

SVCG Lands Table-for-Day at MacWorld

By Veda Lewis

If you've ever been to a computer exposition such as the MacWorld Expo that happens in San Francisco every January, you may wonder what it costs to have one of those booths to show your latest products. I'm told that a little 12' by 12' space can cost as much as \$40,000. Over a four-day convention, that's about \$10,000 per day.

You can imagine how excited we are to announce that our club will have the opportunity to have a table within a booth at MacWorld on Tuesday, January 8th. The SVCG table will be a part of a West Coast User Group contingent in the South Hall at Moscone Center, booth 2345. [We will have a unique position of representing both Mac and Windows users! See end of article for editorial comment. —Ed.]

Lorene Romero, president of North Coast Mac Users Group (NCMUG) in Rohnert Park invited us to participate for a day. Thanks to club members stepping up to volunteer to take two-hour shifts to sit at our table and tell conventioners about our club, we were able to accept NCMUG's invitation.

Our thanks to Kathy Aanestad, Linda Kane (and her son Daniel), Melba Neuman, Wendy Kruljac, T McLure, Beth Pickering, and Veda Lewis for volunteering. Kudos to Kathy Aanestad

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President's Column

by Veda Lewis



A VISION OF THE GLOBAL EQUALIZER

During his presentation at the North Coast Mac User Group (NCMUG) last month, Edward de Jong of Magic Mouse software (magicmouse.com) demonstrated a painting program and a sophisticated CD labeling application. He showed that music groups now have all of the tools to record and process their own CD's and have them look just as good or better than the corporate products. During his discussion, he also touched on the issues surrounding education, training, and the internet. He broke slightly from his presentation and gave us an insight on the tough life of a software developer in the global economy.

BLACK MARKET-

There is a tremendous black market for software in China and Hong Kong. Apparently, you can buy almost any software you want for about \$3.00 on the streets of Hong Kong. His company has sold only one copy of their software in Asia. One copy. Hmmm. Software pirating is so rampant that Microsoft Office XP was selling in China before it had launched from Redmond.

In light of this situation, he feels strongly that the only way to fight this is to make deliv-

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Sonoma Valley Computer Group

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BOARD MEETINGS

Usually following General Meeting. Open to all members. Call 935-6690 for further information.

MEMBERSHIPS

S.V.C.G. Annual Membership: \$20.
S.V.C.G. Family/Couple membership: \$30 (residing at same address). Membership renewals are due and payable at the beginning of each year.

GENERAL MEETINGS

S.V.C.G. meets second Saturday of each month at Sonoma Public Library, 755 West Napa Street; hours: 9:30AM to 11AM unless otherwise notified. Meetings free; guests welcome.

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What I Use My Computer For

I think the computer is a great tool for work but also a great tool for play. I make my Christmas cards, greeting cards, illustrated recipes for the cookbook I made in a PageMaker class, gift tags, pictures to frame from my photos, etc., etc., etc.

—Janet Mobley
NCMUG Newsletter Editor

In the month of December, I used my computer for the following: page-layout (SVCG newsletter and flier, Christmas greeting card and letter using Quark); database (labels, invoices using FileMaker Pro); word processing (letters, journal using AppleWorks); graphics (photo manipulation, clip art using Photoshop and Nova's Art Explosion); HTML editing program to update the club's web page; online for email and research; video (creating titles and credits, movies, audio [sound effects, music, voice over] using Premiere — saving to CD or printing to VHS tape); digital photography using Olympus' Camedia; backing up data to CD using a Yamaha CD-burner and Toast software; and backing up my Palm address book.

—Kathy Aanestad
SVCG Newsletter Editor, Webmaster

What I used my computer to do in December 2001-

Tweaked a flowchart in MS Visio; surfed the net with IE and dumped a truckload of SPAM; retrieved mail from an overloaded inbox in Lotus Notes ('the red screen of death'); wrote three articles for the SVCG newsletter in MS Word; filled out electronic forms in MS Word; retrieved data from an MS Access database; created a logo in Adobe Illustrator; made a sketch in Adobe Photoshop; used several MS Excel spreadsheets. Whew!

— Veda Lewis
SVCG President



Donating Unused Computer Equipment

The URL listed is for the Computer Recycling Center. All of the info needed (and then some) is listed on the site.
<http://www.crc.org/>

Thanks to Wayne Till for that tip.

SVCG UG Benefits

As a benefit to being a member of the Sonoma Valley Computer Group, O'Reilly Press is giving you a 20% discount on all their books and software! For more information, please contact Kathy Aanestad at 935-6690 or email at 'aanestad@wco.com'.

In addition to the O'Reilly Press offer, SVCG belongs to the Apple User Group program whereby members can purchase Apple products at a savings. Contact Kathy Aanestad for user ID and password in order to access their online site. We need members to help with finding contacts for PC user group offers so that they can be included in the newsletter postings. ☺

Small Thumbnails

Q: Have just erased, initialized, and reinstalled (and reloaded) my HD. Now all printing on emails or anything else off web gives a 2" by 2.25" thumbnail. There must be settings or prefs that must be tended but I've overlooked their hiding places.

—Emma Hangnail

A: Probably on Page Setup under File Menu, the Fit to Page box is checked. Uncheck & try your printing again. Also changing the Percentage to around 90 can help.

—Fyle Sharpen

ery of software over the internet cheap enough to compete with the \$3.00 per disk black market. Quite a task, but something to muse about.

According to de Jong, currently 1% of the education budget goes to teaching materials. One-half of that amount (0.05%) goes to textbooks. He feels that in the next few years, a revolution will take place. Textbooks will go by the wayside and education across the net will change the world.

WHY NOT CD'S?

You might think that CD's would be the answer. All that storage, use it anywhere, anytime, who could ask for more? Well, cost structure is still an issue, according to de Jong. Although it costs less than a dollar to burn a CD, it costs about \$5.00 just to mail it out to a customer (shipping and handling). By contrast, it can cost as little as a dime to port an e-class across the net. With a \$3.00 download or online use charge, the pirates would not be interested and their customers would disappear.

E-LEARNING

How could it ever be realistic to expect the cost structure to drop to this level? Since I work in the training field, I asked the speaker about it following his talk. He doesn't have all the answers, but has a strong vision based on his belief that **education is a global equalizer** that is long overdue. We're on the edge of making it happen, he said, because it must happen. Corporations are jumping into e-learning in droves. He said that companies like McDonald's have huge training divisions. McDonald's teaches English to its large number of employees for whom English is a second language.

Training can be an expensive proposition. Travel expenses to bring employees to the training will often be more than the cost of the training itself. Efforts to bring the training to the employee are welcomed by employers, large and small.

As a developer, if you can get your product to the thousands, perhaps millions of customers in your market, you could afford to

charge as little as \$3.00 per use or download.

OVERCOMING LIMITATIONS

Clearly, e-learning has limitations and cannot be used as the primary delivery mode for every subject. However, it can supplement any subject. Web-only courses have a high dropout rate. However, web-courses followed by a small amount of class work with a live instructor are becoming popular.

Effective training has a good dose of three parts. The first part is introducing the subject or skill to the student. The second segment gives the student a chance to learn and practice. The third segment provides a chance for the student to test their skills. Video alone does not have enough interactivity and people tune out. PowerPoint alone can handle the show and test portion, but fails in the practice or interactivity area. Audio is a pretty effective tool when supplemented with workbooks.

Once interactivity across the net can be mastered, training costs will plummet and Mr. De Jong's vision will be realized. I, for one, am fastening my seat belt. I think this is going to be one heck of a ride.

Keep on clickin'
— Veda Lewis



for whipping up a club brochure that includes a membership application.

We look forward to spreading the word about our club. If you're at MacWorld Expo on the 8th, come by and say hello!

[Editor's Comment: I believe our club is a harbinger of things to come. With the advent of Apple's OS X, more and more software developers are jumping on the bandwagon adding hundreds of software applications to the list, software written for both Mac and Windows users!] ~☺

MP3 Sites

Q: Where can I find MP3 files?

A: MP3 files are not platform specific. I mean, if you can download an mp3 from a site, any site, it will play on a Mac or a PC. Having said that, try <<http://www.mp3.com>>. If you're looking for an mp3 file sharing application, try LimeWire <<http://www.limewire.com>>.

You might try AudioGalaxy, with MacSatellite in lieu of Audio Galaxy's Satellite.

On the Mac, OS 9 version:
<http://www.versiontracker.com/mp/new_search.m?productDB=mac&mode=Quick&OS_Filter=MacOS&search=audiogalaxy> (There's an OS X version also, see next link). Or better IMO, Sputnix for OS X.

<http://www.versiontracker.com/mp/new_search.m?productDB=mac&mode=Quick&OS_Filter=MacOSX&search=audiogalaxy>. (There's an open source client at this link as well).

<<<http://www.joshgroban.com/>

Came across this site the other day. No it's not a napster site but something I think we will see more of as the music business hopefully realizes that a lot of people really do want to hear some of it before they buy it. I think it's a good model... for starters.

—Jethro, online

Cheers



Barbara Heiman— Retouching Old Photographs

It has been a long time since Barbara has graced our meetings with her presence and expert knowledge. January 12th meeting, we'll hear some exciting information on how to 'fix your old photographs'!

For those of you who already have taken a class or two on Photoshop, Barbara will be teaching a course Monday nights 5 p.m.- 9 p.m. at the High School titled

"Fixing Photoshop Images." Register in person beginning January 7, 2002. For more information, visit SRJC's website at <http://www.santarosa.edu/petaluma>

Other SRJC Classes in Sonoma

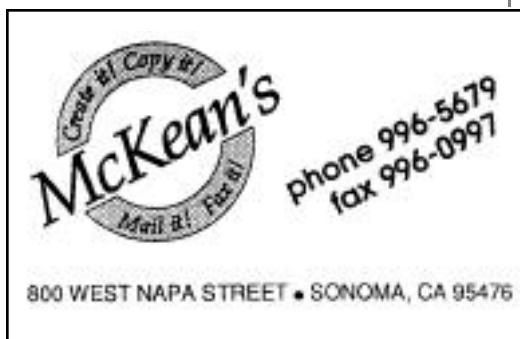
Basic PC Concepts and Practices taught by Emily Raaka meets Tuesdays, 5-9 p.m. Computer Keyboarding, Self-Paced MS Work, Excel, and Powerpoint classes, MS Word Core Level, and more. ☐

Photo Manipulation Program

Adobe Photoshop is one such program as is PhotoDeluxe and PhotoElements. A photo manipulation program is an application that can open *scanned* files — photographs or other artwork that have been scanned into the computer. Using this application, you can then manipulate or change any aspect of the scanned photo. In fact, you can manipulate them to the point where it is becoming impossible to tell in printed work or video what was in the original photo and what has been changed. These applications are now commonly called *image editing programs*.

Photo Retouching

If a photograph has an unsightly blemish, or if the model has wrinkles he doesn't want showing, or if there is a potted plant drooping behind someone's head, or if the fruit isn't quite moist enough, or for any number of reasons, a photograph can be retouched to make it more desirable. This used to be done with airbrushes and paintbrushes and was a



[Photo cont'd on Pg. 7](#)

Sonoma Valley Computer Group Membership Application/Renewal Form

New Applicant

Use information below

Name: _____

Address: _____

Home Phone: _____

Work Phone: _____

e-mail Address: _____

Send \$20 (individual) \$30 (family) check to:
Sonoma Valley Computer Group
POB 649
El Verano, CA 95433

Renewal (expiration date on label)

Use the name and address label on Page 12

Platform: Mac PC WinNT
Operating System: OS 8x Win3 Unix
 OS 9x Win95 Linux
 OS X Win98 WinME

Computer Model: _____

How did you hear about SVCG?

class club member
 newspaper newsletter

User Level: Novice Intermediate
 Advanced Expert



Club members enjoying Kathy's presentation



SVCG President, Veda Lewis, speaking to members

Members Helping Members



Veda Lewis with club's favorite subject — Q&A!



Ben Allin and Kathy Aanestad



Kathy Aanestad Addressing Group

Time to renew your membership



Time to renew your membership!

Dreamweaver 4.0 Review

by Joe Aboutata
Kathy Aanestad

Whether you know as much HTML as Forrest Gump or Lynda Weinman, Dreamweaver 4.0 will assist you in the production of web site design. There are some categories that I created to help you better understand the complete package of web site design.

(All ratings are based from 1-10; 10 is the highest)

INTERFACE: 10. The interface of Dreamweaver 4.0 presents a clear, and clean way to use the program. There are several palettes to navigate through production icons or commands; each palette may contain as many submenus as needed. Example, the Objects palette contains your main icons, other menus, and many other download objects. In addition, when the user creates a command, the user may also create a custom button and he/she would then be able to store it in the Objects palette.

COMMERCIAL VALUE: 10. In Dreamweaver 4.0 you can create templates and libraries that can customize precise web page design similar to the control Cascading Style Sheets posses. When revising a web site or any pages, these two features can save hours, days, and even weeks.

PRODUCTION LAYOUT: 9. Dreamweaver 4.0 has a large number of palettes and windows that can clutter your screen with a few clicks. Therefore, the user can access any palette or window command through the main drop down lists. Yet, the key feature that separates Dreamweaver 4.0 from 3.0 is the work view. Instead of just having the design view, Dreamweaver 4.0 contains two additional views: Code View, and Show Code & Design Views. With a push of a button, the first view allows you to view only the code, and the second view allows you to view a split screen of code and design.

FEATURES: 10. Every computer user that has experimented with Adobe

Photoshop, knows that massive amounts of features can make a great program into a legendary program. Well, the stock version of Dreamweaver 4.0 has all the features that the rivals contains, possibly a few extra features. However, once you install Dreamweaver 4.0 you will notice a feature under the Commands submenu titled "Manage Extensions." This feature allows you to make Dreamweaver 4.0 your own custom program. After signing up for a FREE account with Macromedia.com, any Dreamweaver user can download FREE third-party extensions to supe up the program. Add as many as you like, I have more than thirty powerful downloaded extensions in my Dreamweaver folder .

LEARNING CURVE: 10 (about 2 hours). After doing some tutorials in Adobe's GoLive, I wasted about five or six hours. Still, I didn't feel comfortable creating sites with that program. However, in Dreamweaver 4.0, I could figure out how all the icons worked from just playing with them. After about two hours of exploring Dreamweaver, I had revised a 15 page site, and through Dreamweaver, I FTP'd the whole site at once. How cool is that!!!

FINAL GRADE: A+. My final thought is a saying that a former teacher once told me about Dreamweaver, "There are a million ways to do everything in Dreamweaver."

—Joe Aboutata

KATHY'S REVIEW: The power and ease-of-use of Dreamweaver is incredible. For those of you just graduating from simple HTML editors, Dreamweaver is truly a dream-come-true! Whether you want to work with frames, rollovers, cascading style sheets, forms, or HTML editing, Dreamweaver has it all. Even comes with templates and libraries... and so much more. I was blown away the first time I used the program. In what took me hours, sometimes days, to get my tables nested within tables to look just right only took me minutes with Dreamweaver!

One of my favorite features in Dreamweaver... **convert layers to tables**

(you can also convert tables to layers). Perhaps one of the most powerful features in Dreamweaver, the 'convert layers to tables' is awesome. Start by using the Draw Layer button in the Common Objects panel (see figure 1.1)

Figure 1.1



The Draw Layer allows you to configure your page exactly how you want it simply by clicking of the Draw Layer icon and dragging in on your page. Your pointer changes to a crosshair. Drag to create a box (Figure 1.2) to whatever dimensions necessary for inserting your graphic or text.

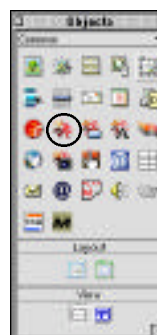
Figure 1.2



The Draw Layer Box

Once you've arranged your information on the page (logo, header, text, graphics), each within its own 'box', you can then go to the menu bar to **MODIFY>CONVERT>LAYERS TO TABLES**. Conversely, if you created your page using tables and want to convert it to layers, you follow the same process, only select **MODIFY>CONVERT>TABLES TO LAYERS**. How cool is that!

INCORPORATING FLASH INTO DREAMWEAVER



Dreamweaver allows you to insert objects you've created in **Flash** with just the click of a button (Figure 1.3). So your Flash rollovers, buttons, and movies can all be repurposed in a Dreamweaver website.

Figure 1.3

The **Frames** feature is fabulous. When the Frames option is selected in the Objects palette as seen in Figure 1.4, you have a myriad of choices for setting up your frames pages... insert top frame, left frame, right frame, left and nested top frame and so forth.

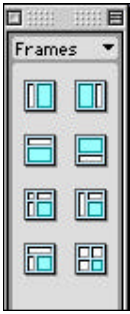


Figure 1.4

Tables

You can sort and format tables, merge cells, add or delete columns/rows, manipulate cell-padding and/or cellspacing. Tables can be assigned a fixed width or by percentage (see Figure 1.6). Can you imagine doing all this with pure coding!!! With Dreamweaver, it's a matter of click, click, click.

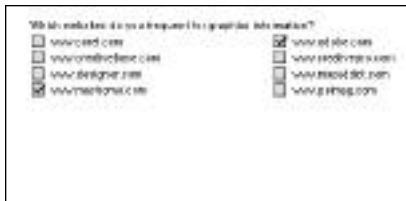
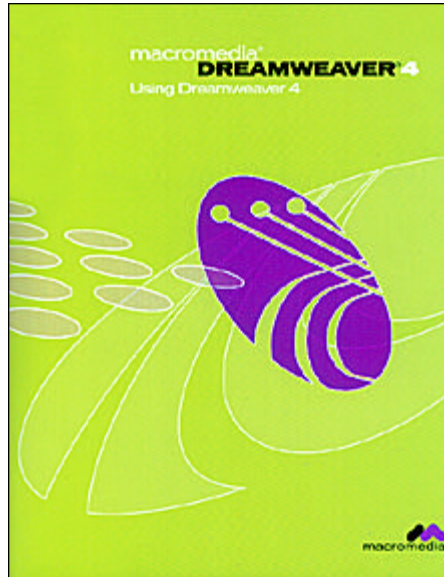


Figure 1.6

In summary, Dreamweaver is very customizable and Dreamweaver will not change your code like GoLive and other HTML editing programs. Dreamweaver is a true WYSIWYG editor. You even have the option of modifying the code yourself. The Objects Menu (see Figure 1.1) contains many buttons (depending upon which palette is selected—Characters, Common, Forms, Frames, Goodies, Head, Invisibles, etc.) for inserting an Image, Rollover, Table, Draw Layer, Line Break, Email Link, Date, Flash, Shockwave, Forms, Frames, etc. You don't need to know HTML to use Dreamweaver, however, it is a plus in case you need to debug your code for any reason.

Like Joe said, "There are a million ways to do everything in Dreamweaver." Make your job more satisfying and rewarding by harnessing the power and ease-of-use of Dreamweaver. You'll never look back!

You can check out any of Macromedia's



Dreamweaver 4.0

products at <http://www.macromedia.com>

Macromedia Exchange for Dreamweaver can be found at:

<http://www.macromedia.com/exchange/dreamweaver/>

Macromedia says this about Dreamweaver Exchange... "The Macromedia Exchange for Dreamweaver is the place to get easy-to-install extensions, learn how to get the most out of them, and even create your own. Extensions allow you to easily add new features to Dreamweaver. Each extension has its own page that includes the extension, a short description, user reviews, and a discussion group where you can post questions and get support for an extension." You must also have the Extension Manager. "The Extension Manager runs side-by-side with Dreamweaver and lets you easily install new extensions and manage the ones you already have."

Examples of some of their extensions:

- Date Insertion
- Scrolling Title
- Centering Table .

Dreamweaver is a must-have for website designers.

—Kathy Aanestad

Photo cont'd from Pg. 4

laborious, highly-skilled task. It can now be done electronically within photo manipulation software. Photo-retouching is still a laborious and high-skilled endeavor, but the possibilities for changing a photo have expanded incredibly. You can not only remove his wrinkles, you can remove his face and replace it with Godzilla's!!!

[excerpts from *Jargon, An Informal Dictionary of Computer Terms* by Robin Williams]

Comfort Words

by Andy Rooney

I've learned.... That the best classroom in the world is at the feet of an elderly person.

I've learned.... That when you're in love, it shows.

I've learned.... That just one person saying to me, "You've made my day!" makes my day.

I've learned.... That having a child fall asleep in your arms is one of the most peaceful feelings in the world.

I've learned.... That being kind is more important than being right.

I've learned.... That you should never say no to a gift from a child.

I've learned.... That I can always pray for someone when I don't have the strength to help him in some other way. ☺





CD-R Media

Jon L. Jacobi

<http://computers.cnet.com/hardware/0-1091-8-8020643-1.html>

MEDIA HYPE

The most obvious differences between CD-Rs, such as color, capacity, and speed, have the least impact on your buying decision. But dig deeper—literally—into the disc, and you'll find the heart of the matter.

Color, size, and speed Designer colors such as red, blue, purple, and black have become popular recently and are purely cosmetic, having no affect at all on the quality or compatibility of a disc. There's another, more subtle color issue involving the reflective layer of the disc and archival life, but we'll get to that later.

The capacity of a disc is a no-brainer: 80-minute/700MB discs hold more than 74-minute/650MB discs; if you want to write more data or music per disc, get the 80-minute discs. Just be aware that some older drives and CD players may not be able to read 80-minute discs, although this problem is becoming increasingly rare.

The speed rating of a disc—indicating the top speed at which you can reliably write data to it—is also pretty straightforward. The rule of thumb is to use discs that match the top speed of your drive, such as 24X media for a 24X/10X/40X drive or 12X media for a 12X/10X/32X drive. You can always use higher-rated media for a slower-rated drive, but trying to use slower-rated media in a higher-rated drive could lead to problems.

QUALITY CONTROL

The less obvious differences in discs—the materials used and the grade of quality control—are what really make or break them. We'll get to the materials later, but now for the bad news about quality control: There's no accounting for it. According to experts such as Vadim Brenner of Oak Technology, so many different companies manufacture CD-R media in so many different places that it's almost impossible to track or test it all. Media quality varies for other reasons, too; vendors are constantly switching sources, good manufacturers can have bad days, and the quality of basic materials can vary. Other factors, including the quality of the laser, the firmware, and the mechanics of the drive reading and writing to the disc, can also affect the outcome.

The good news is that the overall quality of discs is quite good. Manufacturing CD-R media is a well-developed and understood process; where we once routinely saw 5 or so bad discs on every spindle of 50, we now get some spindles with no faulty platters at all. Of course, we may simply be lucky—it's that much of a crapshoot.

Another way to buy reliable media is to stick with a major company that manufactures its own—such as Fuji, Kodak, Maxell, Mitsui, Taiyo Yuden, TDK, or Verbatim. These companies exercise direct control over the materials and processes that go into making the discs, ensuring a more consistent level of quality. House-brand media, such as CompUSA's, and even some big-name brands buy their discs from a variety of companies, so quality may not be as consistent from batch to batch.

Because media quality can be so unpredictable, it should be only one part of a larger data-safety program. To safeguard vital data, you should also employ your software's Verify function and make two or more copies in case of an emergency.

CHEAP OR GOOD?

If you're strapped for cash, don't worry. While certified media will buy you some peace of mind, not all data-storage needs

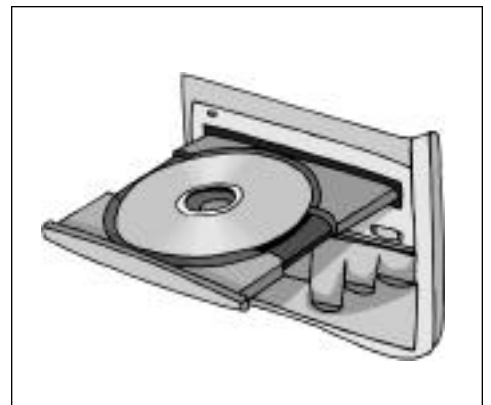
justify the media's higher price. If you're producing nonarchival music CDs, disseminating data for the short haul, or simply making quick one-offs to send to friends, cheapies on a spindle may be more economical, even if you get a few bad discs per batch. Of course, you risk wasting time by writing to the bad discs—but you get what you pay for.

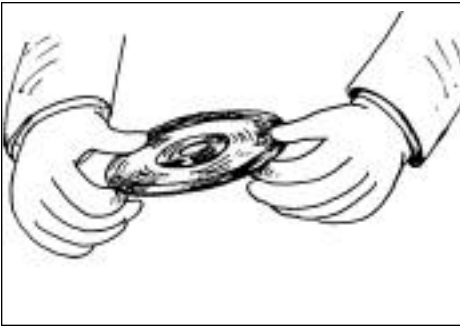
A CD TEST-SPIN

Beyond buying certified or noncertified discs, determining the true quality of CD-R media literally involves an in-depth analysis of the number of errors that occur when data is read from it. Yes, Virginia, every CD-R you write will produce errors, which are measured in terms of block-error rate, or BLER. Katherine Cochrane of CD-Info says that BLER is the number of errors per block (a block is 2,024 to 2,352 bytes of data, depending on the write mode).

According to Craig Thomas of CD Associates, BLER has a variety of causes. "BLER...can be caused by anything from improper writing to inferior CD-R quality: dye, metalization, or plastic discrepancies (by that I mean particles in the plastic or stress of the plastic)."

Cochrane adds that discs, like humans, are allowed a certain amount of fallibility. "Up to 220BLER is acceptable, according to the Yellow Book (CD-ROM) specification, after which the disc is officially considered to have failed." Newer drives are also more tolerant of a disc's failings, says Cochrane: "Many modern readers can correct errors at a higher BLER than 220, since error-correction technology has been advanced since the spec was written."





TAKING A TEST-SPIN

To determine the BLER of some commonly available CD-R media, CNET Labs arranged for the use of CD Associates' CDA 3000 analysis computer to check discs for write errors. Cochrane describes the machine as "a specialized CD-ROM reader/software combination that bypasses the error detection/error correction circuits on the reader and shows the actual reading errors."

For each brand of media tested, we bought a spindle of 50 discs and burned 10 of them at 16X. We used a Plextor PlexWriter 16/10/40A in a fast 1.4GHz Athlon system with 256MB of DDR memory and an IBM DTLA-307045 75GB hard drive. We then read the successfully burned discs at 40X (using the CD Associates machine), analyzed the number of errors, and compared the results. One caveat: Because the sample size we tested was minuscule compared to the millions of discs that are sold each day by these companies, our results are anecdotal—a snapshot of what you might experience if you bought one of these brands of media. However, this test demonstrates the complexity of assessing CD-R media quality because of all the variables involved.

Our performance charts show three pieces of data for each disc: the overall quality rating based on the CDA 3000's analysis, the average BLER, and a picture of what the BLER looked like on a sample disc from each brand.

Three of the four brands passed with flying colors. However, Sony's discs couldn't pass muster at 40X read speeds, even though they were supposed to do so; the machine had to decelerate to 24X to make the disc readable. CD Associates reported that the laser's signal level from the Sony discs was too low for the faster speed. In

other words, the variation between the burn marks and the rest of the disc was not distinct enough to be read at that rate. Most users might never realize that their discs were being read at 24X instead of 40X, but exacting multimedia mavens should check Sony discs to see if they experience the same problem.

PRICE AND PERFORMANCE

Brand: Yamaha
Price per spindle: \$35
Speed rating: 20X
Certified? Yes

Performance: The Yamaha media showed the lowest error rate of all the CD media types. As a result, it got the highest quality rating from the CDA 3000 Analyzer: 97 percent.

Brand: **CompUSA**
Price per spindle: \$20
Speed rating: 16X
Certified? No

Performance: CompUSA's media ranked second in our trials, with a quality rating of 94 percent when tested at 40X. Its error rate was three times that of the Yamaha's. The CompUSA media is uncertified, but it is also inexpensive.

Brand: **Imation**
Price per spindle: \$25
Speed rating: 16X
Certified? No

Performance: Imation's 16X, uncertified media ranked third in the trials. Its average BLER was about 75 percent higher than that of the CompUSAMedia and more than 5 times higher than the Yamaha's. Nevertheless, it still was ranked as excellent by the CDA 3000 analyzer.

Brand: **Sony**
Price per spindle: \$30
Speed rating: 16X
Certified? No

Performance: Sony's discs placed last in our trials, because at 40X, the discs returned too many errors and failed the BLER tests. The signal the discs

returned was not strong enough for adequate error correction at this speed, resulting in an average BLER 33.5 times that of the Yamaha media. However, the discs could be read just fine at 24X and had a much lower average BLER at that speed.

DISC ANATOMY 101

To understand why variations in CD-R compatibility and reliability exist, it helps to know a bit about the makeup of the media.

CD-R media has four layers:

- 1) an upper label/protective layer
- 2) a reflective layer
- 3) a photoreactive-dye layer
- 4) a transparent plastic (polycarbonate) bottom layer, which protects the two middle layers.

Your CD-R/RW drive writes data to these discs by firing a laser in a short burst to burn a hole in the dye layer. This hole is filled in by the metal in the reflective layer above it, which creates a bright spot that's read like a pit in a commercial CD (commercial CDs are pressed much like LPs used to be).

SILVER AND GOLD

The reflective and dye layers are the most important layers in the equation. The reflective layer can be gold, silver, or a combination of both. Gold is generally thought of as the most stable in the long

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Saturday, January 12th
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run since it's the least reactive with dyes and, therefore, less prone to corrosion. However, there's also a good argument for silver, which was specified in the original standard because it's more reflective and, therefore, more easily read by players. Manufacturers also claim that dye formulas have been improved to the point where reactions with the reflective layer are no longer an issue.

FOOL'S GOLD

Buying a disc with real gold in it can be a challenge because you can't go simply on product labeling or even the color of the disc. The packaging on some generic discs may use the word gold strictly as an advertising ploy. And disc colors can be deceptive. The upper layer can be any color of the rainbow, and manufacturers have also recently taken to coloring the transparent bottom layer. Some discs, for instance, have a gold-colored upper protective layer, yet they actually use a silver reflective layer.

How can you tell fool's gold from the real thing? If store personnel cannot confirm the truth for you, ask them if you can open a package and look at the disc. If you look very closely at the bottom layer, even through a color, you should be able to see a warm glow to the disc that signals true gold inside. Comparing a gold disc to a silver disc makes it easier to see the difference. If you cannot perform any of these checks, your best bet is to research company Web sites for the specification, or you can just learn from experience by buying different brands and comparing them.

TO DYE FOR

The photoreactive-dye layer comes in more variations than the reflective layer does. The original official CD standard called for

TDK's Azo dye, which is dark blue. However, a number of other dyes, such as the lighter blue cyanine, have been developed and employed since—basically so that vendors don't have to pay each other royalties.

Some dyes, such as phthalocyanine, are lighter than others and don't produce as distinct a variation in color between burn marks and the unburned areas. This has been the traditional knock on common reflective/dye combinations such as gold/phthalocyanine. By and large, however, CD-ROM-drive manufacturers have learned to compensate for the differences in dyes. According to Katherine Cochrane, "Some recorders (like my first one) do have more trouble recording on phthalocyanine, but the discs do have a reputation for lasting longer than cyanine ones."

If this explanation leaves you seeing more colors than those on a psychedelic poster, try not to worry. Unless you're having real problems with discs that can't be read in other drives, the dye/metal controversy will probably not affect you much.

That said, **we recommend discs with a gold reflective layer for archiving** because under adverse conditions, the more stable nature of gold could be the difference between retaining your data and suffering corrosive heartbreak. But for the best compatibility with the widest variety of drives and players, use discs with a silver reflective layer—their higher reflectivity may make them more readable in older players with weak lasers.

CARE AND FEEDING OF CD-Rs

In order for your CD-Rs to stand the test of time, you must care for them properly. This means placing them in jewel cases whenever you're not using them, not subjecting them to direct sunlight or other extreme weather conditions, and keeping them away from the hands of small children and klutzy adults.

THE STORAGE STORY

If you're short of jewel cases, paper or plastic sleeves are better than nothing.

However, where a jewel case suspends a disc in midair, a paper sleeve is in direct contact with the surface of a disc. Dust can accumulate inside a sleeve, turning it into sandpaper, slowly yet inexorably ruining the surface of your disc.

DOWNSIDE UP

If you're not 100 percent diligent about keeping your discs safely tucked away (who is?), then you should always place them clear side down. The labelled/printed face of a disc is actually more delicate than the bottom, clear, polycarbonate layer, and major damage to the label side will ruin the reflective and dye layers as well. This is not to say that you can scar the clear bottom layer with impunity, but minor scratches to polycarbonate are survivable, and even major ones can often be buffed out or filled.

LABEL ISSUES

Labels are handy for categorizing your discs, but they can also affect performance and damage your discs. A poorly attached label can cause a disc to wobble too much for high-speed reading. If you must use labels, use only those formulated for use on CDs. These have milder adhesives than general-purpose labels and shouldn't react badly with the top layer. Another caveat: We peeled off a label and had both the reflective and dye layers come off with it. It made for great art, but the disc was completely useless after that.

CD MARKUP

Marking a disc with a pen is probably OK if you use a specially formulated CD marker. But the ink formulations in some general-purpose pens can react badly with the upper layer and leak through to harm the reflective and dye layers below. If you want to be completely safe, either mark your discs on the clear inner circle where no data is stored, or better yet, leave the disc unmarked and use the paper jewel case insert to list the disc's contents.

Follow these few simple rules, and you can expect years of service from your CD media.

CNET'S BOTTOM LINE FOR CD-R MEDIA

1. When the data or music's important, use certified media from a major manufacturer that makes its own discs. Otherwise, go with the cheapies to save money.



2. Designer colors are fine, but make sure the media is rated to match the top speed of your recorder.

3. Buy discs with a gold reflective layer if you're archiving. There's a debate as to whether gold is actually superior, but better safe than sorry. Use discs with a silver reflective layer for the best compatibility with older drives and players.

4. Use jewel cases to store your CD-Rs, forgo labels when possible, use only specially formulated CD markers to label your CD-Rs, and keep your CD-Rs out of the sun and extreme temperatures. ☹

Digital Photo Goodies

by Arthur H. Bleich
<arthur@dpcorner.com>

Digital cameras are selling briskly this holiday season and prices have finally descended from the stratosphere. For \$300 to \$500, you can get a digicam with the same resolution and features that would have cost almost twice as much just over a year ago. A plethora of Web sites review almost every new model in excruciating detail; instead of picking out specific camera models this year, as I have for the last few years in TidBITS, I've chosen to look at some nifty digicam accessories and peripherals.

<<http://www.imaging-resource.com/>>
<<http://www.steves-digicams.com/>>
<<http://www.dcresource.com/>>
<<http://www.cnet.com/electronics/0-1429209.html?tag=dir>>
<<http://db.tidbits.com/getbits.acgi?tbser=1022>>

****From Camera to Computer**** -- You'll soon find that the meager memory card that came with your digicam does not have nearly enough capacity to hold all the images you'll be taking. You'll need a bigger card, but fight the urge to buy the biggest. Why? Because if it gets corrupted, you could lose all your pictures. It's bet-

ter to break up memory storage into smaller cards, like 64 MB or 128 MB, depending on the resolution and image compression you usually use when shooting. Delkin and Lexar make good cards with strong warranties — prices are now about \$1 per megabyte or less.

<<http://www.delkin.com/>>
<<http://www.digitalfilm.com/>>

Although most all digicams transfer images to your computer via a USB cable, it's frequently a pain to hook it all up. A better solution is a **memory card reader** that stays permanently attached to your computer's USB port. Then, all you have to do is remove the card from the camera and slip it into the reader. The \$89 Addonics Pocket DigiDrive has slots for five different sized cards: Compact Flash I and II, SmartMedia, MultiMedia/Secure Digital, and Memory Stick. Why do you need all five when digicams usually take just one type? Because your next camera (or other devices) may use a different card. With a memory card reader this flexible, you'll be loaded for bear — at least until yet another card standard comes along.

<http://www.addonics.com/Pocket_DD_frame.htm>

As you accumulate more images, your hard disk will begin to fill up until it begins to bulge. Time for some **extra storage**. About \$300 will get you Iomega's Predator USB or FireWire CD Burner to store images on CDs; with the included Roxio Toast software it's really a snap. Or spend about the same for Western Digital's 60 GB External FireWire Drive which provides a near-bottomless pit for picture storage. As a bonus, you can back up your entire hard disk to it and still have gobs of room for photos.

<<http://www.iomega.com/cdrw/>>
<<http://www.westerndigital.com/products/>>

Some digicams come bundled with decent **imaging programs**, while others do not. Regardless, for \$100 you can get what I unabashedly feel is now the world's greatest imaging program value: Adobe Photoshop Elements. Don't just take my

word for it — go to Adobe's Web site, download it, and try it absolutely free for 30 days. My guess is that after using the built-in how-to's that can transform you into an instant imaging expert, you'll wonder why it isn't selling for three times the price — or even more.

<<http://www.adobe.com/products/photoshopel/main.html>>

Once you get hooked on imaging, you'll want to check out the latest versions of **flat panel computer monitors** — sharp, bright, cool-running, and thin. One of my favorites is Samsung's 17-inch SyncMaster 170T, which is compatible with both analog and digital video signals. It's a top-of-the-line monitor whose images don't fade away like old soldiers when you view it from various angles; that's why it fetches a hefty price of about \$850. If that's a bit too high for your budget, KDS has two analog models, the 15-inch Rad-5 at \$400 and the 17-inch Rad-7 at \$800 that display superb images; you can check 'em out (no kidding) at your local Wal-Mart store.

<<http://www.samsungmonitor.com/html/products/170t.htm>>
<<http://www.kdsusa.com/index.asp?s=conseries>>

Although your photos are taken digitally, there are bound to be times when you want printed copies. Hundreds of ink jet papers are being made today, but sampling them could cost a fortune. That's why **Red River Paper** puts out various sample packs. Their Photographer's Sample Kit includes two letter-sized sheets of each of the company's 22 paper samples (44 sheets in all) and costs only \$8 (and until 31-Dec-01, Red River is offering a special price of \$4). Included are different weights of glossy, matte, and exotic watercolor papers to try before you buy your favorites in larger quantities. Also included are instruction sheets that give you optimal settings for all popular printers.

<<http://www.redrivercatalog.com/Pages/plashpages/photogsamplekit.html>> ☺





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Next Meeting: Saturday, 1/12/2002

Place: Sonoma Public Library

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Time: 9:30 a.m. to 11:30a.m.

Topic: ***Retouching Old Photographs
with Barbara Heiman*** . (See Pg.4)