or use a certain function since the original application is free. But if you have paid hundreds or even thousands of dollars for an application, you shouldn't have to mess with advertising. But be prepared, because the big guns have learned this trick now.

Microsoft Office XP includes a feature called "Smart Tag" that keys into certain typed words or phrases. It will be used to pop up a window offering the user, for a fee, information from the Internet. For example, if you type a stock symbol, it offers to take you to various informational pages about the stock and the company from Microsoft's MoneyCentral Web site. These smart tags will likely require you to sign in with the Microsoft-owned authentication system called Passport, which stores your personal information.

Crashing into Other Software

It doesn't happen very often, but if I'm working on a large document in Word 2000 and am concurrently running Windows NT Explorer, when I try to cut and paste a table row, Word gets busted on an illegal operation rap and I lose whatever I was working on. What is even worse is that if the system doesn't crash, I can't get back into the document because Word in its infinite wisdom declares that it is already in use. I can't get the file back until I reboot.

I certainly won't quit computing because of these annoyances, but, as in the case of RoboHelp, I'll be looking for serious alternatives - alternatives that offer me as a user a little more respect.

Leave Your Work

By Bill Wood

You should think twice before bringing work home from the office. There may be another good reason for either leaving work at the office or having your boss buy a laptop that is easier to take to court.

I'm not talking about using a portable computer as a trial tool. That has been fairly standard for years. No, this time I'm talking about the typical computer user who brings work home from the office or who sends e-mail. Your home computer could end up in court. With that in mind, some simple precautions can save a considerable amount of grief.

Recent court cases have made it clear that there is a risk that your home computer could be subject to discovery. Generally, either party in a court case can file a request to examine files and records of the other party. The request does not need to be very specific so long as it describes what information is sought. For example, a discovery request for "all Word documents stored on any computer used by Bill Wood for work purposes between June 1, 1999 and June 1, 2000" could be a proper request.

There is a scenario that is even scarier. A party can also require you to make the entire computer available for inspection by the other party and its experts. That method is used to find forgotten or hidden files. It is also used to retrieve files that have been deleted. Remember that with DOS-based machines, merely deleting a file does not erase the content from your hard drive. It is only removed from the list of files. Many programs and techniques are used to recover such files. Although that can be a life saver if you inadvertently delete a file, it can also be very difficult to explain if your adversary finds files on your machine that you said didn't exist. Obviously, it is easier to continue a normal life if you have sufficiently separated the files that might be involved. Keep work-related files away from the home financial files or your child's research for a term paper.

It is true that your lawyer can seek a protective order from the Court that restricts the examination of your computers or files. You can also have the judge restrict the use and dissemination of the information disclosed. But, experience indicates that the judge will allow fairly great latitude in the discovery unless you can provide evidence that there is no evidence to be had. And when your lawyer works for an hourly fee, every trip to court is costly.

How can all of this happen? Recent cases have involved misappropriation of company secrets, criticism of an airline by some of its employees, and e-mails supporting an educational proposal in the recent elections.

The typical rules of courts only require that a request to examine files be reasonably calculated to lead to uncovering relevant information that would be admissible. The requesting party may not even know if a document even exists. It is very simple to ask for all documents in any form or format on a certain subject.

Of course, the problem with mixing work-related files with your home files is that computer users tend to put a lot of information on the same computer. Thus, there is a valid concern that much more than relevant evidence will be uncovered. In the process a lot of your private information will be exposed and your home computer could be out of commission for a significant amount of time. It may then be impossible to get online to pay your monthly bills, not to mention your son or daughter not being able to complete a term paper.

Another potential trip to the courthouse for your computer can come from your e-mail and posting to message boards. In several recent court cases judges have ordered Internet Service Providers to disclose the true identity of account holders that sent e-mail or posted messages to discussion groups. In November 2000, a New Jersey judge ruled that AOL must disclose the name of its subscriber that sent a barrage of e-mail messages connected to a local school board election. While that case involved an unreasonable amount of messages (and one was alleged to contain a virus), it is the first instance I've seen where political speech has been involved in an identity disclosure request. That is significant because courts have traditionally held that anonymous political speech is perfectly permissible.

More frequent requests have surfaced from companies that seek the identity of persons who post opinions about companies that may affect stock prices or that disclose trade secrets. This is a developing area of the law and it will be a while before we know how Internet Service Providers will cooperate. However, it is easy to see the ISP's dilemma. It costs money to protect the identity of its subscribers and there is very little chance that it will be reimbursed for those costs. On the other hand, it can't afford to be seen as a company that doesn't stand up for its subscribers.

How do you deal with these threats? One solution is to get organized. The best solution is to keep your work files at work and not commingle them with your home files. Fat chance. Sometimes the only way we get to see our families in the daylight is to bring work home and open it up after dinner. But, it is still possible to provide some protection.

That is where a laptop and a separate e-mail account can help. Use the laptop when you need to do office work. Use a separate e-mail account to post your legitimate opinions on message boards. If a laptop isn't available, as least set up a separate directory and file for the work-related files. It will make it much easier to comply with the discovery order if all of the information is already segregated from the rest of your files.

Don't misunderstand me. Harassing spam, viruses, and threats are bad and they are often illegal. They should never be conveyed. But, you are entitled to do your work and express your lawful thoughts and opinions in responsible ways. By organizing your computer use you can honestly swear that you did not use your home computer or your home e-mail account. There is no guarantee those steps will keep your home computer and e-mail accounts from the courtroom, but it should help restrict the invasion into your life to the smallest possible inconvenience.

Bill Wood is an Assistant City Attorney in the San Antonio City Attorney's office. He practices real estate and technology law for the city and can be reached at wwood@texas.net. This article is for general education only and is not intended as specific legal advice. He is not in private practice and is not soliciting clients.

Anyone concerned about any legal questions covered by this article should consult a private attorney that is familiar with the field. This article is solely of the personal opinion of the author.

Software Review

Quicken Home and Business

By Barton Koslow

Quicken Deluxe has been central to my financial needs for quite a few years, so each year I eagerly await the updated version. This year I decided to check out Quicken Home and Business to see how it differed from the Quicken Deluxe version I customarily use. Quicken Deluxe includes seven financial centers: My Finances, Banking, Investing, Household, Tax, Planning, and Reports and Graphs. Add a Small Business Center, a full complement of business reports and graphs, and you now have Quicken Home and Business. Don't let this fool you. The added items cover a lot of territory.

New Center

The Small Business Center transforms Quicken Deluxe into a full-fledged accounting program. It includes Accounts Receivable, Accounts Payable, and Payroll. In addition, you can estimate and track costs for individual jobs and projects. When you attempt to create an invoice or enter a Bill Payable, Quicken reminds you to first set up an account. You are then led to a separate Accounts Receivable or Payable Register and an invoice or bill-payable entry form, as the case may be. When the invoice or bill-payable is completed, your entry appears on the Receivable or Payable register. Accounts Receivable provides entry forms for customer payments, credits, refunds, finance charges, and customer statements. You may, at any time, display a current list of unpaid customer invoices. You may create standard invoice items, and modify or delete the provided custom messages for statements. Under Accounts Payable, there are entry forms for vendor payments, credits, and refunds.

Payroll

It is possible to enter payroll into Quicken manually, but this is not usually recommended. The Quick Payroll program on the CD-ROM is installed after you have installed Quicken Home and Business. A 30-day trial period is free, after which you must subscribe to Quicken Basic Payroll Services to continue to use Quick Payroll. You need an Internet connection to properly use Quick Payroll.

Quick Payroll enables you to track hours, salaries and wages, social security numbers, dependents, vacation and sick time, bonuses and advances, company payments to government and private pension plans, and keep your payroll tax deduction tables up to date.

Reports

Reports added for business include balance sheets, profit and loss statements, cash flow statements, outstanding invoices, accounts receivable reports, accounts payable reports, payroll reports, tax reports including Schedule C, a missing checks report, and project/job cost reports. A Quicken Services Directory points you to more business and other offerings (some free and some not) like Internet postage, online bill payment, 401(k) advice, shopping for insurance, autos, etc., creating a business plan, sending and receiving money via e-mail, tracking packages, and more.

Quicken Deluxe

The remainder of the program is the same as Quicken Deluxe, which is a substantial program by itself.

Quicken addresses every avenue of personal finance, from keeping track of your bank accounts, investments, income and expenses, and taxes, to planning for the future. It's all there and more than you will probably ever use. I use Quicken to keep track of every aspect of my finances, investments and taxes. I know my investment positions, my bank account balances, and my net worth on a daily basis. It is difficult to remember how I ever got along without it.

New Improvements

Even great programs like Quicken may be improved. This year is no exception. A new Bill Reminder may be activated on boot-up of your computer. The method used to alert you to financial news in the Portfolio View is finally right. If there is recent news, a small symbol appears next to the security's name. Placing your cursor over the news symbol shows the headlines. Click on the headline and you are taken to Quicken.com to view the complete article. Before, you had to click on each security in your list to see if there was news. Bravo! It's about time.

The new Smart Reconcile feature permanently stores statement information, permitting you to correct previously reconciled statements. An improved tax feature allows you to go from totals to details by clicking your mouse on the numbers. The Investing Center has been revamped and improved with areas for investing services, activities, and analysis. You may now backup your data to the Quicken Internet site. Alerts are more customizable and powerful. Integration with Quicken.com has been augmented. The Quicken.com Web site now has show-me videos to help you with Quicken. And the new Quicken Services Directory (see above) has been added.

Program Deficiency

Alas, there is one major feature that has been omitted from this stellar program. Intuit, where is the undo feature? When you inadvertently delete an essential number in Quicken, you are in deep trouble, as every other figure is affected. Not only is an undo feature required - it should be at least four or five levels deep.

Conclusion

I have always maintained that the foremost uses of a computer are for word processing and accounting. In my opinion, you cannot find a better program to handle your personal accounting.

Quicken Home & Business 2001
Web price: $74 plus shipping

Quicken Deluxe 2002
Web price: $53 plus shipping.
$20 rebate for upgrades.
Intuit, Inc.
P.O. Box 7850
Mountain View, CA 94039-7850.
800-8118706
http://www.intuit.com

Barton Koslow is a member of the Los Angeles Computer Society, from whose newsletter, *User Friendly*, this article is reprinted.

Computer Broadcasts

By Ken Hopkins

In addition to the monthly Sacramento PC User Group meeting and the various SIG meetings, there are radio and TV broadcasts that discuss computers that may be helpful to members. I managed to find several, but they are not all verified. If you know of any changes from my list, please send me the information via e-mail (ken@hopkinscomputing.com). Help me fill in the gaps with other regularly scheduled broadcasts. If a show has gone away, I would like to know that too.

The oldest running TV program is Computer Chronicles, carried by PBS. It does not appear in the August lineup but I do not know if it has been canceled. It has suffered from being scheduled very late at night.

The most TV coverage can be seen on the TechTV (formally ZDTV) network. In Sacramento, you can get TechTV on DISH Channel 191, DirecTV Channel 354, and Strategic Technologies Channel 37. You can also find TechTV on GE Americom Satcom C4, transponder 12, 135 degrees west, 40 degrees elevation. If you are an AT&T Broadband subscriber, you should let them know that you want TechTV (if we get AT&T to pick them up, it will be easy for us to bring TechTV personalities to a meeting). Times are not given because they keep changing.

Additional TV programming is produced by CNET. For a while they had several great programs on the SCI-FI channel but these seem to have gone off the air. The remaining programming appears on CNBC. CNBC can be seen on most cable or satellite systems. On Comcast Cable, it is channel 49. It also appears on DISH and DirecTV but I do not know the channels.

Most of the TV shows are repeated at least once after the initial play. Some radio programs are also aired multiple times. In addition, some of the radio programs are also broadcast on the Internet in case you get bad reception from a distant radio station.

Radio Programs

Online Tonight
KFBK AM 1530
Weeknights 1 AM – 3 AM

AM 910 (Oakland)
Weeknights 7 PM – 9 PM
Host: David Lawrence

Online Today
KFBK AM 1530
Sundays 11 AM – 1 PM
Host: David Lawrence

Megabytes
KTKZ AM 1380
Saturday 11:00 AM (repeat Sunday Noon)
Host: Russ Hicks

Computer America
KTKZ AM 1380 or KAHI AM 950
Sunday Afternoon?
Host: Craig Crossman

Into Tomorrow
KAHI AM 950
Sunday Mornings?
Host: Dave Graveline

Everything Computers
KSFO 560 AM (San Francisco)
Saturday 10 AM to 1 PM
Host: Bob O'Donnell

TV Programs

The Computer Chronicles
KVIE Channel 6
Saturdays, Midnight
Host: Stewart Cheifet

Cheifet's Net Café
KVIE Channel 6
Sundays, 12:30 AM
Host: Stewart Cheifet

TechLive
TechTV
Weekdays

Call for Help
TechTV
Weekdays

The Screen Savers
TechTV
Weekdays
Hosts: Leo Laporte and Patrick Norton

Big Thinkers
TechTV
Weekly
Host: John C. Dvorak

CyberCrime
TechTV
Weekly
Hosts: Alex Wellen and Jennifer London

Fresh Gear
TechTV
Weekly
Host: Sumi Das

Extended Play
TechTV
Weekly
Hosts: Adam Sessler and Kate Botello

Internet Tonight
TechTV
Weekdays
Hosts: Scott Herriott and Michaela Pereira

The Money Machine
TechTV
Weekdays
Host: Carmine Gallo

Silicon Spin
TechTV
Weekdays
Host: John C. Dvorak

AudioFile
TechTV
Weekly

The Edge
CNBC
Weekdays, 3 PM
Host: Ted David

CNET News.com
CNBC
Weekends, 7 PM
Hosts: Wendy Walsh and Richard Hart

CNN.dot.com
CNN
Saturdays 9:30AM & Sunday 10:30AM
Hosts: James Hattori and Perri Peltz

Tales of the Web
E!
Occasional broadcasts
Host: Cindy Margolis

Area Guide to Computer Stores

By Al Eno

This is a list of the computer stores in the Sacramento region. With your help this list will become longer and more complete. Please send corrections, updates, and suggestions to eno@eknowcom.com (or 916.455.0498).

Sales and Service

Access Computers and Wireless
7811 Laguna Blvd Suite 140
Elk Grove, CA 95758
916.683.4600

118 Sunrise Ave.
Roseville, CA 95661
916.773.4600

Mon-Fri 9:00-7:00
Sat -Sun 11:00-5:00

395 S. Hwy 65
Lincoln, CA 95648
916.408.1338

Mon-Fri 9:00-6:00
Sat-Sun 10:00-5:00
www.accessroseville.com

Advance City Systems
5607 Freeport Blvd.
Sacramento, CA 95822
916.422.0168

Mon-Sat 11:00-7:00
www.advancecity.com

Advance Computer Services
5972 S Land Park Dr
Sacramento, CA 95822
916. 427.6005

Mon – Fri 8:30-6:00
Sat 9:00 –1:00

Arden Computers Inc.
2590 Alta Arden Exwy.
Sacramento, CA 95825
916.489.2000

Mon-Fri 9:30-7:00, Sat 11:00-5:00
www.ardennet.com

CompUSA
2040 Alta Arden Expy
Sacramento, CA 95825
916.648.3662

1251 Lead Hill Road
Roseville, CA 95661
916.772.5255

Mon-Sat 9:00-9:00, Sun 10:00-6:00
www.compusa.com

Computer House
2250 Sunrise Blvd.
Rancho Cordova, CA 95670
916.631.7911

Mon-Fri 8:00-6:00
www.computer-house.net

C.P.R. – Computer & Printer Repair
2820 Auburn Blvd., # 1A
Sacramento, CA 95821
916.978.9092

Mon-Fri 8:00-5:00

Computer – Terminal Services
3734 Bradview Drive
Sacramento, CA 95827
916.368.4300

Mon – Fri 8:00 - 5:00
www.ctsweb.com

Computer'N'Notebook Smartcom
3510 Auburn Blvd #6
Sacramento, CA 95821
916.489.3183

Mon – Sat 11-7

Computer Store Of Sacramento
1870 Fulton Ave
Sacramento, CA 95825
916.972.7678

Mon – Fri 10:00-7:00
Sat 11:00-5:00

Computer Warehouse
901 Howe Ave.
Sacramento, CA 95825
916.567.7900

Mon-Fri 10:00-6:00, Sat 10:00-7:00
http://computerwarehouse.com

C-Tech Systems
 1837 Fulton Ave
 Sacramento, CA 95825
 916.486.4282
 Mon – Fri. 8:30-5:30
 www.c-techsys.com

Coopers Computers
 5800 Auburn Blvd
 Sacramento, CA 95841
 916.334.112
 Mon – Fri 9:00-5:00
 www.cooperz.com

Excel
 5121 Freeport Blvd
 Sacramento, CA 95822
 916.736.0322

 Mon-Sat 10:00-6:00
 info@excel-computers.com
 www.excel-computers.com

Family Computer Company
 8303 Sierra College Blvd.
 Roseville, CA 95661
 916.791.8432

 Mon-Fri 10:00-5:00, Sat 10:00-5:00
 www.familyco.com

Fry's Electronics
 4100 Northgate Boulevard
 916.286.5800

 Mon-Fri 8:00-9:00
 Sat 9:00-9:00, Sun 9:00-7:00
 www.frys.com

HI-Q Computers
 11225 Trade Center Drive
 Rancho Cordova, CA 95742
 916.635.7842

 Mon-Fri 10:00-3:00, Sat 9:00-6:00

Hubbard's Computers
 Call before visiting
 916.368.2815

 Mon-Sun 9:00-9:00 (except Thur)

 Thur 6:00-9:00

KINGMICRO TECHNOLOGY INC.

Kingmicro Technology Inc.
 11257 Coloma Rd #A3
 Gold River, CA 95670
 916.631.0836

 Mon-Fri 10:00-5:00
 www.kingmicro.com

M&M Computers
 7611 Greenback Lane
 Citrus Heights, CA 95610
 916.721.6677

 Mon-Sat 10:00-7:00
 www.m-mcomputers.com

Mather Computers
 10361 Rockingham Drive #700
 Sacramento, CA 95827
 916.366.9696

 Mon-Fri 9:30-6:00, Sat 11:30-4:00
 www.mathercomputers.com

Microbase Technologies
 5580 Power Inn Road, Suite E
 Sacramento, CA 95820
 916.388.2000

 Mon-Fri 9:00-5:30
 www.micro-base.com

Paks Lin Technologies
 2340 Gold River Rd #E
 Gold River, CA 95670
 916.859.0818

 Mon-Fri 10:00-6:00

PC Components
 404 Blue Ravine
 Folsom, CA 95630
 916.984.4455

 Mon-Fri 9:00-7:00
 Sat 10:00-6:00, Sun 11:00-5:00
 sales@pc-components.com
 www.pc-component.com

PC Outlet
 2830 Arden Way
 Sacramento, CA 95825

916.485.5844
877.485.7894 - Toll Free

Mon-Fri 10:00-6:00
www.computer-house.net

Proline Computers

1537 Howe Ave. #206
Sacramento, CA 95825
916.564.1045

Mon-Fri 10:00-7:00, Sat 12:00-5:00
www.prolinecomp.com

Radio Shack

2718 J St
Sacramento, CA 95816
916.441-4668

Stone Creek Center
1589 W El Camino Ave #109
Sacramento, CA 95833
916.922-9347

4500 Freeport Blvd
Sacramento, CA 95822
916.452.7371

Camelia Shopping Center
5650 Folsom Blvd
Sacramento, CA 95819
916.452.4632

811 Harbor Blvd
W Sacramento, CA 95691
916.371.7932

Arden Fair SC
1689 Arden Way #2104
Sacramento, CA 95815
916.922.4703

Natomas Marketplace
3651-5 Truxel Road
Sacramento, CA 95834
916.928.6111

5200 Stockton Blvd #115
Sacramento, CA 95820
916.452.6091

Loehmann's Plaza
2577 Fair Oaks Blvd., Ste. A
Sacramento, CA 95825
916.973.1056

2644 Marconi Ave Space A-5
Sacramento, CA 95821
916.488.7928

Lake Crest Village SC
1012 Florin Rd
Sacramento, CA 95831
916.392.3685

Southgate SC
4518 Florin Rd
Sacramento, CA 95823
916.421.2442

2383 Butano Way #383
Sacramento, CA 95825
916.488.0686

Florin Mall
6079 Florin Rd
Sacramento, CA 95823
916.393.3366

Rosemont Plaza SC
9161 Kieffer Blvd Ste A
Sacramento, CA 95826
916.362.4194

Kmart Shopping Center
6220 Mack Rd
Sacramento, CA 95823
916.429.2617

Vineyard Square Shop Center
7918 Gerber Rd Space B-7
Sacramento, CA 95828
916.689.368

5118 Madison Ave
Sacramento, CA 95841
916.334.7911

4100 Tanzanite Ave
Carmichael, CA 95608
916.483.5026

www.radioshack.com

R&R Computers
680 Cottenwood St. Suite B
Woodland, CA 95695
530.668.0793

Mon 11:00-1:00, Tue-Fri 11:00-6:00
Sat 11:00-4:00
www.yolo.net/wvm/rrc

South Pacific Systems
3084 Sunrise Blvd.
Suite #3
Rancho Cordova, CA 95742
916.638.3596

Mon-Sat. 9:15-6:00
www.southpacificsystems.com

Truecomp America Inc.
7271 55th Street
Sacramento, CA 95823
916.422.3333

Tue-Fri 9:30-6:30, Sat 9:30-5:00

Zoommax
1000 Sunrise Ave. #3B
Roseville, CA
916.781.6666

Mon-Fri 9:00-6:00, Sat 10:00-5:00
www.zoommax.com

Product Sales Only

Adie Raid Systems
5816 Roseville Road
Sacramento, CA 95842
916.338.7660

www.adjile.com

Best Buy
1901 Arden Way
Sacramento, CA 95815
916. 925.1212

9131 West Stockton Blvd.
Elk Grove, CA 95758

916.691.9784

6110 Birdcage Center Lane
Citrus Heights, CA 95610

1236 Galleria Boulevard
Roseville, CA 95678
916.780.5969

Mon-Sat 10:00-9:00, Sun 11-00-6:00
www.bestbuy.com

HSC Electronic Supply
4837 Amber Lane
Sacramento, CA 95841
916.338.2545

Mon-Fri 9:00-6:00
Sat 9:00-5:00
www.halted.com

Office Depot
11119 Folsom Blvd.
Sunrise Shopping Center

Rancho Cordova, CA 95670
916.638.9308

1607 Douglas Blvd.
Douglas and Sunrise Blvd.
Roseville, CA 95661
916.783.1954

Hwy 50 and 65th
Behind A&A Appliance
Sacramento, CA 95819
916.455.2741

3422 El Camino Ave.
Country Club Center
Sacramento, CA 95821
916.487.9572

7933 E. Stockton Blvd
Next to Costco
Sacramento, CA 95823
916.682.7910

Date Ave. and Madison Ave.
Behind Boston Market
Sacramento, CA 95841
916.338.5988

Bidwell Shopping Center
Folsom, CA 95630
916.984.6316

Mon-Fri 8:00-9:00
Sat 9:00-9:00
Sun 10:00-7:00
www.officedepot.com

OfficeMax

OfficeMax

1707 J Street
Sacramento, CA 95814
916.930.9586

2800 Power Inn Road
Sacramento, CA 95826
916.388.0120

Arden Square
3120 Arden Way
Sacramento, CA 95825
916.979.0334

Southgate Plaza
4440 Florin Road, Ste. A
Sacramento, CA 95823
916.399.1212

Oakshade Town Center
2107 Cowbell Road
Davis, CA 95616
530.792.0824

Mon-Fri 8:00-9:00
Sat 9:00-7:00
Sun 10:00-6:00
www.officemax.com

STAPLES

Staples

1900 Howe Ave
Sacramento, CA 95825
916.563.0580

3631 Truxel Road
Sacramento, CA 95834
916.928.0890

2690 Sunrise Blvd
Rancho Cordova, CA 95742
916.858.1868

9146 East Stockton Blvd
Elk Grove, CA 95624
916.686.2450

1770 East Main St
Woodland, CA 95695
530.668.3230

845 Harbor Blvd.
West Sacramento, CA 95691
916.372.9148

Mon-Fri 7:00-8:00
Sat 9:00-7:00
Sun 10:00-6:00
www.staples.com

Sacramento PC Users Group

General Meeting

The SPCUG conducts a monthly general meeting (usually on the third Wednesday of the month). This meeting is free and open to both members and the public.

Most of our meetings take place at the Sacramento Association of Realtors at 2003 Howe Ave., Sacramento (across from Kmart). The schedule for the meeting is normally:

♦ *Doors open at 5:30 PM*
♦ *Beginners tutorial from 5:45 PM to 6:30 PM*
♦ *Membership, library, and Q&A tables open at 6:30 PM*
♦ *Main meeting starts at 7:00 PM, and lasts until 9:30 PM*

We also occasionally have other special meetings or locations. Visit our home page for date, time, location and information about the next meeting.

Membership sales and renewals.

Our membership table is open prior to the meeting for new or renewal memberships (and for answers to any membership questions).

Beginner's Tutorials

A rotating series of tutorials is held prior to the meeting. The tutorials cover "How to Use Microsoft Windows," "The World Wide Web: Getting On and Getting Around," and more are in development. Experienced computer users are on hand to try to answer your questions.

Q&A table

A general question and answer table is staffed before the start of the meeting. Experienced computer users are available to try to answer your questions.

User group business

We use a small amount of time at each general meeting to conduct some group business. This usually involves reports from our officers.

Interactive Q&A

During the meeting, a question and answer period allows any attendee to express a question (or an announcement) to everyone attending the meeting. Our "experts" will try to answer your technical questions, with help from everyone else in the audience.

Local vendor sales

We provide space (subject to prior arrangement and fees) in the lobby prior to the meeting for local vendors to offer their goods and/or services for sale to our members. These vendors are also (usually) provided a few minutes during the meeting to advertise their wares.

The show!

We try to schedule at least two presentations of new or improved software or hardware solutions for each general meeting. The presenters are usually representatives of the manufacturers of the hardware or software. We try to schedule presentations that are of immediate interest to our members. Our general meetings have seen the introduction of important new hardware or software products (sometimes the first time the general public has seen the products).
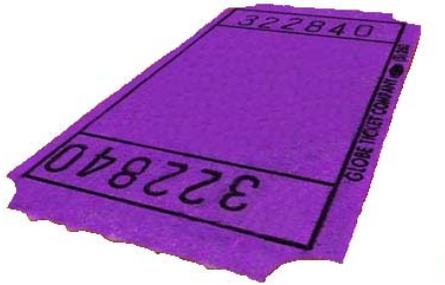
The prizes!

Many of our presenters offer samples (or prizes) of their products for distribution to those attending the general meeting. Past prizes have includes lots and lots of software but have also include hardware like PCs, Pocket PCs, Monitors, and printers. *These prizes are available for SPCUG members only*. Members receive a numbered ticket prior to the meeting (ticket distribution stops at 7:00) which, if it matches a "drawn" ticket number, entitles the member to a prize.

Sacra Blue®

Sacra Blue is the award-winning magazine of the Sacramento PC Users Group. *Sacra Blue* is now an electronic document that is free to everyone. You download a free PDF viewer at www.adobe.com to read the files or print them out. It is laid out as a printed publication rather than the free-form web page look. You are urged to print it out to read off-line. It contains information about the PC industry, including:

• General meeting report: A recap of what happened at the last general meeting.
• Chapter/SIG reports: Summaries of the local chapter and special interest group meetings.
• Editorials, Columns and Features, and Reviews (hardware, software and books).
• Calendar of upcoming events.
• Member classified ads.

It is very easy to get *Sacra Blue*. Just go to the Sacramento PC User Group website (www.sacpcug.org) and follow the instructions when you hover over the *Sacra Blue* button.

A new issue is posted during the week before the general meeting.

The contents of *Sacra Blue* are also available as *eBlue* on the Sacramento PC User Group web site. This gives you the freedom to read *Sacra Blue* online in either the web page format or printed page format.

e-Mail Meeting Notices

We send an e-mail notification about the meeting and *Sacra Blue* each month. •

Chapters, SIGs, and ACOs

Chapters

In addition to the main users group, SPCUG supports regional subgroups (chapters) which meet in various outlying areas. Chapters generally hold monthly meetings and feature presentations from industry organizations (hardware and software) and local members.

Auburn Chapter

When: 4th Wed 7:00

Where:
Beecher room
Placer County Library
Placer County Goverment Center
350 Nevada St., Auburn

Contact:
Dick Towle 530-389-2116
dickwt@foothill.net
www.foothill.net/gcpcug/welcome.html
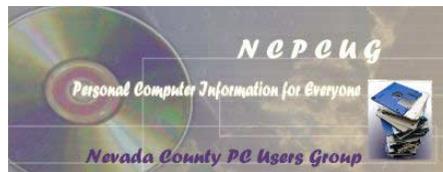
Davis Chapter

When: 4th Wed, 7:00.

Where:
Davis Public Library
East 14th St., between B and F Streets.

Contact:
Dave Eden, President
853-5956
daveeden@yahoo.com
http://pages.zdnet.com/davispcug/davispcug

Nevada County Chapter

When: 1st Wed, 7:00

Where:
Helling Library Conference Room
850 Maidu Ave
Nevada City

Contact:
Mary Lee Allen
mlallen@jps.net
www.nccn.net/~ncpcug/

Orangevale/Folsom Chapter

When: 4th Thur, 7:00

Where:
Fair Oaks Presbyterian Church
11427 Fair Oaks Blvd., Room 2
Fair Oaks, CA 95628

Contact:
Rich Davis 961-3467
ofpcug@bigfoot.com
www.geocities.com/orvaflsmpcug/

Roseville Chapter

When: 1st Thur, 7:00

Where:
Roseville Science & Technology Access
105 Lincoln Street
Roseville, CA

Contact:
Gary Sloan 771-3223
gwsloan22@hotmail.com

Special Interest Groups

Special Interest Groups (SIGs) meet to allow members to explore subjects in greater depth than is possible at general meetings.

Beginners Tutorial

When: 3rd Wed, 5:45-6:30 PM

Where:
Sacramento Association of Realtors
2003 Howe Ave

Contact:
Dennis Duffy 978-0440
Dennis@biz-builder.com

Digital Imaging Group

When: 1st Tues, 7:00

Where:
Roseville Science & Technology Access
105 Lincoln Street
Roseville, CA

Contact:
Jim Lockhart 988-9434
jim@2xtreme.net

Ecommerce

When: 1st Wed, 6:30

Where:
Arden-Dimick Library
891 Watt Avenue (Northrop and Watt)

Contact:
David Larson, 530-668-9378
dml@prontomail.com

Sacramento Linux Users Group (sacLUG)

When: 2nd Thu, 7:00

Where:
MIS Solutions
4619 Auburn Blvd
Sacramento, Ca

Contact:
Brian Lavender, 454-1259 (649-6306 days)
brian@brie.com
www.saclug.org

Microsoft Database

When: 3rd Thur, 6:30

Where:
Cal EPA Building
1001 I Street

Contact:
Miriam Liskin, 530-432-5670
mliskin@miriamliskin.com
www.smsdb.org

OS/2

When: 1st Mon, 7:00

Where:
SMUD
6301 S Street, Sacramento

Contact:
Tim Cardozo, 726-6237
tcardoz@attglobal.net

WordPerfect / Corel

When: 4th Thur, 6:00-8:00
Where:
Prestwood Consulting, Room 9B
7525 Auburn Blvd
Citrus Heights

Contact:
Carol Harris, 334-1669
cjsacto@yahoo.com

Affiliated Computer Organizations

Affiated Computer Organizations are not part of SPCUG but we share many members and allow the groups to report their activities in *Sacra Blue*.

Sacramento Lawyers *technology* User Group (SLUG)

When: 3rd Wed, Noon
Where:
The Delta King
1000 Front St., (Old) Sacramento
Contact:
Michael Cable 381-7868
mcable@portercablelaw.com
http://www.sacbar.org/slug.html

Visual Basic

When: 3rd Tue, 6:30
Where:
New Horizon Corporate Center
1215 Howe Ave
Contact:
Brian Prestwood 725-9947
brian@prestwood.com
www.sacvbug.org

Delphi (Borland)

When: 2nd Tues, 6:30
Where:
Prestwood Training Center
7525 Auburn Boulevard, Suite 8

Contact:
Mike Prestwood, 726-5675 x205
mike@prestwood.com

Advertising in *Sacra Blue*

Commercial Advertising in Sacra Blue

Advertising in Sacra Blue is an inexpensive and effective way to reach enthusiastic PC users. A full-page ad in *Sacra Blue* only costs a few pennies per reader per issue. Those readers are in the greater Sacramento area as well as Auburn, Davis, Folsom, Marysville, Orangevale, Nevada City, Placerville, Rocklin, Roseville, Yuba City, and beyond.

Ad Rates

Ad Size	Cost	Size (H x W)
Marketplace Ad	$15	3.5" x 2"
Quarter page	$30	6.86" x 3.5"
!/3 page	$45	2.5" x 9.25"
Half page	$60	8" x 4.5"
2/3 page	$90	5.25" x 9.25"
Full page	$120	8" x 9.25"
Two-page spread	$225	16" x 9.25"

Special placement charges

Specific placement requests entail an extra $25 surcharge.

Free eBlue Banners

You will be entitled to a 468 pixel by 60 pixel banner ad that will be placed on one of our *eBlue* pages during the month your ad appears in *Sacra Blue.*

Advertising Discounts

We offer discounted advertising rates for long term contracts. Multi-month contracts come in 3, 6, and 12-month increments.

3 consecutive months	5% discount
6 consecutive months	10% discount
12 consecutive months	15% discount

You also get a free meeting table for one of every three months your ad appears in *Sacra Blue* so you can promote your business in person.

If you pay the entire amount of the multi-month contract before the first ad runs, you get an additional 10% discount.

Deadlines

We require advertising insertion orders by the third Wednesday of each month and receipt of the ad by the fourth Wednesday of the month to ensure publication in the following month's issue.

Commercial Advertising at Meetings

SPCUG offers your company an opportunity to reach a captive audience of at least 200 members and visitors at SPCUG monthly meetings. We hold meetings on the third Wednesday of each month; view our Web site for the latest information. We give you two ways to advertise at meetings.

Tables

We offer 8-foot by 3-foot tables around the perimeter of the meeting hall and in the lobby for companies to advertise their wares before and after general meetings. Best of all, these tables cost *only $40 per meeting.*

Seat Advertising

Your advertising can be even more direct if you place your business's ad flyers on the audience chairs before the meeting. It only costs you $30 to place ads on 200 seats.

For more information or to secure a table or seat advertising, contact Vendor Coordinator Tim Cardozo (tcardoz@attglobal.net).

Member Advertising

Members can place classified advertisements in *Sacra Blue* and/or *eBlue*, at no charge. Professional members can also advertise their businesses on our Consultants' Corner page in *eBlue*.

Classified Advertisements

You must submit a new ad (or any changes to the ad) by the fourth Wednesday of the month for the following issue. Contact the Editor with your full name, membership number, and your ad. Your ad will appear in the next three issues of *Sacra Blue*. If you want your ad to run for another three issues, or if you sell your items, let the Editor know as soon as possible.

Meeting Tables

Members may sell obsolete or unused hardware or software at meetings at no charge. Contact Tim Cardozo (tcardoz@attglobal.net), Vendor Coordinator, for more rules and other information and to secure your table.

Consultants' Corner

You must submit a new Consultants' Corner ad (or any changes to the ad) by the fourth Wednesday of the month for the following issue. Contact the Editor with your full name, membership number, and your ad. •

How to Submit Ads

Send e-mail with your file attached to ken@hopkinscomputing.com.

Membership Application

Sacramento PC Users Group (SPCUG)

(PLEASE PRINT)

Date	This is a new membership	This is a renewal	I used to belong

Name

Associate Name(s)

Primary e-mail address (not including sacpcug.org addresses)   ☐ Send me announcements via e-mail

Address

City	State	ZIP

Daytime Phone	Evening Phone

☐ Please include me in the member directory   ☐ Also include my phone number   ☐ Also include my e-mail address
Note: The member directory will not include your street address. The member directory distribution will be limited to members.

Where did you hear about the SPCUG?

What type of user are you? (Check all that apply)

☐ Novice   ☐ Trainer
☐ Programmer   ☐ Work Related
☐ Consultant   ☐ Home User
☐ Other

Annual dues are $30 for a domestic membership and $50 if you live outside the U.S. Associate membership $12.

This form is for **new** and **renewing** memberships.

SPCUG will send a renewal form shortly before your expiry date. Please respond promptly when you receive that renewal form in the mail. You may also use this form to renew in advance.

Please include this form, with your check or money order, to:

Sacramento PC Users Group, Inc.
Attn: Membership Secretary
PO Box 162227
Sacramento, CA 95816-2227
Or bring it to our General Meeting

Please indicate the items that you use and have some knowledge in and the subjects you would like to learn.

	Knowledgable	Want to Learn
Programming	☐	☐
Art & Design	☐	☐
BBS/Telecommunications	☐	☐
Networking	☐	☐
Desktop Publishing	☐	☐
Windows	☐	☐
Word Processing	☐	☐
Multimedia	☐	☐
Databases	☐	☐
Operating Systems	☐	☐
General Computer	☐	☐
Spreadsheets/Accounting	☐	☐
Hardware	☐	☐
Other (please list)	☐	☐

If you have any questions or comments, please send e-mail to membership@sacpcug.org.

Classified Advertisements

SPCUG members can place non-business-related classified ads in *Sacra Blue* at no charge. Ads should be computer-related.

Ad Wanted

Your classified ad could be in this location to be read by all of the readers of Sacra Blue. This is a free service available to all members. Please contact Ken Hopkins at ken@hopkinscomputing.com with your ad.

Consultants' Corner

The Consultants' Corner allows computing professionals serving as Sacramento PC Users Group volunteers to advertise their services. Announcements are provided as a resource to members, but in no way imply endorsement by the Sacramento PC Users Group.

Custom Programming

Access / Visual Basic / Excel / Clipper programming, databases and spreadsheets tom@etoma.com, Tom Anderson, 916-488-1870.

Phelps Computer Services

Visual FoxPro experts. Specialists in FoxPro / dBASE since 1983. Consultation, training, analysis, design, programming. Will Phelps, 916-682-3876.

BCS Computer Consulting

Programming / Internet, software installation and configuration, hardware installation and configuration, trouble-shooting and repair, networking. Over 15 years experience. 916-315-0580 or 916-444-4503.

Customer Development Systems

Business Automation Services and Consulting. MS Access, VB and SQL Relational Database design, Legacy Imaging Projects, Microsoft application business use templates, MS Excel spread-sheet development, Data Mail Merge Specialist. One-to-One and classroom Microsoft and industry standard application training. Beginners to Advanced learn at your pace. Understanding and patient. 20 years of experience. Dennis Duffy, 916-978-0440 spcug@biz-builder.com

HullSoft Enterprises

Milt Hull is an expert in the High Tech industry with 22 years of consulting experience and software expertise. He specializes in setting up small businesses on the Internet with Microsoft BackOffice and/or Small Business Server including Proxy Server, Exchange Server within a Windows NT/2000 Server environment in both an Internet and Intranet Environment. Solutions include 56K, ISDN, IDSL, ADSL, SDSL, Frame, T1 and up! Expert in Exchange server! Call HullSoft to automate your business! Milt@HullSoft.com or 916-972-0400.

SPCUG Calendar of Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
October 13	October 14 *Columbus Day*	October 15 Visual Objects /Clipper	October 16 New Users Tutorial **Main Meeting**	October 17 MS Database SIG	October 18	October 19
October 20	October 21	October 22	October 23 Auburn Davis Web/E-Commerce	October 24 Orangevale/Folsom WordPerfect SIG	October 25	October 26
October 27	October 28	October 29	October 30	October 31	November 1	November 2
November 3	November 4 OS/2	November 5 Digital Imaging SIG MS Access/ SQL Server SIG	November 6 Nevada County	November 7 Roseville	November 8	November 9
November 10	November 11 *Veterans Day*	November 12 Delphi SIG	November 13 Steering Committee	November 14 Clarion SIG Linux SIG	November 15	November 16
November 17	November 18	November 19 Visual Objects /Clipper	November 20 New Users Tutorial **Main Meeting**	November 21 MS Database SIG	November 22	November 23
			COMDEX			
November 24	November 25	November 26	November 27 Auburn Davis WebE-Commerce	November 28 *Thanksgiving Day*	November 29	November 30
December 1	December 2 OS/2	December 3 Digital Imaging SIG MS Access/ SQL Server SIG	December 4 Nevada County	December 5 Roseville Orangevale- Folsom	December 6	December 7
December 8	December 9	December 10 Delphi SIG	December 11 Steering Committee	December 12 Clarion SIG Linux SIG	December 13	December 14
December 15	December 16	December 17 Visual Objects /Clipper	December 18 New Users Tutorial **Main Meeting**	December 19 MS Database SIG	December 20	December 21
December 22	December 23	December 24	December 25 *Christmas Day*	December 26	December 27	December 28