Cites & Insights:
Crawford at Large

Volume 1, Number 8: Midsummer 2001 ISSN 1534-0937 Walt Crawford

Summer Doldrums

You know the symptoms. *American Libraries*: combined June-July issue. *PC Magazine*: monthly in July and August rather than twice a month. New episodes on broadcast TV networks mean series that didn't make the cut for the regular season—otherwise, come June 1, it's Rerun World.

I have never in my life set out to be contrarian. I swear. Opposing the Death of Print and Inevitable Sweeping Triumph of Ebooks in 1992—and calling those predictions both dystopian and unlikely? I wasn't contrarian, I was ahead of the times. Denouncing the (all-) Digital Library as a dangerous notion, asserting that you can't separate content from carrier without serious consequences, and so on? Certainly not contrarian.

You see here the effect of the summer doldrums on *Cites & Insights:* a bonus issue in between the July and August issues. You could say the lack of major essays shows that I'm suffering the doldrums. You might be right—or it might be that I need the space to catch up on an overflow of press commentary, reviews, and all the rest. The latter is factual, although the former theory has its charms.

As a special offer, we're including this bonus issue *at no extra cost.* The $0 you pay for regular access to *Cites & Insights* covers this issue as well.

Speaking of Payment

For the first (but not the last) time, I am requesting a form of payment if you appreciate *Cites & Insights*. The form of payment is this:

- Send email (to wcc@notes.rlg.org) with a subject heading or sentence that suggests you read *Cites & Insights*. "CICAL" in the subject heading will do nicely. If you read a printed copy that you didn't download, let me know!
- **Optional but greatly appreciated**: In that message, indicate—for the personal computer you use the most—the following:
  1. Operating system and version (e.g., Mac OS 9, Windows 98, Red Hat Linux)
  2. RAM (in megabytes)
  3. To the best of your memory, over the past few months (or since you last changed your hardware/OS environment): How many hours, on average, does your computer run before software/OS problems force you to do a full restart (either a hardware reboot, power cycle or, in Windows, the double Ctrl-Alt-Del restart)?
- Deadline: August 31, 2001.

If I receive enough responses, I'll prepare an article based on them. Given the conflicting nonsense I've heard about how crash prone operating systems are, I'd like to offer some real-world counterpoint—or, depending on the results, real-world support!

Inside This Issue

Press Watch I: Articles Worth Reading

Ranada, David, "They're all cartoons," *Sound & Vision* 66:4 (May 2001), p.39, and Evenson, Laura, "Zap! Kerbango! Powie!" p. 40 (same issue).

A bit far afield, but these two (entirely separate) columns shouldn't be missed if you care about home entertainment. David Ranada points out why you really shouldn't use movies to judge the sound portion of a home theater system—at least not if you plan to use the system for music as well. Theoretically at least, the job of a good music system is to reproduce the music as it was recorded, including recreation of the original recording space (or a facsimile thereof). But for most movies, there's no "original recording space" to

recreate—and there may be less "natural" sound than you think. If you watch the credits, you'll see a group of "Foley artists" named. Foley artists create convincing sounds using whatever's handy. So, realistically, the single pull quote in this column is just right: "The job of a home theater system is to accurately reproduce the sound of speakers in a room"—there's no acoustic original to match.

Evenson's piece discusses the near-death and apparent rebirth of radio in the "Internet age." For a while at least, you can get variety in Internet radio that's vanished on most airwaves. One prime local example is 107oink5, KPIG, which used to be an over-the-air station with wide-open musical sensibilities. It's off the air but on the Internet. Internet radio is, effectively, a brand-new medium with real possibilities. There's at least one problem not mentioned here—money. Radio stations that broadcast and also wish to Netcast find themselves blanking out ads to avoid paying substantial new fees to the actors in those ads. That's not a healthy sign for the future of Internet radio, and nobody knows whether Net-only stations will find adequate revenue streams—but that's a longer, messier story.

Maiken, Melanie, "Jeeves hitches a ride," *The Industry Standard* 4:19 (May 14, 2001), pp. 62-6.

Can Ask Jeeves make money as a corporate technology provider where it's failed as an ad-supported customer service? That's part of the story here, and maybe the technology works better in specialized spheres.

I've found Ask Jeeves one of the most useless "major" search engines on the Web. Every question I've asked (that I would ever ask an Internet engine) has yielded useless suggestions. But a "tuned" version at Jeep.com can respond to "Does the Jeep Cherokee come in purple?" with "What colors are available for the Jeep Cherokee?"—which in turn leads to a list. (Why doesn't Jeeves just provide the answer? I don't know; ask Jeeves.) A fair number of companies are using such tuned versions or have signed contracts, including Dell and Microsoft.

The next version of Ask Jeeves may serve these companies better—but you may not be particularly thrilled. "Answers 5.0 has beefed-up 'insight' capabilities that show clients exactly what questions customers typed into the search box. This allows companies to learn a great deal more about a customer's needs than can be gleaned from a log of keyword searches…"

Maybe this is good. Maybe it's a further erosion of individual privacy even for anonymous questions. I'm not sure.

Ojala, Marydee, "Free vs. fee: Upselling content without upsetting customers," *EContent* 24:4 (June 2001), pp. 32-5.

Even though a significant portion of *EContent*'s material comes from academic librarians, the audience is distinctly commercial. This article is worth reading, but a few points are a bit jarring. Most disturbing is this comment in the second paragraph: "The concept that information 'wants to be free' has done to the Internet what the Carnegie public library system has done to librarians explaining to patrons why some information carries a price tag." I'm not aware that the tiny number of remaining Carnegie-built public libraries has much to do with the universe of America's public libraries. If Marydee is suggesting that commonly-funded access to information and materials undermines private enterprise, that's an interesting and controversial point. Otherwise, I don't understand what's being said here. I've always derided the "information wants to be free" nonsense, but I believe that strong public libraries are essential to a healthy America.

That's just one sentence. Read the article. Draw your own conclusions. Most of what's there is eminently sensible, as I'd expect from Marydee Ojala. Maybe you should just ignore odd comments about public libraries.

Seff, Jonathan, "Does MHz matter?" *Macworld* July 2001, pp. 46-54.

No, this isn't another Macthusiast explanation of why finely-tuned G4 applications from Mac-oriented companies run faster on a 500MHz Mac than the "equivalent" untuned Windows versions on 1000MHz Pentium systems. I wouldn't bother to mention those. They boil down to the simple truth that, if you prefer the Mac, today's machines are fast enough—just as, if you prefer Windows, today's machines are overpowered for most uses.

This article is much more interesting and most of what it says applies (differently) to Windows systems as well. Seff goes through the parts of a Mac that affect speed. It's not a simple equation. You may be aware that, on either platform and up to a certain point, adding memory may do more for real-world speed than upgrading to a faster processor. That's even more important for multitasking Mac users, where even 128MB is "puny" by this article's standards. There are other aspects to overall speed, and the article describes them well, with some interesting test results.

Johnson, Cory, "Desperately seeking financing," *The Industry Standard* 4:24 (June 18, 2001), pp. 30-6 (and other stories in the same issue).

As you cope with "dot.bombs" and other symptoms of the return of reality to the Internet marketplace, it's useful to understand some of the financial details. I'd guess that most *Cites & Insights* readers work for nonprofit or government-supported institutions, which have different sets of financial issues. This fascinating story details the methods used to try to keep a new company alive.

This issue of *The Industry Standard* is also the first with a new slogan ("Intelligence for the information economy"), layout, and typography. While the magazine continues to be much more slender than in the glory days, most of the changes improve an already-worthwhile publication. Almost all text is now clean fully-justified serif, which I find more readable and finished than the alternatives.

On the down side, too many sections use columns that are narrow for my taste. Those four-column pages are set 9 picas wide with what appears to be 9-point text on 11-point leading. For comparison, *Cites & Insights* has 19-pica columns for 10-point text on 12-point leading. Most guidelines suggest that body columns should be least 1.5 times (in picas) the type size (in points) for good readability—but narrow columns do work well for material that's scanned rather than read.

Later in that issue, read "From here to ubiquity" (pp. 68-9) and think about it. On one hand, the figures and discussion make DVD's success quite clear (and provide even more evidence that ebook appliances aren't likely to be runaway successes). On the other hand, if the IDC survey used for the last two charts is plausible, high-definition TV just doesn't interest most people. That doesn't surprise me—but it does pose an enormous quandary for the FCC.

"The great pretenders" (pp. 70-3) offers pointed commentary on the likelihood that consumer research may be worth a lot less than companies would like to think—because consumers are gaming the researchers. The most obvious cases are controlled-circulation publications (trade weeklies and others that you get free if you qualify). "Companies that offer free magazine subscriptions in exchange for survey information are sitting on a landfill of garbage data, because in the questionnaire universe, *everyone* is a senior executive with the power to approve millions of dollars in hardware, software and consulting services."

On page 75 we find that DVD may account for *one-third* of the retail video market this year (emphasis added)—and that investors now believe that video stores aren't going away. That's a change from years past, when the Commerce Department was saying that video stores were doomed by Video-on-Demand. As one who (somewhat forlornly) suggested that VoD was unlikely to replace good retail stores—or at least that it should not do so—I hope the new information is right.

Welch, Matt, "Suck: From oasis to mirage," *Online Journalism Review* (ojr.usc.edu), posted June 21, 2001.

Suck may have an awful name but the daily "publication" was one of the first attempts at popular online journalism and frequently offered worthwhile insights. It's been around for six years. Unfortunately, *Suck* and its cousin *Feed* are on "unpaid summer vacation" and may not return—something about money or lack thereof.

Matt Welch offers a thoughtful set of "top 10 reasons…why *Suck* was such a damned good online journalism site, in every sense of the phrase." Fortunately, *Online Journalism Review* has the support of the University of Southern California, so this excellent commentary seems likely to stick around. Go read it—and consider looking up some of *Suck*'s archives while you can. Frequently offensive and often useless, *Suck* has also been as good as Welch says. If it's gone, that's a loss—one of the many we're seeing in ad-supported online-only vehicles.

Tennant, Roy, "The copyright war," *Library Journal* June 15, 2001 (available at www.libraryjournal.com in the Infotech archives), and Lasica, J.D., "News sites get copyright fever," *Online Journalism Review* (ojr.usc.edu), posted June 14, 2001.

I wasn't sure where (or whether) to note Roy Tennant's column, particularly since I dislike the first and last sentence—although "Copyright *as we presently know it* is dead" (emphasis added) is much better than the original PowerPoint bullet, "Copyright is dead." Take away that overstatement and Tennant offers a good concise summary of some troubling issues in today's intellectual property field, and I agree with most of what he says.

On one hand, much of the stuff that's available in digital form is trivially easy to copy, leading some to regard copyright as irrelevant. On the other, DMCA, UCITA (which seems to be stalling in state legislatures) and digital rights management overbalance the law toward copyright holders, trampling first sale rights and fair use rights in the process. On the gripping hand (thanks, Jerry Pournelle), the AAP seems to be developing the institutional paranoia and power-play tendencies of the RIAA and MPAA.

The *OJR* piece deals with a more specific set of issues that may expand the overall discussion. These issues aren't going away, although I certainly wish that DMCA and UCITA would disappear!

Nadel, Mark S., "The First Amendment's limitations on the use of Internet filtering in public and school libraries: What content can libraries exclude," *Texas Law Review* 78 (April 2000, updated June 18, 2001). Available from: http://papers.ssrn.com/paper.taf? ABSTRACT_ID=23083

What am I doing reading the *Texas Law Review*? Well, my brother-in-law is a law professor, and…

Actually, my brother-in-law *is* cited in this article but that's another issue altogether. The truth is that Mark Nadel read *Cites & Insights* and sent me email noting that I might be interested in two of his articles. I haven't read the longer one yet, but he's right about the first one. Nadel (J.D. Harvard, 1981) works at the FCC—but notes that the views expressed in the article are his own and have nothing to do with the FCC.

This article is well written and, for those deeply interested in filtering issues, worth reading. Nadel argues that libraries *may* filter Internet access without violating the First Amendment. If I understand the article, he further argues that the Mainstream Loudon decision (in which the district court for Virginia found that the library's use of a software filter violated the First Amendment) is a bad one. His argument could be read as undermining part of the ALA and ACLU cases against CIPA—but there's a considerable gap between "it's permissible for a library to filter under certain circumstances" and "it's legal and reasonable for the Federal government to *compel* filtering under broader circumstances."

To my mind, the article uses too much "evidence" from David Burt and Filtering Facts. Much of his argument relies on the concept that inappropriate sites can legally be filtered because they reduce the amount of computer time available for more appropriate Internet access. He clearly states that legitimate filtering must be entirely under the library's control and must not favor any sociopolitical viewpoint (questionable for the filters I've heard about). The article is 44 small-type pages including 204 footnotes.

Feedback: Your Insights

Here's what happens when you publish excerpts from reader email: you get more (and longer!) email. Enough more for a separate occasional feature, as space permits. Concise comments are more likely to be printed. I will edit for length and clarity—and, of course, I reserve the right to respond to comments. I'd appreciate it if you attach an affiliation to your email. If it's not intended for publication, please say so. (Feedback that boils down to a correction will be noted in "Following Up.")

PC Values

Rory Litwin, publisher of *Library Juice*, disagrees with my preference for name-brand computers:

> In my opinion, only someone who doesn't know better would recommend name-brand computers when cheaper, higher-quality computers are available from custom builders here in the silicon valley, especially to professionals who may be purchasing them in quantity.
>
> I bought my computer from Central Computer (http://www.centralcomputer.com/) in Santa Clara. I placed the order by phone and worked with a sales guy to find out what high-quality components were available at that moment at good prices. From doing a little research I knew I wanted an AMD Duron cpu. The sales guy told me my options for motherboards and advised me about them. Likewise for memory, video card, hard drive, etc., all based on my specific needs.
>
> One reason it is good to do it this way is that name-brand computer makers, like Gateway and Dell, often use inferior components and don't tell you. Their market is people who don't want to take the time to look into what is going into their computers. They are sometimes abusing people's trust in name-brands as representatives of quality. It is understandable that many people don't have time to do a lot of research into their computer purchases, but someone purchasing computers in quantity for a library has a responsibility to do a little more research, and they should not be going name-brand…
>
> You don't have to live in the Silicon Valley to buy your computer this way. These companies take orders over the phone and will ship to you. (Though it is more convenient to work with them and use your warrantee if you are local.) Computer dealers like these also exist in other metropolitan areas, of course.

I'm afraid we disagree here (though you may be right). I would *never* argue that you shouldn't consider local alternatives, particularly if you dislike big business in general, but I've been burned too often to be comfortable with shop-built systems.

While I've heard the claim in the third paragraph before (that Dell and Gateway sneak in "inferior components" when you're not looking), I've never seen verification. On the other hand, I've personally been orphaned twice on personal computers, and local businesses that have taken your advice have also been orphaned—left without any means of

support for their PCs as the local shop disappears. When (a couple of years ago) I did a pricing comparison of shop-built PCs (including Central) with comparably specified systems from Dell and Gateway, Dell and Gateway were cheaper than most locals. My experience with both Dell (at work) and Gateway (at work and at home) has been essentially trouble-free. My experience with shop-built PCs (in both cases) has been anything but. As always, your mileage may vary.

Semi-Random Notes from Dan Lester

Excerpts from email from Dan Lester, self-described "Data Wrangler" at Riverofdata.com, with a few responses:

> *On page 10* you talk about "paradigm shifts" and doing it better. I'll agree that doing it better is vital, but at least one is both first and IMHO doing it pretty well. United Airlines started in Boise in 1926 and has still made it, despite the problems of the ones you mention. Of course good ol' MS was there early and is still hanging in there.

That's page 10 of the June issue, and I should note that I tend not to believe in paradigm shifts. I do mention one United problem in the July issue—or, rather, a case where American has made a better customer-relations decision than United.

> *Napster Math, p. 17.* You're right on the math. However, I'm one who would instantly pony up the ten-spot a month for the access. Maybe even twenty. I buy CDs, but at fifteen or so on average for discs, I don't buy too many for just a couple of songs I'm interested in. (I'm a lyrics person, and solid lyrics that tell a story are a key part of my life. Who sings the song is much less important, within limits.)

As would John Dvorak and, I suspect, hundreds of thousands of other people. I suggested five million as a likely target. And I'm with you on the "couple of songs" issue, one reason most of my current CD buying is boxed sets and other collections.

> *Howard article on same page:* You're right that who knows what one will do with the DVD in forty years. However, anything worth keeping, whether personal or otherwise, will be copied to whatever the then-current medium is, and the data will be as good as it is now. After all, aren't you playing CDs of the same music you used to have on cassette, and on vinyl before that? Even if some of the idiot plans for the "new CDs" or "DVD audio" come to pass, the worst that will happen is you'll copy or buy them again. And certainly any digital photos you have of family you'll copy to some new format, just as you will with your writings.

Except that Howard seems to be saying that burning a DVD ends that need—and, in practice, we don't always spend the time or money to assure that secondary materials are always reformatted onto new technology. That's one reason digital preservation is such a big issue—and the definition of "worth keeping" changes over time. If it was as simple as saying "If it's worth keeping, surely you'll remember to reformat it," RLG, OCLC, LC and others wouldn't be spending their energies on defining true digital archives. I don't believe those energies are wasted.

> *MicronPC, page 8.* Actually, it is a continuing brand name, and should *not* be considered a new company. Yes, Micron Inc. sold them off, but it is still the same people building the same boxes in Nampa, Idaho. I know several who work there, and they're happy about the changes, although the ones laid off aren't. Of course everybody is laying people off in the computer business. The key thing is that it is the same engineers, production people, etc….

I stand corrected.

For the Children

Steve Weaver (Western Piedmont Community College, Morganton, NC—but writing on his own behalf) takes me to task:

> Before you reproved Will Manley for departing from "ordinary principles of logic" in the latest issue of *Cites & Insights* ("Where I Stand: For the Children"), you might have considered your own. A cursory review of your article reveals at least nine logical fallacies, as outlined below:
>
> (1) Your "out of touch with the professional literature" and "won't convince librarians who understand the issues" remarks fail the popularity and appeal to authority tests.
>
> (2) Your prejudicial language (e.g., "distortion," "diatribe," "hypocrite," and "wooden-headed," as well as your condescending tone throughout) fails the attacking the person test.
>
> (3) CSTPA fails the false analogy test. Are childhood cuts and bruises really equivalent to the potential for lifelong psychological harm that many parents fear childhood exposure to pornography may cause? You're comparing "apples and oranges."
>
> (4) Accordingly, CSTPA fails the straw man test because you use it to attack an argument different from (and weaker than) your opponent's best argument.
>
> (5) CSTPA is, therefore, a red herring (it introduces irrelevant material to the issue being discussed).
>
> (6) Then there's the fallacy of exclusion. You emphasize that CIPA requires filters on ALL public library computers but fail to mention that official ALA policy opposes *any* filters on computers in public librar-

ies and, for "informational" purposes, considers children to be the "functional equivalents" of adults.

(7) Your article also fails the false dilemma test because you only emphasize two alternatives (filtering or not filtering) while neglecting others. You do mention a personal lack of opposition to filtering computers in children's departments (a fine suggestion but a professional non-starter as indicated above). However, what is so intrinsically unreasonable or "unconstitutional" about simply utilizing a filtering system's override mechanism in the event that patron access to legitimate material is blocked?

(8) Then there's the matter of premises or core assumptions. You seem to assume that it is a "logical fallacy" for anyone—even a library legend like Manley!—to reach conclusions on intellectual freedom issues at variance from ALA. Perhaps his premises were simply different. Differing premises do not necessarily make a false argument. And your suggestion that he, of all people, doesn't understand library issues simply because he departs from ALA orthodoxy is, frankly, lazy induction.

(9) Finally, while I'm not certain how to classify it, the standard of perfection that ALA-types insist upon for filters (but probably not for any other form of library technology) is surely a logical fallacy. Nothing in this world works flawlessly 100% of the time and, if you've ever heard of Murphy's Law, you probably don't expect them too [*sic*], either. So how do you justify holding filters to a uniquely higher standard? "Because its negative effects on our liberties vastly overbalance any so-called protection?" That's your opinion. Here's mine: perhaps the profession's rationale for trotting out the perfection standard is more instrumental than proximate in character.

One last comment: you wrote that you didn't understand why Manley and others within the profession would write pro-filtering articles because they "won't convince librarians who understand the issues to abandon their principles." Are you absolutely certain of that? My kremlinological training suggests that you're whistling in the dark. The profession's relative inability to engage filtering advocates in "fallacy-free" debate suggests a certain lack of organizational and intellectual confidence on this subject. I rather suspect that there are those within ALA—perhaps you are one of them—who are terrified that "new thinking" about library issues might just prove to be contagious.

Weaver convinces me to take back six words in my article: "and the ordinary principles of logic." And to remember those golden days of high school debate, when we learned how to use logic-chopping to undermine opposing arguments without directly addressing them. I won't bother to address the logical fallacies in his letter, since—*like my editorial*—it is an argumentative statement and as such should be largely exempt from such quibbling.

Wooden-headed is Manley's word. There *is* a problem with CSTPA (noted in Following Up, this issue), but I'd say "apples to oranges" is comparing maiming, death, and other permanent physical injuries with hypothetical psychological harm.

I do not speak on behalf of ALA and have frequently differed with their slogans and sometimes policies; thus, #6 and #7 are irrelevant. ALA does not rule the nation's libraries. To the best of my knowledge, no librarian has ever been thrown out of ALA because his or her library used filters. I've been at programs where city librarians described how and why they filter all public computers; they were neither jeered nor removed from the room.

What's unreasonable about requiring a high school senior (under age 17) with concerns about AIDS or homosexuality to go to a librarian and justify overriding a browser filter? To me, that question answers itself.

I didn't question Manley for disagreeing with ALA "orthodoxy" but for saying that it *makes no sense* for ALA to challenge the legality of CIPA. If Manley took ALA to task for challenging a law that related only to computers in children's areas (or at least exempted computers that children have *no* access to, such as staff computers), it would be a different argument and I would probably stay out of it.

If Weaver believes that all who oppose CIPA are ALA functionaries or involved in some "kremlinological" operation (whatever that is), that's his privilege. It's nonsense, but it's his privilege. If he asserts that ALA and ACLU representatives are unable to represent *their* sides of filtering discussions in a logically coherent manner, he's simply wrong.

As for my being "within ALA"—I'm a member, and have been for 27 years. That's about it.

I stand by my editorial. I believe that CIPA is bad law and that ALA serves its members well by challenging that law.

Product Watch

Multifunction—Cheaply?

When *Macworld* reviewed a trio of multifunction "printers" (scanning, copying, printing, and faxing devices), they found a direct relationship between price and value (see *Cites & Insights* 1:3, p. 16). The May 22, 2001 *PC Magazine* reviews another competitor that seems to offer surprisingly strong features for the money. The headline is "A multifunction powerhouse" and the photo

shows a flatbed copying/scanning unit, making this a more useful unit than typical low-end page-feed systems—but the price is $250!

Xerox' WorkCentre M950 scans at 600dpi (in full color) and can print at up to 1200dpi. The unit includes a page feeder but has the flexibility of flatbed scanning; copying features include enlargement and reduction at any percentage from 25 to 400%; and print speed is more than respectable (although first-page speed is slow). It took less than two minutes to produce seven color copies and 104 seconds for 12 monochrome copies.

You don't get great quality—colors are muted, photo output dull—and it's not a high-volume unit, but it earns four dots and seems like a real value. But then, it's not Mac-compatible.

ICE Returns

Years ago, I noted the introduction of film scanners with ICE: Image Correction and Enhancement technology. These scanners scanned the *surface* of the film in a separate pass, allowing them to remove dust and scratches automatically. The idea is back—but with a digital twist. Two new Nikon film scanners, reviewed in the May 22, 2001 *PC Magazine*, offer Digital ICE^3 ("ice cubed"), including Digital ROC and Digital GEM. ROC stands for reconstruction of color, which claims to "automatically restore proper color levels and balance to faded film," while GEM is Grain Equalization Management, removing visible film grain from scanned images. One would guess that similar digital technologies come into play when restoring old movies for DVD release.

It's an interesting half-page review. Tests on "old, faded, dusty and scratched slides and negatives" yielded impressive results. "Aging, faded images that had an overall blue color became vibrant and colorful. Dust and scratches disappeared without manual editing, and we were able to eliminate the grain from images taken with grainy 400-speed slide film."

ROC or GEM added two minutes of processing time to each scan, using a Pentium III-750 PC. These are *strictly* film scanners, with very high resolution (2,900dpi for the $895 unit, 4,000dpi for the $1,695 model) and a slot for slides or negatives. The cheaper unit gets a perfect five-dot rating and more than meets most users' needs.

The Really Big Show

Who would pay $3,499 for a 36" 4x3 TV set? Even Sony XBRs don't cost *that* much, and they're the best direct-view sets you can buy (in my opinion). But Princeton Graphics' Ai3.6HD isn't just a TV set. It's also a multimedia monitor with built-in CPU, 16MB flash memory and 64MB SDRAM, Internet access, and a bunch of connections—as well as a TV tuner and internal line doubler. It's a high-definition display ("compatible with 480p, 720p, and 1080i input") but requires an external HD tuner—and, given its 4x3 rather than 16x9 ratio, it's not a good choice for HDTV (or DVD viewing, for that matter).

PC Magazine gives this beast (210 pounds) a five-dot rave and calls it a "killer display" that's "a natural for board rooms, company lobbies, training facilities, or any other location where a versatile display is desirable." It's certainly one of the biggest PC-compatible displays you can buy, and appears compatible with almost any input.

Unfortunately, you have to be wary of some claims. "As a computer monitor, the Ai.36HD can display at resolutions of 640-by-480 (85 Hz maximum), 800-by-600 (75 Hz), and 1,024-by-768 (60 Hz)." Yes and no. Two sentences later we learn that this display has an Invar Shadow Mask CRT (that is, it's *not* a Trinitron display) with a 0.90-mm stripe pitch (which is confusing, because stripe pitches *are* for Trinitron/Diamondtron displays: shadow mask CRTs normally have dot pitches).

Do the math. Assuming this uses TV-set standards rather than monitor standards, 36" is the *visible* diagonal measure (always true for TV sets) rather than the tube size (the phony number used in monitor ads). That means the visible area is 21.6x28.8 inches. There are 25.4 millimeters to an inch. Dividing by the dot pitch or stripe pitch of 0.9mm, we get 28.2 dots per inch. Thus—barring magic—the tube can *physically resolve* 813x609 dots. Any resolution higher than 800x600 represents wishful thinking and approximate display—the unit can accept higher resolution but not accurately display the results.

I'm not knocking Princeton. Fun and games regarding actual resolution seem to be standard practice for very large data displays. Note that 0.90mm is a *TV* figure. PC monitors typically have 0.24-0.26mm stripe pitch or dot pitch, sometimes a little finer, almost never coarser except on cheapo no-name displays.

Speaking of Really Big…

EContent for May 2001 has an odd "Gearing Up" item, complete with picture but no measurements: Cyberbank's PC-EPhone. It's a cell phone that includes a 4" LCD display with 256 colors and 640x480 resolution, offering full-screen Web browsing as well as Bluetooth interchange and voice communication. Supposedly, this device will be on the

market in "spring 2001" (by the time you read this?) for roughly $1,500.

Convergence or craziness? That screen means the device is *at least* 3.5 inches wide, a *lot* wider than a regular cell phone. A 640x480 screen that small is impressive: that's 200dpi, a huge jump in LCD density—but are you ready to cope with full-size Web pages shrunk down to 2.4x3.2"? The writeup ends that it's a "powerfully functional treat." Maybe.

Big Diskettes Return?

Remember the competing "super diskette" drives, the Sony HiFD and LS120A SuperDisk? Maybe not. Both offered upward compatibility with 3.5" microdiskettes while providing much higher capacity on special same-size media (120MB and, later, 240MB for the LS120A, 200MB for the HiFD). Compaq included the LS120A on some of its models for a short time. Neither one had any real impact.

But hope springs eternal. Matsushita (Panasonic) is introducing the FD32MB SuperDisk, which supposedly stores 32MB on a *standard* microdiskette. The claim is that the new drive will also handle LS120A SuperDisks. Drives will cost around $200. The Panasonic spokesperson is high on the idea, saying that the low cost of diskettes and ease of use should be big selling points (according to a report in the June 2001 *Computer Shopper*).

One little drawback: files written in high-capacity mode are read-only. Just as they are on CD-Rs, which are as cheap as microdiskettes, use drives that cost less than $200, and hold 700MB rather than 32MB—and are faster than diskettes. Oh yes, and if you want the ability to rewrite with these under-$200 drives, you pop in a $1 CD-RW that also has several hundred megabytes capacity rather than dropping back to 1.44MB. This seems like a tough comparison for the FD32MB to win, but maybe I'm missing the point.

Following Up

Corrections, amplifications, apologies, sequels and other direct additions to essays and other topics from the last two issues. (Feedback now appears as a separate section.)

For the Children

Of course I was exaggerating in the Children's Sharp Thing Protective Act. CIPA allows librarians to bypass filters for adults who can demonstrate "legitimate" reasons to do so, on a case-by-case basis—but there's no provision for blanket bypass. So a truly equivalent CSTPA might require that all knives, scissors and paper cutters be locked up in each school. Cooks who needed knives could demonstrate that need *each day* to the principal's satisfaction in order to bypass sharp-things protection.

Now that I've read excerpts of CIPA and the related Neighborhood Act and ALA Counsel's summary and analysis, I'm more confused than ever. Even though CIPA doesn't mandate filtering for "inappropriate materials" as such (it mandates a *policy* to address access with meetings and the like), I believe that its definition of "materials harmful to minors," while written so as to mirror legal definitions of obscenity, is so broad as to be unreasonable.

I think that's particularly true because a minor is anyone younger than 17. I was a senior in high school at 16, and I can't think of much that was inappropriate for me at that age that would have been appropriate a year or two later. But I'm no lawyer. (Nor, according to a letter in "Feedback," am I a logician!)

Macworld ran a casual test of three "user-friendly filtering applications" in its July 2001 issue. They installed ContentBarrier, KidSafe (free from Apple), and AOL 5.0's parental controls—choosing the "safest" options in each case. Then they tried to reach some squeaky-clean sites such as CNN, *Macworld*, the Democratic and Republican Party sites, and Britannica.com. All of the filters let them reach Apple and Microsoft; ContentBarrier locked out CNN but was the only one of the three to allow the Republican Party, Britannica, and a cancer information site. KidSafe filtered *Macworld*'s Web site(!). All three blocked the Democratic Party and Napster. Their conclusion: "Either the Web is a lot more risqué than we imagined, or Internet-filtering software needs a healthy dose of parental common sense to be truly useful."

See also "Press Watch I" where I note a relevant 44-page article from *Texas Law Review.*

Ebook Watch: Catching Up with Ebooks, Part Two

John Hubbard informs me that the URL for "E-ink for e-books" should be http://www.biblio-tech.com/BTR901/January_2001/e-ink_for_e-books_.html

Clifford Lynch's *First Monday* article has engendered a *lot* of feedback and commentary in various parts of the Web. Much of that feedback is ignorant or simply mean-spirited; as expected, many comments on bulletin boards represent cherry-picking, mining the text for a particular sentence or para-

graph that can be cited out of context. After printing off a few of these, I find that there's little point in summarizing them and no point in giving them press they don't deserve—and Clifford Lynch is more than capable of fighting his own battles.

Gary Frost has added to his initial commentary on Lynch's article (at www.futureofthebook.com). Much of that commentary is, in a way, orthogonal to Lynch's article: intersecting with points in the article and, in some cases, *springing from* those points—but not necessarily critiquing those points themselves. (I can appreciate that. Close readers will note that much—sometimes most—of *Cites & Insights* and my "DisContent" column in *EContent* comes about that way: springing from and informed by what I read, but not directly addressing the articles.)

I still believe that Frost sometimes confuses Lynch's reporting for his beliefs—e.g., "leading to a sense that technology inevitably will supercede the printed book" is a *report* on a widely-held sense, *not* Lynch's own sense—but overall, I think Frost's ongoing commentary will add to a useful set of discussions that may help people understand the complex media environment of the present and future. There may be an important book hiding here somewhere!

The Price of CD-Rs

"If you burn CD-Rs, you must be delighted by the low prices… Don't assume that those prices will keep heading down." That's from "Trends and Quick Takes" in *Cites & Insights* 1:6. It was based on an *EMedia* report that noted licensing costs to use CD-R patents: 8 cents per disc minimum. So it was no great surprise to see a July 2001 *PC World* news report entitled "CD-R media prices to triple this summer." On one hand, supposedly Philips (and the other patent holders) lowered royalty fees. On the other, prices had dropped even lower than I thought—to a wildly unsupportable ten cents a disc with rebates. (I cited $0.25 partly because rebates are normally one-shot offers.)

Don't get too alarmed. The analysis cited in this article suggests that CD-Rs will go up to an average of 30 to 35 cents in spindle multipacks (without jewel boxes) and probably stabilize there. That's still incredibly cheap, only feasible with lowered royalties, and makes CD-Rs the most cost-effective backup and distribution medium by far.

PC Values

Dan Lester argues convincingly that Micronpc should *not* be considered a new company—that, while Micron's PC operations were sold to a different owner, the same people are building the systems. Rory Litwin argues that I shouldn't favor Dell and Gateway over shop-built PCs. I'm not as convinced. See "Feedback" for both letters.

…Charley Pride, Meet *FamilyPC*

I noted last month that Charley Pride (I spelled his first name wrong) was bringing out an audio CD with a noxious form of copy protection, one that would presumably prevent the CD from working on CD-ROM drives. Bob Starrett's "the CD writer" column in the June 2001 *EMedia Magazine* discusses this disc and the issues it raises. "When Charley Pride's agent calls to tell him that his CD is not selling because there is rumor floating about that it won't play on some CD players, he is likely to have a quick revelation about the economics of paranoia." The column is a good read.

Trends and Quick Takes

Legitimacy and Relevance

I'm not sure which story here is more interesting: that Google won't accept payment for positioning within search results or that other journalists feel that "holier-than-thou pose" is an appropriate description for editorial integrity. The first is refreshing. The second, coming from a reputable publication, is somewhere between sad and appalling.

Here's the story, taken from *Interactive Week* as posted on ZDNet June 4, 2001. (I don't go to ZDNet these days—for reasons explained in the June 2001 *EContent*—but this item was linked from more than one library Weblog that I do review daily.) Google does not require companies to pay to get into Google. Google won't allow payment for placement within the results themselves. Google does sell ads tied to particular keywords and premium sponsorships, but those ads are quite distinctly separate from the results and always labeled "sponsored links." Google gets about half its revenue from those ads; the rest comes from Google-powered search engines at many other sites. Given the quality of Google's ranking, why wouldn't companies license the Google engine if the terms are right?

Here's the astonishing quote from Craig Silverstein of Google: "We think if we're the only ones out there with a reputation for integrity in our search results, that can only be good for us." The astonishing part of that comes after the first three words: Google may be the only major search engine that doesn't sell favored placement. Here's the paragraph that makes me wonder both about the free

Web search industry in general, and about the attitudes of *Interactive Week:*

> With its holier-than-thou pose, Google stands alone from other major search companies, including Ask Jeeves, GoTo.com, Inktomi, LookSmart and Yahoo!. There are generally two kinds of fees they charge: paid listings, in which customers pay for their sites to be included in a search provider's directory or index, and paid placements, in which sites are guaranteed the top spots in searches that contain specific keywords.

"Holier-than-thou": placement in a result should be based on actual relevance, not on a hidden payment. I'd call it "ethical" or "transparent." But then, all the other companies claim—I love this—that "search results improve when businesses have some paid input." Inktomi says that fee-based listings allow Inktomi to update its index more often—or, specifically, to update *paid* portions more frequently. "Ultimately, it's users who win, say the search companies that charge for listings. Paid inclusion, they say, provides users a more extensive index, and paid placement gives users links most relevant to their interests."

Parse that last sentence. The most relevant answer for any question you ask comes from the company—always a company, never a nonprofit, governmental agency, or individual—who will pay the most to provide the answer. As to "more extensive index," so far Google seems to index more of the Web than any of the paid-placement competitors.

I was also saddened to read Danny Sullivan's comments. He thinks Google will eventually opt for paid inclusion; he buys the argument that (paid) sites improve a search engine better by helping it know where to crawl and how often. And he thinks Google may find itself at a competitive disadvantage—because most users assume that every search engine's ranking is phony anyway (although he doesn't use those words). Does cynicism finally claim us all?

Speaking of Google, *Salon* ran an interesting interview with Monika Henziger, Google's director of research, in its June 21 issue, entitled "Google à go-go." Given *Salon*'s push for subscriptions, I have no idea whether you can retrieve it from the archives.

MyCereal (Part Two)

In *Cites & Insights* 1:5 (May 2001), I noted General Mills' MyCereal.com, a site that lets you design your own breakfast cereal. It's fair to say that my "Trends and Quick Takes" note didn't constitute a ringing endorsement. So here's the July 2001 *PC World* and Harry McCracken's "Web Savvy" column. The lead sentence: "I have tasted the future of breakfast—and it's delicious." He *loves* the idea of paying a buck a bowl for his blend of oatmeal flakes, banana bits, and cranberries, and he hopes that "it's also a glimpse of where e-commerce is going."

"It's the most entertaining Web shopping I've done in eons." He waxes enthusiastic about MyCereal for most of a page before going on to the customized bicycles you can get from Airbone (starting at $1,500) and concluding with a $65 pair of sneakers from Customatix—"a pair of flashy lime-green running shoes with black-and-silver trim, red soles, and appliqués of a satanic little guy on the sides." I can only hope that McCracken uses those shoes to get out more. He might even try running down to Trader Joe's (or any good supermarket) and buying some dried fruit and bulk cereal. Just at a guess, he could get fresher customized cereal for a lot less than a buck a bowl. (But what's entertaining about that? It doesn't even use the Web.)

Does DataPlay Stand a Chance?

Months ago I mentioned the DataPlay disc, a fledgling medium that stores 250 megabytes on each side of a half-dollar-size optical disc. My assumption was that the medium was a nonstarter: its only advantage over CD is size, the recordable discs cost five or ten times as much as CD-R or CD-RW for less storage, and even geeks are tiring of new devices.

I could be wrong (so what else is new?). *EMedia Magazine* 14:6 (June 2001) includes a news item that BMG will join Universal and EMI in supporting DataPlay. The story goes on to discuss MP3 as a likely use—and notes that DataPlay features built-in support for digital rights management. You can probably assume that DataPlay discs won't allow buyers to make convenience and remix copies as readily as audio CDs do.

There's no indication that any of the music publishers are releasing huge numbers of DataPlay discs, to be sure: agreeing to support a medium is quite different than putting products in stores. I still wonder whether this medium makes much sense, but at least there are some signs of life.

Watching or Reading?

You won't be surprised to hear that "the gap between the audiences of the biggest magazines and the most-watched primetime TV shows is growing," according to an FCB Media study reported in *Media Life* (www.medialifemagazine.com, posted June 26, 2001). After all, print magazines are old news, right?

Wrong. Read the next sentences: "But what some might be surprised to learn is that it's the magazines that are on top. Among adults 18-49, the 25 top-circulating magazines have an average rating,

or coverage, of 10.2 percent, while the 25 most-watched TV shows have an average rating of only 7.3 percent—a 40 percent difference."

Now consider that the largest-circulation magazine in the United States doesn't reach that demographic at all (or at least not primarily): *Modern Maturity*'s vast audience is almost entirely 50 and older (now 55 and older, as those young punk Baby Boomers now get *My Generation* instead). The details in this article cite *Reader's Digest* as having the broadest reach among us geezers, but that may be because *Modern Maturity* comes as a membership benefit in AARP rather than as a straight subscription.

This isn't a trick of bundling large numbers of shows and large numbers of magazines together. For the period comparable to the 2000-2001 TV ratings season (October 2, 2000-April 15, 2001), roughly 21% of adults 18-49 read *People*; only 12% saw *Survivor II*, the highest-rated TV show for that demographic. Choose your demographic: the names may change, but the comparisons are similar or worse. (Most extreme: blacks age 18-49, where the highest-rated magazine, *Ebony*, has *three times* the reach of the highest-rated TV show for this group, with an astonishing 45% reach.)

It makes you wonder what advertisers are thinking. To reach adults 18-49 using the top 25 resources, magazine advertising cost $11 per thousand impressions—while TV cost $27 per thousand impressions. I don't know about you, but I find magazine advertising a lot more useful, acceptable, and (frequently) informative than TV advertising—and it's cost-effective as well.

Press Watch II: Commentary

Howard, Bill, "More entertainment, more kaching," *PC Magazine* 20:10 (May 22, 2001), p. 195.

Bill Howard *loves* technology. He's unhappy that it's taking so long for PCs and entertainment electronics to merge. He wants it all, *now*—and, of course, he assumes that everyone else does as well. And gets pretty silly in the process.

This column labels NetFlix as a "convergence product." Huh? NetFlix (a great service if you don't have a neighborhood DVD rental outlet that you like) is a DVD rental service, shipping pieces of plastic through the U.S. mail. What makes that convergence? He gets it wrong anyway, in a bizarre way. NetFlix' standard plan costs $20 a month, which lets you have three DVDs at any time. "Send one back, NetFlix mails you another. The math is simple: 3 bucks a movie."

Where did *that* come from? If you watch two movies each weekend, you'll always have two new movies the next weekend (with a third to spare). That comes out to $2.50 a movie on a four-weekend month. If you're an avid viewer (three movies each weekend) and don't keep movies, figure $1.67 each for four-weekend months. If you're semi-retired and give up reading, you could get through six three-movie cycles in a 30-day month: that's about a buck a movie! There is no fixed cost per rental for NetFlix—but there are also no late fees.

That's not why I point this one out. Neither is Howard's uncritical love for TiVo or ReplayTV with its "superb" recording quality (I suspect he's never used S-VHS). I was struck by his final paragraph, telling us how much we'll spend on all this stuff. "Consider that an American family earning $45,000 a year could end up spending 5 percent of its income on entertainment electrons." Yes they could—but most of them probably won't. His list of stuff we all want to have far exceeds my leisure time, much less desires—and his list doesn't include old-hat stuff like books and magazines. Who has time? And there will always be more $10-a-month services that *we all absolutely need*, redundant though they may be. The last word in the column after he says "You're even going to have to pay for online music," is the same as the last "word" in the column title. It's a word I'm beginning to despise—and distrust.

Broida, Rick, "Home, smart home," *Computer Shopper* 21:6 (June 2001), pp. 132-8.

Take a writer who loves any innovation he sees. Add a magazine with a title that clues you in: shopping is the name of the game. Mix with a cover that says "Simplify your life with connected smart devices," and you have the makings of great silliness (unless you believe all this stuff).

It's all here, going well beyond this sentence:

> Once Internet and networking technologies coalesce and appliances learn to interact, your refrigerator will keep track of what's inside, your lawn sprinkler will monitor the weather and operate accordingly, and your VCR will accept programming from thousands of miles away.

Later, we learn that we'll "look in on the baby by changing channels on the television" and dim lights, lower blinds, light a fire, or turn on the stereo with "the press of a button." Those of us who *now* turn on a stereo or turn off lights with the press of a button

may not be impressed—but we can now do all that *from across the country*. Better yet, the fire will light itself when the refrigerator feels chilly, or maybe the stereo will lower the blinds and light the fire to create a proper mood for the robot vacuum cleaner.

"A suite of cooking appliances will cook for you even if you're not there." Remember crock pots? Wasn't that what they did? This time around, you "select a recipe from the main console, prepare the ingredients, and set the time you want everything cooked. When you get home, you could have fresh bread, a slow-cooked roast, and steamed vegetables waiting to be served. Stuck at the office? Just 'call' the kitchen console from your office PC and tell the 'chef' to wait an extra hour or two." Naïve folk like me might wonder about food poisoning, freshness, and other issues related to leaving ingredients sitting in their cooking vessels all day, but I'm not all that wild about having a refrigerator track my food purchases and consumption either.

Maybe you'll be inspired to buy into this vision of the future. Every house will have several PCs linked together through wireless networks; "a few strategically placed Webcams" will help you keep an eye on the house.

The "smart house" will lower your energy bills despite this array of always-on devices because "an automated thermostat can lower the temperature during the day when no one's home and at night when you're sleeping." That's true—but automated (timed) thermostats have been around for years. Our house has a remarkable energy-saving device (twenty of them, actually) that turns off the heat during the day and lowers it at night (and would do the opposite if we had air conditioning). It's called a finger. It's absolutely reliable and its time settings are variable depending on when we actually leave the house or go to bed.

I won't go into all the oddities of this article. Note the "approximately $40 a month" you'll pay for broadband access robust enough to deliver any movie at any time in DVD quality—and, of course, *two-way* broadband so all those Webcams work anywhere you are with "smooth, full-screen video." Will that be Northpoint broadband or Covad?

Dvorak, John C., "The myth of broadband," *PC Magazine* 20:11 (June 12, 2001), p. 85, and Bill Howard, "Productive computing with wireless," same issue, p. 219.

It's always fun to see battling columnists, although I doubt that Dvorak and Howard would admit to battling. Dvorak's column might even belong in Press Watch I, although I'm not convinced of his argument—which is, basically, that dial-up speed (which he calls "34 Kbps, plus or minus 10 Kbps") is a "true standard." (I consistently get 50 Kbps or better from AT&T Worldnet, but I'm aware that Dvorak's figure is more common.) At some length, he suggests that this "standard" dictates the way the Internet works and that, as a result, "Broadband may be decades away."

Howard is, as always, a full-time technogeek. He's believed for several years that there are three necessities to "improve…personal and business productivity": broadband Internet access (which he calls high-speed broadband, presumably as opposed to low-speed broadband?), abandoning the desktop for portable computing, and using wireless connections. "These are the keys to productive computing." Knowing your applications? Buying the right tools for the jobs *you* do? Understanding that the computer is just a tool, and using it as such? Doing your computer *work* (writing, spreadsheets, etc.) on your own computer, in which case bandwidth and wireless are meaningless? I guess those are all irrelevant: a wireless notebook with broadband is all you need. That's presumably why I'm so grotesquely unproductive at home: I use a desktop computer with a wired V.90 dialup connection.

I'm cheating by grouping these two together. Howard is a True Believer in broadband and setting up your own home wireless network. He tells you to assume you'll buy two more cell phones between now and the time that sending data over cell phones "gets good" in the U.S. ("about 2004")—that's 18 months per cell phone, a rate of obsolescence that makes PCs look like wheelbarrows by comparison. He's all excited about the "Holy Grail" of Web browsing on cell phones: "a smart 'push' model." Which, given the enormous success of push technology so far, makes about as much sense as Web browsing on cell phones. If you're a Howardesque technofreak, this must all be reasonable.

Akst, Daniel, "Read the instructions," *The Industry Standard* 4:23 (June 11, 2001), pp. 86-8.

Have you looked at the pictograms (like icons, but why use five letters when ten are available?) on clothing tags? Do any of them make sense or are they as "obvious" as the broom on Word's toolbar? As this article notes, "These elegant pictograms, developed by the insightful folks at the American Society for Testing and Materials, are a triumph of cross-cultural communication—equally incomprehensible to everyone, no matter what your mother tongue."

This article proposes that the solution for this is chips—chips in *everything*. That's not new, but I continue to find it a startling case of overkill. "Imagine, for example, that clothing carried smart tags con-

taining laundering information in a host of languages… Dryers might even issue an alarm or refuse to run if they contained an item embedded with a 'do not tumble dry' chip. You might not understand the tag, in other words, but your appliances would."

Give me a break. First, of course, there would be no reason to have multilingual instructions in the chips. Your *appliance* would be set for your language of choice; why burden your JockeyCPU or Fruit of the RAM with extraneous text? Second, is this a sensible use of digital technology? I've seen the ideas that all products in a supermarket—including apples and kiwifruit—will carry tiny transceivers so that you check out automatically and your refrigerator knows what's on hand. This is another variation on the same theme: trillions and trillions of chips in every item we own all talking to one another.

Well, why not? We have unlimited funds, energy is endless and there are no serious problems to be solved in the world. I suppose I should be ready to replace all my clothing and my appliances so I won't accidentally wash my Dockers in hot water. Isn't that *really* the goal of the information revolution?

Somogyi, Stephan, "Take command of Mac OS X," *Macworld* July 2001, pp. 72-4, and "Mac OS secrets," same issue, pp. 76-7.

Bwah-ha-ha…

I don't want to heat up the platform wars again. The five percenters have great machines and continue to believe the Mac way is the only way. The rest of us (I suspect) spend a lot less time envying their iMacs, cubist G4s and iBooks than they think we do. (Oops. The cube is gone, isn't it?)

But we've always been told that the One True Mac Way is the only way computing should work—and, of course, that means freedom from the evil command line. Snigger snigger: Windows 98 is still just a shell atop DOS, while Mac OS is a true graphical operating system. Windows 2000 is *not* a shell atop DOS, but there's still a simulated DOS prompt because it's so handy sometimes. But how often do you *need* to use a DOS prompt in Windows? As the first line in the second article here states, "We Mac users have long been proud that we don't have to type in commands to use our machines to our fullest." Which is, to be sure, equally true for Windows users.

These two articles show just how far we've come. In case you haven't been paying attention, Mac OS X is a great leap "forward into the past." Mac OS X is, as far as I can tell, a graphical shell atop Unix (which originated in 1969). Both of these articles offer tips for using the newfound Mac command line to "make your Mac more powerful."

It's not really a command line. It's "Terminal," an application that looks a lot like…you got it! A terminal, with the ever-intuitive "%" prompt. In the terminal box, you can enter intuitive commands like "ls" and "less" and even "ls | less." The second article introduces Perl scripts—and it's the first of "a series examining OS X's geekier innards."

The irony is delightful. Watch Mac users discover workarounds for Unix' dislike of file names with spaces in them! See brave commentators explain why "less" is a perfectly natural command to display a file's contents. Let's talk about case sensitivity…

Review Watch

These notes cover *comparative* reviews that seem worth noting, primarily from magazines in the personal computing field. Constant grumbles: *PC World*'s rigid review format leaves out much of the work they do and *Macworld*'s reviews are typically so brief as to break down to "trust us, we know what you need."

Biometric Security Devices

Grotta, Sally Wiener, "Bio-keys," *PC Magazine* 20:11 (June 12, 2001), pp. 162-74.

Don't expect to see this category very often, and I'm not sure it makes sense to include here. But this review is fascinating, particularly if you read the sidebars. The primary review covers seven fingerprint readers, devices to improve security for PC or network use. They work reasonably well, and the Editors' Choice is charming in its own way. Sony's $299 FIU-710, also called the Sony Puppy, is a tiny device (1.4oz, "about the size of a few business cards") that connects to a PC via USB cable and uses an electrical field to sense fingerprints. That means that it only works with live fingers, not printed replicas (or other alternatives I'd rather not think about), as it's sensing differences in conductivity rather than light-and-dark patterns. The Sony stores patterns in the device itself, making it extremely secure—and it uses 1Kb RSA encryption, by far the strongest level I've ever heard of (most encryption is either 56-bit DES or 128-bit RSA).

While the main article reports a claim that "by the end of 2005, there will be one or more biometric technologies shipped as part of every new PC system" (the study was commissioned by the International Biometrics Group, your classic disinterested party!), a wonderful sidebar with Jim Weyman of

San Jose State's Biometric Test Center offers a less enthusiastic perspective. He's not sure that the added security is worth the cost for most applications, particularly for "positive identification" (proving you are who you say you are). It's being used in California and elsewhere for *negative* identification: if you apply for a driver's license, a scan of your fingerprint will be matched against a statewide database to make sure you don't already have one—in other words, that you're not someone else. Weyman concludes, "It could be that consumers will never demand this. I know governments absolutely require it for negative identification. But then again, Texas has been using biometrics for social service recipients since 1996, and just this week they voted to get rid of the system."

Desktop Computers

Behr, Mary E., "Managed PCs: look like a hero," *PC Magazine* 20:12 (June 26, 2001), pp. 144-55.

What's a managed PC? It's like a small business or home office PC, but it includes remote management software, tool-free chassis, and the manufacturer's assurance that a configuration will be available for at least 9 months. The review pays as much attention to the management software as the machines—and awards Editors' Choices to the two lines with the most complete remote management software capabilities. Those are Dell and Hewlett-Packard. Specifically, five-dot ratings go to Dell's $2,054 GX400 and HP's $879 e-PC. One sidebar offers test results for power-save mode, significant because remotely-managed PCs can't always be turned off at the end of the day. The results are impressive, at least for two Dell systems, two Gateway systems, and one system each from HP and IBM: in "S3 mode," the systems used less than 4 watts (the IBM NetVista less than one watt!), compared to usage anywhere from 25 to 66 watts in normal operation. If those "normal" uses seem low, you're right: omitting the display (as I believe these tests do), PCs just don't use much power.

Brown, Bruce, "More P4 pep for less," *PC Magazine* 20:11 (June 12, 2001), pp. 36-41.

Yes, *PC* still does review actual end-user PC equipment now and then, if only in the "First Looks" section. This roundup considers five 1.7GHz Pentium 4 systems from five of the biggest names in desktop PCs, all with 128MB RDRAM, 18"-viewable displays, DVD-ROM drives, high-end graphics cards (mostly nVidia GeForce2 with 32 or 64MB RAM), and big hard disks. Four have CD-RW drives as well as DVD-ROM; while two hard disks are a "mere" 40GB, Compaq and Gateway both provide 75GB monsters. Prices range from $2,567 (Dell Dimension 8100) to $3,460 (Compaq Presario 7000T). Oddly, the least well-equipped unit (HP's Vectra VL800MT, with no CD-RW drive and one of two 40GB hard disks, and only 32MB graphics RAM) was the second most expensive at $3,130; Gateway's Performance 1700 XL is $132 more than Dell's price. These are surprisingly low prices for the fastest available CPU and very well equipped systems.

Editors' Choice is the Gateway, the best configured of the group and second least expensive, with solid performance. The Compaq, Dell, and Micron Millennia MAX XS ($2,793) tie for second with four-dot ratings; HP trails the pack.

English, David, "The dynamic duo," *Computer Shopper* 21:7 (July 2001), pp. 100-10.

The hook for this group is unusual: all the systems use AMD Athlon processors (1.2GHz or faster) and all use double-data-rate (DDR) RAM, faster than standard RAM and a lot cheaper than RDRAM. The rest of the minimum configuration includes 128MB DDR-SDRAM, 40GB hard disk, DVD-ROM or CD-RW, 18"-viewable display, and Windows ME. Systems range from $1,779 to $3,287; other than Compaq and Micronpc, the vendors are relatively unknown. Although not required, all systems also came with nVidia GeForce 2 Ultra graphics processors and 64MB DDR graphics RAM—leading-edge graphics by most standards.

Most application tests seem to show that the Athlon-DDR combination at 1.33GHz equals or exceeds Pentium-4 systems running at 1.5GHz. These are powerful systems with widely varying configurations. Ratings (using *Computer Shopper*'s 10-point scale) clustered between 7.0 and 7.7; the two systems at 7.7 both receive Best Buy seals. One of those is the cheapest system, Atlas Micro's $1,779 XS5000; the other is Xi's $2,550 Mtower SP, third cheapest of the group. Those are the only two PCs without CD-RW drives; the Atlas uses a small, slowish hard disk; neither system comes with mainstream productivity software. They are both, however, well-configured, powerful, reasonably-priced machines.

O'Brien, Bill, and David English, "Curing the beige-box blues," *Computer Shopper* 21:6 (June 2001), pp. 92-100.

This odd review covers five "colorful" PCs—which can mean anything from HP's colored plastic panels and faceplates to sleek LCD-based systems from Gateway and IBM and Sony's innovative pen tablet computer. Minimum configuration is an

800MHz CPU, 128MB RAM, 20GB hard drive, optical drive of some sort (CD-ROM, DVD-ROM, or CD-RW), monitor, and Windows ME. Prices range from $1,398 to $2,999.

Computer Shopper gives a lot of weight to price and apparently no weight to manufacturer size or reputation. Thus the Best Buy here: the $1,799 Integra from ePCdirect, a company I've never heard of. The Integra is an all-in-one box with a 15" LCD display, clunkier than the competitive LCD all-in-ones from Gateway and IBM but with a TV tuner and FM radio included. It also has a DVD-ROM drive, as do the Gateway and IBM. The review says that the Integra "takes convergence to where it should be"—but is the future of media *really* listening to FM at your PC and watching TV on a 15" LCD screen? My biggest problem with the Integra is the maker: given that it's a total unknown and that all-in-one PCs tend to have more proprietary parts than vanilla boxes, you're taking a considerable chance.

The highest point score—which would typically yield the Best Buy—goes to IBM's $2,199 NetVista X40i, a black all-in-one. Its performance is (generally) worst in the roundup but the reviewers *loved* the sleek black box.

Gateway's $1,999 Profile 3cx and Sony's $2,999 Vaio Slimtop PCV-LX900 Pen Tablet Computer tie for third. I'm astonished that the Vaio gets a mediocre design rating; that combined screen/tablet design looks to me like the most innovative idea in desktop PCs this year—and for most users, its CD-RW drive is more valuable than a DVD drive. I guess the "uninspired" light-gray case and existence of a (slim) box in addition to the screen/tablet count against it. Gateway's unit is the third iteration of the Profile design. Oddly, the drives have returned to their initial position behind the screen, which may make the unit sleeker but makes it a little clumsy to insert diskettes, DVDs, and CD-ROMs.

Digital Cameras

Newman, Heather, "Lights! Camcorder! Action!" *FamilyPC* 8:5 (May 2001), pp. 100-103.

"Can't decide whether to get a digital or analog camcorder? Then pull up a chair and read on, because we're here to tell you that digital is the way to go." That's the lead—and, as one who believes there's still a future for *still* film photography, I can't argue with the conclusion.

The review covers seven digital camcorders costing $599 to $1,999. That's more than you'd pay for a modest analog camcorder—but the case for digital video seems convincing. If you're going to prepare videos that anyone else would want to watch, you'll do a lot of editing. Every editing generation with analog video causes substantial loss of quality, starting with a medium that's not very high quality to begin with—and the tools for analog editing are either clunky, expensive, or both. The result, I suspect, is that most camcorder owners wind up with too many little boxes full of tape nobody wants to view.

Digital camcorders can offer better video quality to start with. More significantly, setting aside issues of compression and decompression, there should be *no* loss of quality as you edit digital video. Editing can take advantage of contemporary PC power, making it more flexible, cheaper and faster than effective analog editing. You need a powerful PC with loads of disk space and IEEE 1394/FireWire inputs and some software: non-trivial but reasonable.

The reviews appear in ascending order by price, starting and ending with Sony units. The highest rating (95, an astonishing score on *FamilyPC*'s scale) goes to Sony's $1,999 DCR-PC110, with higher resolution than most competitors and generally first-rate performance. Panasonic's $1,400 PV-DV800 takes second place with 92 points, also a very high score; it has less than half the resolution of the Sony and weighs a little more, but it's got a good feature set and performance. They say at the end of the Panasonic review, "if you're interested in making near-professional video, it might be worth paying the extra cash for the top-of-the-line Sony model."

Stafford, Alan, "DV guide," *PC World* 19:6 (June 2001), pp. 135-9.

This test includes four models ranging from $900 to $2,000, with that top mark the same Sony DCR-PC110. The article is good, and a comparison of picture quality from one analog videocam (used for comparison) and the cheapest reviewed digital videocam is quite startling. There's really no comparison—the digital picture is *much* sharper, with better color, more detail, and fewer flaws. The summary doesn't provide evidence of any real winner. The Sony offers the best performance and features; a $1,300 Canon is one-third the size of a $900 Panasonic; and while the Panasonic doesn't match the Sony's quality or features, it's a lot cheaper. If you care about this field, read both articles.

Displays and Projectors

Broida, Rick, "Flattening up," *Computer Shopper* 21:6 (June 2001), pp. 102-8.

This may be the year that LCD displays begin to make sense for mainstream users. I've seen $500 prices for name-brand 15" units and, temporarily, a $900 price for an 18" LCD display. That's still con-

siderably more than comparable CRTs, but the prices are within reason. This review includes five 15" LCDs listing for $595 to $769.

The review may overstate the advantages of LCDs—I'm not sure that "vastly superior technology" is right, and "tend to deliver much sharper images" doesn't match my experience (comparing LCDs to Trinitron tubes)—but the low space requirements, reduced power consumption, lighter weight and lack of flicker all argue for LCDs. The review mentions LCD problems with moving images, noting: "LCDs sometimes blur them, though not always to a detrimental degree." I would argue that *any* visible blurring is detrimental, but what do I know? The review also mentions that using an LCD display at other than optimum resolution will yield fuzzy images but does not mention the color-purity problem that *Macworld* discovered.

Samsung's $604 SyncMaster 570sTFT gets the Best Buy award. It's relatively inexpensive and the only one in this roundup that can switch orientations. The Samsung's point score is significantly higher than the second-rated unit, Mag InnoVision's $595 LD500.

Broida's opinion couldn't be clearer: "For obvious reasons, we'll take the worst flat-panel display over the best CRT any day of the week." I find that extreme—but for more and more users, an LCD may now make sense as an alternative to a CRT.

Graphics Hardware and Software

McDonald, Glenn, "Get crafty" and "Software for mini-Monets," *FamilyPC* 8:5 (May 2001), 104-6.

These related articles provide family-tested reviews of four home publishing programs and two graphics programs designed for kids. In the general-purpose category, including four programs costing $60 or less, the winner should be no surprise: Microsoft Picture It! Publishing Platinum Edition 2001, a $55 package that offers "seemingly endless features without becoming overwhelming."

All the other programs come from Sierra Home, which seems to have usurped The Learning Company's role as multibrand purveyor. Of the three, Hallmark Card Studio Deluxe 2.0 gets the highest rating. Specific subratings may be of interest: Picture It! Scored significantly higher than the others on satisfaction and features, but trailed Hallmark Card Studio on ease of use and replay value.

For the young'uns, JumpStart Artist appears to be the program of choice. It's cheap ($20) and uses cartoon characters to talk kids through art projects. Disney's Magic Artist 3D costs more ($30) and disappointed testers, some of whom couldn't get it to work at all.

Carlson, Kurt, "Picture perfect programs," *FamilyPC* 8:6 (June 2001), 100-102.

Once upon a time, users might expect that a single "painting" program would handle graphics projects and photo editing, and possibly also the kind of low-end "publishing" that products reviewed in the McDonald roundup above are designed for.

Silly users. Here's an entirely separate roundup of half a dozen under-$100 photo-editing programs. Actually, they're all under $55, except for the $99 Mac version of ArcSoft's PhotoStudio 2000—the lowest-rated program in the roundup, but also the only one tested in a Mac version.

Highest rating goes to Adobe's PhotoDeluxe Home Edition 4.0, typically right around $50 (as are most competitors). It offers easy use and "serious fire power," including many of the advanced Photoshop capabilities. MGI's PhotoSuite 4 Platinum Edition comes in second. It offers great special effects if you're fond of them, including what MGI calls "Photo Tapestry," the special effect I've grown to loathe—where a photo becomes a mosaic of tiny thumbnail photos. It was clever the first time; now, it's mostly just annoying. But if such miracles wow you, PhotoSuite will do it at home. Cool.

Printers

Bsales, Jamie B., "It's like printing money*," *PC Magazine* 20:9 (May 9, 2001), pp. 154-67.

The asterisk links to a cautionary paragraph: "Don't misunderstand: We don't advocate counterfeiting money—just saving it. And these printers may do that." What printers? Today's lower-cost, higher-speed color laser printers. They've become much easier to set up and maintain; speed has improved substantially (now typically 6 to 12 color pages per minute), cost per page has dropped to as low as $0.08 for a typical color page, and the prices start as low as $1,300. The review covers a dozen printers; the editors liked most of them.

Editors' Choices begin with Lexmark's $2,000 C720N, which offers the best output they've seen from a color laser, good overall performance, lots of paper-handling options, and good network management software. It won't print larger than legal size; for tabloid printing, the choice is Xerox' $8,400 Phaser 2135DX—and that printer is rated at a blazing 21 color pages per minute. (A 42-page color Word report took 2:26 to print, so reality isn't much

worse than the claim. The Lexmark needs 4:52 for that same report—also close to Lexmark's 6 ppm claimed speed.) If you're on a tight budget, Minolta-QMS offers the magicolor 2200 DeskLaser for $1,300 (it took 5:20 for the 42-page color report).

The Lexmark and Xerox both earn five-dot reviews. In addition to the Minolta, four-dot reviews went to the HP LaserJet 4550N ($2,260), Lexmark 1200N ($5,200), and Xerox Phaser 1235N ($3,500). A sidebar notes that business-class inkjet printers still offer better color output although text won't be quite as crisp. HP's $1,000 Business InkJet 2250TN is a good business-class choice, with an unusually high duty cycle for an inkjet: 10,000 pages per month. Lasers are workhorses: these color units are rated at 20,000 to 90,000 pages per month.

Littman, Dan, "Long-haul lasers," *PC World* 19:6 (June 2001), pp. 96-108.

Less colorful but more essential to most offices, monochrome lasers keep getting better, faster, and cheaper. This roundup involved 13 printers, although only four of the newly-tested printers receive either feature listings or commentary. (As is typical with *PC World*, more complete information appears on their Web site.) The standard "one best buy per category" methodology didn't involve any new printer. Instead, the $249 Minolta-QMS PagePro 1100L appears as the best buy for small offices, the $1,299 Xerox DocuPrint N2125 for corporations. The best text printing among the ten printers summarized comes from HP's $1,579 LaserJet 4100n, if print quality matters to you (it's only 25% of *PC World*'s ranking).

Web Hardware and Software

Bannan, Karen J., "Open the floodgates," *PC Magazine* 20:9 (May 9, 2001), pp. 142-52.

Server accelerators go deeper into Internet hardware issues than I fully understand, but if you're involved with a high-volume Web operation, this review might be worthwhile. TCP may be thorough and reliable (*PC*'s words, not mine) but it involves a *lot* of overhead—setting up and taking down connections, sometimes dozens of times for a single page. Each of the four devices reviewed here lifts some of that load from Web servers, moving it to a dedicated card or separate processor.

It's a good article; if you're a potential customer for these devices, you'll probably understand the discussion. PC Labs tested three of the four units by "stressing out" a server using Antara.net's FlameThrower WebStressor, a tool designed to push a server to its limits. The results were fairly dramatic. Measuring the maximum number of sustainable concurrent TCP connections on a single-CPU Linux server (that is, the point at which they started to get TCP resets), the server on its own topped out at 510 connections—but with the $20,000 NetScaler 3100 (the Editors' Choice unit), that number increased to 253,134. You're reading those numbers right: the NetScaler handled some *500 times* the traffic. Actual improvement in HTTP Gets wasn't quite as dramatic, moving from 89 per second to 143 per second—but that's still a 50% improvement. On a two-CPU Windows 2000 server, the TCP limit moved from 1,538 to 339,500—still more than 200 times as high—and the HTTP limit almost doubled, moving from 105 to 202 gets per second (with 1,000 TCP connections). Notably, the NetScaler also improved the server's resistance to denial-of-service attacks: it took more than 100,000 simultaneous Syn, Ping of Death, Land Attack and Smurf attacks to max it out—where the server alone maxed out under fewer than 10,000 attacks.

$20,000 is serious change. For some server farms, the improvement may be worth the cost. Don't ask me for more explanation: I've already told you more than I understand!

Dyck, Timothy, "Web server brains," *PC Magazine* 20:10 (May 22, 2001), pp. 124-42.

This article reviews application server software, including five "component-based" and three "page-based" systems. As always with *PC Magazine*, the article provides loads of background and the tests are performed carefully. (Read "Inside PC Labs" on p. 60 for background on the testing process.)

From what little I know in this area, it's hard to fault the Editors' Choices. Among high-end servers, IBM's WebSphere Application Server, Advanced Edition 3.5 gets the nod. The Advanced version isn't cheap ($10,000 per CPU) but it's powerful, scalable, and appears to be solid. The standard version lets you get started for $795 per CPU. The performance graphs show WebSphere having a *substantial* edge over the competition.

ColdFusion 4.5 isn't cheap either ($4,995), but it has a great reputation and tested best among the lower-end systems.

English, David, "Home safety nets," *Computer Shopper* 21:6 (June 2001), pp. 119-22.

I know it's repetitive, but: If you have high-speed Internet access from home, which almost always means an "always-on" connection with a constant IP address, you absolutely, positively need a firewall—either software or a router with built-in firewall. This review covers five current software of-

ferings, including four familiar names and one I'd never heard of (Sygate Personal Firewall 2.1).

BlackICE Defender 2.136 ($40) and Norton Personal Firewall 2001 3.0 ($50) tie for first place with 8.2 ratings. Norton offers more features; BlackICE offers better value. BlackICE actually tries to trace the source of attacks as well as blocking intrusive traffic. Norton does its best to configure itself for the Internet-accessing applications you already own. ZoneAlarm Pro 1.0.112 ($40) offers a good third choice, a little less aggressive in seeking out attackers but equally effective in blocking them. A freeware version of ZoneAlarm may be firewall enough for home users.

English, David, "Sensational design," *Computer Shopper* 21:7 (July 2001), pp. 124-30.

When you want to create a Web site, what's the best software for the job? There's probably no answer to that question, given the variability of Web sites and design issues. This group review includes five Web-site design programs including some of the best-known names. NetObjects Fusion MX ($100) earns the highest rating and single Best Buy seal; it's best suited for building and maintaining complex hierarchical page structures. On the other hand, they found it hard to bypass some of the automated features.

Freed, Les, "No more letter bombs," *PC Magazine* 20:11 (June 12, 2001), pp. 148-58.

Do you need heavy-duty email filtering software? If so, and if you can square the intellectual freedom issues, this article offers an in-depth review of the products. Editors' Choices are Aladdin's eSafe Mail for small operations ($400 for a 50-seat license, $1,680 for 500 seats) and Trend Micro's ScanMail 3 and ScanMail eManager ($704 for 25 seats, $2,430 for 100, $10,475 for 500). Read the article carefully before buying into any of these solutions. They do appear to work, but in some cases the cure may be worse than the disease.

Freed, Les, "On guard at home," *PC Magazine* 20:11 (June 12, 2001), pp. 210-12.

This brief report includes firewalls such as those covered in the David English article above, but also home Internet gateways that provide a different form of firewall protection. All of the products pass ShieldsUP! Tests, so ratings focus on ease of setup and use and on extra features.

Among the four gateways, the editors like Netgear's $150 RP114 Cable/DSL Web Safe Router best, although Linksys' $150 Etherfast 4-Port Cable/DSL Router also earns a perfect five-dot rating. For software firewalls, the Editors' Choice is ZoneAlarm Pro 1.0 ($40), largely because it strikes a balance between protection and paranoia. BlackIce Defender and McAfee Internet Guard Dog Pro tie for second, but BlackIce isn't quite as easy or understandable while Guard Dog is too intrusive. They found Norton's installation too cumbersome.

Roberts-Witt, Sarah L., "Web server brawn," *PC Magazine* 20:10 (May 22, 2001), pp. 144-52.

How do you add more server power without leasing more space? One way is to shrink the servers. This review considers four "1U servers," rack-size boxes that measure one rack unit or 1.75" high. A standard equipment rack holds 42 units—or, in this case, 42 servers.

Although the summary says that "all four servers in this roundup are worth considering," the $5,904 Compaq ProLiant scored last in every respect and achieved a mediocre two-dot rating. HP's $5,321 Netserver LP1000r and IBM's $6,195 eServer x330 both score a solid four dots—but Dell takes the Editors' Choice, earning a perfect five dots for its $4,196 PowerApp.web 120.

What do you get for that kind of money, other than a pizza-box cabinet? A fast Pentium III (1GHz in the Dell), with room for a second CPU in all but the Compaq; one gigabyte of RAM; two network interface cards; and a medium-size ultra-high-speed hard disk. These came equipped with Windows 2000 Server, but all will run Linux (and, in most cases, other Unix variants).

The Details

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Hanlon's Razor: Never attribute to malice that which can be adequately explained by stupidity.

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