Cites & Insights:
Crawford at Large

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Trends and Quick Takes

The Pendulum Swings

The Web changes everything. We've been hearing that for years, absurdly simplistic though it is. Now we get the reaction: dot.coms are dead, the Web is pointless, there's no New Economy, it's all a pack of lies. People (journalists) went overboard believing the hype. Some now go overboard with disenchantment—and the truth lies somewhere in between.

Andreas Pfeiffer offered an interesting perspective in December 2000 in "Has the Internet peaked?" (a ZDNet special, with a URL too long to offer here). He goes on to say that he's not saying that the Internet will stop growing and believes the Web will "continue to provide amazing opportunities." But he was struck by the real world, remarkable for someone who publishes a "report on emerging trends and technologies."

The straws on this particular camel's back? Lastminute.com closed its British Web site and used a printed catalog to promote its deals. Teachers report that students are getting bored with the Web. Print publishers are closing down Web sites. Online content companies are producing print publications.

"All this looks a lot like realistic appreciation of the strengths and weaknesses of a new medium, following the initial, unrealistic claims and expectations." Absolutely—but the Negropontian (and Gilderite) perspective says that the Web is *not* a new medium—it is the Convergence of All Media.

"For the past four or five years, the Web was regarded as a revolution… But by now we know. There is a good chance that the Web will be the way it is today for a very long time." Pfeiffer notes that broadband isn't a salvation—and, more importantly, that "it is much harder to change human behavior than it is to change technology." Web usability does not evolve rapidly. Pfeiffer says that "Web sites are getting better," one of his few comments that I might disagree with.

Right up to the last paragraph, this is a thoughtful perspective. The Web is maturing, we're all a bit bored with the Internet hype, and the "era of mad experimentation" can give way to opportunities for useful tools and services. But note the closing:

> As for the earth-shattering, headline-grabbing developments that break new ground for technology, there is lots of stuff yet to come—just ask those guys who work on G3 telephone services, interactive television, and a few other things still percolating in the labs.

Interactive television as an earth-shattering development? Ah well. At heart, Andreas Pfeiffer is still an industry analyst, with all that implies.

Inside This Issue

The Why Files

Three cheers to the University of Wisconsin. It has a nonprofit science education site on the Web with that name. It's been around for a while and has won several awards. That's not the reason for this quick take. *The Industry Standard* for January 1-8, 2001, notes that Twentieth Century Fox is accusing UW of trademark infringement. Why? Because Fox owns *X-Files*. Does the Why Files logo look like X-Files stuff? No—but Fox lawyers say that the Why Files "dilutes the distinctiveness of the X-Files name."

Fox has an easy solution: UW turns over rights to the name to Fox, which gives UW a no-charge license. So far, UW says that this "would betray [the university's] principle of academic freedom and its obligation to create and disseminate information."

Why Files editor Terry Devitt "wonders if Fox believes it has a lock on the alphabet." I can't see any other excuse for this egregious accusation. I favor intellectual property rights, but this is a case of trademark protection run completely amok.

More Freebies Bite the Dust

PC World for February 2001 notes an odd pair of dead.coms, both companies that promised to *pay* Web surfers or at least contribute toward their ISP bills. RhinoPoint was clever: you got paid for filling out monthly online surveys—but first you paid $15 to register. It's possible that some people received payments. Those quoted in the brief note did not—and RhinoPoint simply disappeared. *Someone* got money for nothing—but it wasn't the Web surfers! (I will refrain from comments on the wisdom of paying up front for an "incredible deal" down the line.)

SweepSurf.com (formerly MValue.com) was a little different: it promised people $0.50 per hour for viewing ads as they surfed the Internet. At least this site shut down and sent apologetic email to members; the business model just didn't make sense.

Two Little Lines

There they are, on the screen I'm looking at right now: as thin as lines can be, light gray, about one-third and two-thirds of the way down the screen. I still remember when a former RLG employee (and purchasing agent) was ready to call Gateway to complain that his wonderful new monitor was defective and needed replacement: these two little lines wouldn't go away. They won't, you know—not on any 16"-viewable or larger Trinitron or Diamondtron tube. The tensioning lines are essential to make aperture-grille CRTs work right, and may be one reason that some PC magazines have given highest visual quality ratings to "traditional" tubes. Most users, myself included, much prefer the true colors, brilliance, and detail of aperture-grille tubes—and, these days, the true flat versions (Trinitron FD and Diamondtron NF) seem to be even better. (Sony's key patents on aperture-grille technology expired a few years ago—but Mitsubishi, builder of Diamondtron tubes, has a Sony license.)

I was bemused by the "Top 10 Monitors" page in February 2001's *PC World*. I rarely mention these "top 10" and "top 20" features; I don't care for the methodology or the lack of specificity. One aspect of this group—all 16"-viewable CRTs—was interesting. To wit, every single one of the displays uses a flat-screen aperture-grille tube: there's not a "dot-pitch" display in the lot! (There are also no Sony-brand or Mitsubishi-brand displays, but nine of the ten tubes come from Sony or Mitsubishi.)

CRTs may be heading towards obsolescence (a journey that's likely to take several more years), but based on this evidence the thin lines may be with us longer than the line-free dot-pitch tubes.

Arggh

Here's a sentence from that same February 2001 *PC World*, in Scott Spanbauer's "Internet Tips" column: "Libraries share books much like Napster shares songs, although it's illegal to photocopy entire books in a library."

The headline offers my comments. Circulating books is *in no way* like Napster file exchange, with the exception that more than one person gets to use a copyrighted piece of intellectual property. I'm astonished that Spanbauer is so tone-deaf to distinctions. Libraries buy copies of books (legally). They circulate any given book to *one borrower at a time*, legally—just as it's perfectly legal for me to lend you a book, a videocassette, a CD, or anything that I purchased. If I lend you a book, I can't read it while you have it. If Napster operated such that one person could listen to a song borrowed from another person, but only one person at once—and the lender couldn't listen at the same time—the case against Napster would be far more difficult.

(The sentence before this one is also interesting: "So, is it [Napster-like file copying] stealing?" Ethically, I believe the answer is clear. Yes, it is. Noting library circulation as an answer to that question is absurd and offensive.)

"Bill Gates is Right!"

Let's balance that grumble by noting a particularly good end-of-issue column by Stephen Manes, again in the February 2001 *PC World*. He starts by quoting Bill Gates (speaking in Melbourne, Australia):

> Whenever the computer industry has a panel about the digital divide and I'm on the panel, I always think, 'Okay, you want to send computers to Africa, what about food and electricity—those computers aren't going to be that valuable.'

The headline here, preceded by "News Flash," represents Manes' snap judgment. (Gates went on to talk about human values and medicine availability.) He gives cynics their due: "Cynics might argue that Gates would take exactly that position in order to inflate the already considerable status of his recent philanthropic efforts." But he prefers to think "that in figuring out how to best use his fortune, Gates has given more thought to the matter than most technologists. I also think he's right."

That's just the first part of a fine discussion. Technology can do wonderful things, but it can't solve every problem. We err in overestimating its potential and underestimating the importance of people and our habits.

Then again, how do you "inflate" the status of the Gates Foundation's international work in medicine and health areas? Bill and Melinda Gates provided *one quarter* of all spending in this area by *all the developed nations of the world*. A billion dollars here, a billion dollars there: it starts to add up!

I suppose cynics would argue that he wants to keep people alive so they'll buy Microsoft software.

What Goes Around…

The Industry Standard for January 15, 2001 has one of those little items that makes you scratch your head. Napster has *sued* to protect its demon logo. It seems that another company is selling Napster hats and T-shirts with that logo, adding a ™ to the word Napster (which Napster doesn't bother to do). This isn't the first time. Napster has also sued other companies for infringing on their trademark.

None of which would be noteworthy, except that it suggests that logos and trademarks represent *real* intellectual property, worth defending at all costs. Not like creative works such as music, which anybody should be able to copy for free. That's just creativity. Now, a logo, that's serious business.

PC Values: February 2001

The standard configuration includes 128MB SDRAM, 24x or faster CD-ROM, AGP graphics accelerator with 16MB display RAM, V.90 modem, a 15.7-16.1" (viewable) display (called 17" by some makers), and wavetable sound with stereo speakers. "Pluses" and "Minuses" are shown where applicable, along with hard disk size, software, extras, and brand-name speakers.

Top system prices are taken from corporate Web sites for Dell, Gateway, and Micronpc. The surprise this month is that, with Dell's corporate assertion of a price war, Gateway and Micronpc took over all three best-value spots. It's also interesting that all of the value leaders had CD/RW drives. Once again, first-tier makers offered better values than other advertisers at all levels.

- **Top, Budget:** Gateway Performance 1000: Pentium III-1GHz, 20GB HD. Minus: No separate display RAM. Extras: Boston Acoustics speakers, CD/RW drive, home network adapter, MS Works Suite 2001. $1,179, VR 2.63 (+31% since 11/2000, +48% since 8/2000).
- **Top, Midrange**: Micron Millennia Max XP: Athlon-1.2GHz, 40GB 7200RPM HD. Pluses: DVD-ROM, 64MB display RAM. Extras: Altec Lansing speakers with subwoofer, CD/RW drive, MS Office 2000 SBE. $1,899, VR 2.05 (+31% since 11/2000, +43% since 8/2000).
- **Top, Power**: Gateway Performance 1500 Dlx: Pentium 4-1.5Ghz, 60GB 7200RPM HD. Pluses: 18" display, 32MB display RAM, DVD-ROM. Extras: Boston Acoustics speakers with subwoofer, CD/RW drive, home network adapter, MS Office 2000 SBE. $2,508, VR 1.80 (+24% since 11/2000, +49% since 8/2000).

Ebook Watch

Did Gemstar trademark "ebook"? "Gemstar eBook™," sure. A graphic design involving the term "eBook" (note the capital "B"), probably. The word itself? It's hard to see how such a trademark can stand. But that's small change in the ongoing farce of ebook developments.

A fine two-page article in the October 2, 2000 *Industry Standard* discusses recent developments at Gemstar. Consider the tease: "The interactive TV company bought the best-known ebook brand and threw it away." That's just the beginning—and two pages of *The Industry Standard*'s relatively small print and tight style includes quite a bit of content. I'm not sure about that "interactive-TV" point: Gemstar produces those little numbers to help you program VCRs, but that's a crude form of interaction. But consider the highlights:

- Martin Eberhard, founder CEO of Nuvomedia (the Rocket eBook people) left the company, six months after Gemstar purchased it and Softbook. His comment is revealing: "Gemstar decided for its internal reasons that [ebooks] would be a good space to get into. It looked around and saw there were a bunch of players already making noise in the space, so it decided to buy them out and shoot them in the head."
- Gemstar's abandoned *both* brand names and won't manufacture or distribute new readers. RCA will do that; Gemstar will concentrate on selling the ebooks themselves—presumably based on its nonexistent retail expertise.
- The new readers, with their evocative, attention-getting names (the $300 REB 1100 and

the color $700 REB 1200), will include 56Kbps modems for direct access to Gemstar's proprietary ebookstore: that's Gemstar's only real hope of profitability.

- Gemstar's ad campaign won't use online advertising, only traditional media—an interesting choice for a new-technology product. (The article doesn't note that, so far, that "multimillion dollar" campaign seems to consist solely of *TV Guide* ads. Gemstar owns *TV Guide*.)
- Gemstar isn't interested in broad content; they're after a few thousand bestsellers. So much for one promise of ebooks, the idea that midlist titles could gain new life. A Gemstar honcho states, "Backlist titles create logistical issues for us" and that they don't want to be "like Netlibrary that has 20,000 titles that nobody wants." This is essentially the polar opposite of Nuvomedia's original idea, which included putting together a community of unknown writers. Gemstar wants best sellers—and expects people to pay *more* for them than for mass-market paperbacks.
- Gemstar counts on Circuit City and similar chains and looks to a future where you walk into an *electronics* store to buy your *book* reader from one of several manufacturers—all of whom are selling Gemstar-licensed devices connecting to Gemstar's bookstore. "We want to be the Yahoo of reading."

Gemstar has alienated the creators of dedicated ebook devices; turned away from writers who might have reason to *prefer* ebooks; favored electronics stores over bookstores; and done nothing to improve reader quality while increasing reader prices and reducing the breadth of usefulness.

This strategy makes it even less likely that we'll see high-quality "niche" ebook readers dedicated to one large market where they could make eminent sense, namely the secondary and higher education markets. (One company does appear to be working on a dedicated reader for higher education textbooks; I expect to discuss that situation in the next "Ebook Watch.")

Further enlightenment on Gemstar's strategy comes from their Web site: "Frequently Asked Questions About eBooks" (www.ebook-gemstar.com/about/faq.asp). Avid readers will love the new REB dedicated readers because "dedicated reading devices combine the ease-of-use and reading experience of a traditional book, with powerful electronic features like key word searches, annotations and built-in dictionaries, while allowing the readers to carry dozens of titles easily, in one place." If you care about typography and reading, you would pause at "ease-of-use and reading experience of a traditional book"—after all, even the most expensive model only offers 97dpi resolution and suffers from transmissive lighting and other problems. Here's Gemstar's answer.

> Scientific studies and common sense confirms that people simply do not read long form content, or 'immersive' reading materials like a novel, on a PC screen. The reasons for this are not the display quality or font fidelity, but ergonomics; pleasure reading requires the ability to get into a comfortable position in bed or on couch, away from the distractions of email or other work that is present on a PC.

I've been wrong all along! Reading ergonomics and pleasure have nothing to do with display quality or font fidelity. How could Microsoft, Apple, Adobe, Bitstream, and all those old-fashioned print publishers have been so wrong—going to such lengths to provide high-quality typography on the page and improve it on the screen? Why did Hewlett-Packard and other printer manufacturers bother with all that engineering expense to get us from 9-pin dot matrix printers to 1,200dpi laser and inkjet printers? *None of that matters*: Gemstar's told us so. As long as we have comfortable reading positions, we don't care about legibility or readability.

On behalf of avid readers everywhere, particularly those who *read* novels and magazines rather than just glancing at them, I say: **Bushwah**. That's the polite version.

I wrote the section above last October; since then, I've been watching for ads and inclusion of REB readers in store advertising supplements. Score on ads as of late January 2001: *zero* other than those in *TV Guide*—and the full-page ads seem to have disappeared there as well. Score on supplement inclusion: one office superstore had a listing for the cheaper REB model, *once* during the entire holiday season. One other chain has had *one* tiny listing since then.

You Gotta Have Faith

John Blackford's column in the November 2000 *Computer Shopper* shows how easy it is for supposedly hard-headed commentators to fall prey to the ebook hype. It also shows a remarkable disinterest in facts outside the PC domain and a touch of disdain for quite a few readers.

Blackford finds it noteworthy that "many users still print copies of [Web] pages!" The overall column seems to be about "paperless offices" and how they haven't worked—but he's decided that there might be something to ebooks.

Why? Well, Jeff Bezos of Amazon isn't wild about the idea, and "when you hear yesterday's innovators bad-mouth the new kid on the block, take note." How's that for thoughtful analysis? He goes on to assert that Microsoft Reader is a "consumer-friendly format," even though it apparently prevents printing. We learn, as always, that "display technology will also continue to advance," a promise we've heard for a decade now, as will "better" hardware such as Franklin's eBookMan. But the eBookMan has an even smaller screen than the old Rocket eBook and Softbook: how is this better? We hear about digital paper, set to reach us any day now.

Here's an interesting paragraph: "As the ebook market grows, sellers must recognize that digital content is cheaper. While a press run of only 10,000 books costs plenty, publishing on the Web costs little. Yet, currently, you get only a couple of dollars' discounts on a $15 or $20 book bought online." Did Blackford try to find out what "costs plenty" means? For paperbacks, I'm fairly certain it means less than $2 per copy for a run of 10,000 (including typesetting, printing, and binding)—and "costs little" on the Web writes off some expensive infrastructure.

While the penultimate paragraph does begin "If ebooks do take off," the final sentence makes a straightforward and astonishing projection: "The electronic counterpart to books and magazines will remain less elegant for some time, but the day will come when paper books are a nostalgia item, not for serious reading." Since there's not the hint of a time frame attached to that projection, nobody alive can ever prove him wrong. "The day" could be 10,000 years from now.

Getting to Print Resolution

Despite promises over the past decade, there has been remarkably little real-world improvement in the resolution of display devices, particularly LCDs. The range today is typically 75 to 100dpi; that's not significantly better than it was ten years ago. There are signs of improvement, albeit at a price.

Dell's top Inspiron 8000 features a new 15" UXGA screen with 1,600x1,200 resolution. That's 133dpi resolution—56% higher than typical contemporary XGA screens (1,024x768, 85dpi). *PC Magazine* uses convoluted language to discuss the implications of this improvement: "Theoretically, at 200 dpi, a screen will seem to have almost printlike clarity." Note the presence of three qualifiers out of 13 words: *theoretically, seem, almost*. Note also that 200 dpi is as big a jump from 133 dpi as 133 dpi is from 85 dpi—and that we have no idea whether UXGA panels can be delivered in mass quantity at reasonable prices. It's taken about a decade to get from 85 dpi to 133 dpi. To get from "almost printlike" to "printlike" would require *at least* 300 dpi (and preferably more). How long will it take to get to 200 dpi or 300 dpi at real-world prices? The usual answer is "a couple of years." That's been the usual answer for quite a long time now.

Still, the Dell should offer much more pleasant reading and viewing than most notebook computers. What will the denser screen mean for battery life and overall performance? Only reviews of production systems will tell.

"E-Books vs. Tree-Books"

That's the cute heading for a halfpage update in the January 2001 *FamilyPC*. I find the update disturbing for what it leaves out as much as for what it says. The writer praises the RCA models because they "look better than ever" and have "special bells and whistles," and touts Franklin's ebookMan devices with "easy-to-read text thanks to Microsoft's Reader Software." But there's no acknowledgement that the RCA models don't offer better resolution than their predecessors and that the ebookMan has a ridiculously small screen.

While admitting that nobody's buying ebook readers ("fewer than 50,000" is a euphemism for "too few to mention") and that sensible people who use computers all day don't want to read from them at night, it goes on to use the "digital generation" trump card in a particularly noisome example:

> But for their kids, happy to spend hours glued to a 2x2-inch GameBoy screen, an e-Book may just be the next best thing.

Low-Tech Alternatives to Ebook Potentials

Despite appearances, I'm not opposed to electronic books. Several markets exist in which ebooks *should* serve users better than print books; some of those niches are quite large. Unfortunately, current ebook *device* marketing doesn't relate to those niches—although ebook *distribution* (for PDF download or instant print) may be developing interesting niches.

One billion-dollar niche that seems like a natural for ebook readers is the textbook field: two related fields, K12 and higher education. In both cases, print books suffer from currency and cost issues—and students suffer from the weight of multiple books. In the past, ebook fanciers have suggested that ebook equivalents to textbooks would save money for students. That's not at all clear. But if 90-pound school students are actually hauling around 30-pound backpacks (as reported on a recent *Marketwatch*), a two-pound ebook reader that could eliminate 25 of the 30 pounds would be worthwhile if only to prevent premature back problems.

Nobody seems to be working on the K12 market—preparing the high-resolution, color, ruggedized readers that would be needed or building the publisher relationships to make it work. Meanwhile, other companies seem to be solving the back-strain problem in a manner that may remove one big argument for text ebooks. To wit, backpacks on wheels: school versions of carry-on luggage costing as little as $20.

What does that have to do with ebooks? Nothing, directly—but indirectly, it's worth noting that high technology doesn't necessarily offer the best solution to apparent technology problems.

Another Voice Heard From

Mick O'Leary discusses "Ebook Scenarios" in his January 20001 "O'Leary Online" column in *Online Magazine*. While I usually find O'Leary's comments sensible, this particular column astonished me. "We are on the verge of the ebook era, and it will be big—very big." He relies on Don Hawkins' earlier *Online* series on electronic books, including the claim that ebook readers "are improving rapidly"—which *should* be the case but doesn't seem to be true.

O'Leary believes that "Riding the Bullet" is a landmark as a "bestseller ebook," even though nobody knows whether it *sold* many copies, it's widely believed that very few of those who downloaded it read through it, and it's a novella, not a full-length book. There's the usual assertion that the young'uns don't care about printed books (poor Harry Potter, languishing on the remainder shelves), and the usual device of belittling print books by praising their qualities as physical objects (although O'Leary does recognize that print books are also efficient devices for reading and studying).

O'Leary says we should "expect ebooks to arrive in a big surge," not like the slow spread of personal computers but like fax machines and mobile phones. There's some bad history here: fax technology dates back more than a century, and certainly represents a slower and more uneven spread than PCs.

Sensibly, O'Leary understands that ebooks have more potential in some areas than others. But for "some types of books [to be] largely and quickly…replaced by ebooks," which he believes will happen, the publishers and device producers must be targeting those types. He cites textbooks first, and I agree; see elsewhere in this section.

His second case, technical manuals and professional books, may be closer to the mark. But then he suggests, "The next time you buy a manual for the latest version of Windows, it may be a digital file in an ebook, instead of a 700-page paperback." Well, now, that's a problem—because those digital files are *already included* with many (if not most) software releases, as substitutes for the fat manuals that used to come with software. If we were willing to read this information online, why would we buy those $25 paperbacks? (I haven't purchased an Acrobat handbook because I *am* willing to read portions of the 684-page PDF guide on the computer, if only because I don't think I'll need to read very much of it.)

I won't go through the rest of his categories. I would tend to agree with most of them, if there was any apparent truth in his overall assertion that "authors, publishers, and readers are moving toward ebooks." (He makes that assertion in asking what booksellers and libraries should do.) There follows the usual laundry list: ebooks are much cheaper, just in time is better than just in case, we can finally get the desired virtual library.

He warns that we must watch out for the "CD-type rip-off," where a new medium that should be much cheaper turns out to be more expensive. Why should CDs be much cheaper than LPs? Because, *years after they were introduced*, they're now physically cheaper to produce—and somehow production costs are the only costs that matter. (Should CD prices be coming down? Of course they should in 2001, but that was not reasonable in 1985.) What effect will libraries have by "watchdogging" ebook prices? About as much effect as we've had complaining about CD prices, I suspect—particularly since some of today's biggest ebook vendors are hostile to library interests.

I see the usual problems here. "Tomorrow's ebook readers" will do a better job with text and graphics—but we're told that we must begin to buy (inferior) ebook readers *now*, even though today's readers will probably not work with tomorrow's texts. "Whatever your method, get moving on it. With ebooks, it is better to get ready than to get left behind."

It's quite possible that O'Leary is right and I'm wrong. I will note that, even with his enthusiasm, he understands that print isn't going away. I agree with his primary targets for ebooks—but I think he's badly off on speed and probability, given the current state of affairs.

Trend Watch 2001: The New Year Follies

It's that time of year. Pundits project the sure-fire winners for the coming year—and, once in a while, look back at their previous projections. Lately, some writers are even pointing out the sure successes that haven't happened or that seem unlikely to happen. I haven't done predictions this year, and don't plan to—but then, I suppose every commentary on new products or trends suggests what I think *should* happen. Herewith a few highlights from some of the many "tech trends" commentaries.

"Tech trends 2000—are we there yet?" *FamilyPC* 8:1 (January 2001), p. 30.

A half-page list of ten "hot new technologies" that "didn't live up to expectations in 2000." The list includes broadband net connections, home networks, speech recognition, free ISPs, Web-enabled cell phones, DVD+RW and DVD-RAM, Bluetooth, affordable flat-panel monitors, home and garden software, and TV/Web convergence.

Not a bad list, with some items that show the magazine's home orientation. Now if the editors and writers would only recognize that some of these didn't happen because they're not particularly good ideas, not just because we're not all Getting It…

I sense some of that in the comments on Web-enabled cell phones and TV/Web convergence, and to some extent the pointed reminder that "Ninety-something percent [speech recognition] accuracy means you still have to type." With Free ISPs, the comment notes that their testers hated the services, rather than the rapid collapse of the whole idea. But the rest of the list leaves plenty of room for Hot New Thing enthusiasm. And see immediately below!

Guttman, Monika, "The 10 hot tech trends of 2001," *FamilyPC* 8:1 (January 2001), pp. 96-7.

This remarkable article brings us ten projections from "10 experts," who collectively tell us that 2001 will be friendly and helpful. A few of the predictions are sufficiently quirky that I'll just name the prophet and the prophecy. Howard Rheingold expects to see a big market for Netiquette training. Philippe Kahn (yep, both Howard and Philippe are still around) has us all carrying candy-bar size wireless devices that combine digital cameras and cell phones so we can share life's moments anywhere, anytime.

The others deserve more attention—not all of it derisive:

- Jack Myers says that we *need* personal video recorders to handle our 62 TV channels, and they'll become so popular so quickly that they'll be embedded into TV sets. Hence the age of personal TV, *this year*.
- Michael Wolff (*Burn Rate*) oversells Net backlash by claiming, "By the end of the year, the whole notion of a dot-com will seem like a foolish or quaint idea. There will be no businesses that are just Internet businesses." He includes Amazon.com (and presumably Yahoo, Dell and Google?) in that overstatement: they'll all "go out of business or be merged into other conventional business." This year.
- Ben Mandell has the wired home happening this year—yep, even the sure-fire refrigerator that keeps track of your groceries and maybe sends lists to the stores.
- Joyce Schwarz heralds the death of "high phone bills" because we'll all be using Internet telephony. This year.
- Idil Cakim says we'll all be flush with "interactivity," such as retail Web sites that ask for opinions, choose-your-own stories, Web sites that let you "compose" your own music video, and so on. This is part of the Internet switching from "primarily information" to "more of an entertainment venue."
- In one of two scenarios I wouldn't mind seeing come true, Nana Naisbitt expects to see genetic testing for sensitivity to pharmaceuticals as a standard part of hospital procedures by next year, reducing the astonishing number of deaths from unexpected side effects.
- Finally, David T. Gordon expects to see classroom software (and hardware) to help special-needs children learn to read and write—e.g., real-time translation of a teacher's words to captions for hearing-impaired children. Gordon points out that most of the technology involved has been around for a while, but it would be cutting-edge for classrooms—and could help keep special students socially integrated in schools.

Now, if we only had reliable electricity for all these wonders…

"21 big ideas for 2001," *[Inside],* December 26, 2000, pp. 40-50.

What do you say about a feature that begins "Napster, light of my life, fire of my loins. My sin, my soul"? This bizarre feature on the "next twists and turns in the convergence road" includes one Big Idea from each of 21 writers, accompanied by sidebars offering Big Ideas from 21 of Inside.com's readers. Long-time readers know that "the convergence road" is enough to set me off. Many of these items are tiny conceits; calling them "Big Ideas" suggests a paucity of imagination. A few deserve mention.

- Sara Nelson thinks that Ebrary is hot stuff: "Online research may never be the same." Ebrary lets students "pay only for what they need" and offers users access to materials "*as they do in libraries*." Except on Ebrary you pay \$0.15-\$0.25 per page to *read* the documents. Libraries and free access are *so* 20th century.
- Two writers opine that we don't much care about Internet refrigerators, but we *do* want "consumer electronics networks," through which all of our tech toys communicate with each other, PCs, and the Internet.
- Readers, mostly Big Names in various Little Ponds, offer the silliest ideas. One reader says, "MP3s will be forgotten once wireless radio makes cell phones the modern-day transistor." Yes, it was a shame that portable transistor radios need those ugly wires tracing back to…oh, wait, isn't *all* current radio wireless? Duh. A literary agent believes that "readers will dutifully purchase" ebook devices when Oprah touts them, then abandon them after "visiting their optometrists." A pathetic view of reader intelligence from a literary agent—or is that akin to suggesting that some lawyers think clients are idiots? And, overreacting, one reader thinks "The Web will go the way of the CB radio, becoming a porn shop for the truly clueless."

Cooper, Charles, "The Coop's 2001 predictions," ZDNN (December 26, 2000).

Charles Cooper offers almost-daily commentary on the PC and technology fields, much of it more realistic than many of his colleagues. As part of ZDNet's "2001 year in preview" cluster, he "consented to gaze into his crystal ball." Here are his key items (ignoring those of interest only within specialized industries:

Microsoft wins its antitrust case on appeal. "3G" wireless services don't become significant in the United States. "P2P" (peer-to-peer computing) *does* become significant within business. Software becomes intelligent: you can buy only the functionality you really want. Media mergers will become even more common. The Bluetooth wireless protocol finally starts to matter. Internet transactions get taxed. Nasdaq recovers to the 4000 level. Web-browsing appliances go bust. And there will be at least one crippling attack on the Internet.

I'm doubtful about "buy the functions you need" software; I don't think it works that way. (Not quite true. I think you can get just the functions you want, but it would cost a *lot* more than accepting functions you don't need.) Given Bush, I don't think we'll see the end of the absurd tax exemption for Internet transactions in 2001 (and public libraries should regret this). I'm a little skeptical as to Bluetooth. Otherwise, I either believe he's right or (as in the case of Nasdaq) *hope* he is.

"The year the bubble burst," *The Industry Standard* 3:52 (December 25, 2000), pp. 68-117.

The last issue of the year features a 35-page (excluding ads) "year in review" section that makes excellent reading now and may be worth reviewing in six months or a year. The focus may be the Internet economy (a term that's sounding perilously old-fashioned) but the lessons offered resonate through any hype-filled area. Sidebars from various industry hotshots add spice to an already-rich mixture.

One article notes our knowledge that, as of 2000, "the survivors of the struggle for computer-making dominance are Compaq, Dell, Gateway, and IBM." (No HP?) The point is that "Twenty years ago it would have been just as reasonable to bet on Eagle, KayPro, Tandy, Televideo, and Xerox." The list may be wrong but it's a good point. (Atari? Commodore? Morrow? Xerox was always a long shot.)

I do wonder about a list of "Winners & Losers" that has Larry Ellison as a big winner and Bill Gates as a big loser, based partly on stock worth within their companies. Bill Gates and his wife spent \$1.25 *billion* last year toward easing world health problems; we need more "losers" like that—and maybe fewer like Ellison who feel their own magnificence is the only service they owe anyone. [I now know that Ellison's given \$17 million to his own medical foundation. Well, 1% of Gates' one-year giving is a start!] A sad little sidebar from Ed Yardeni, one of the big-name Y2K extremists who never once said "Oops," has the usual "here's what I *really* meant all along" rewriting of history.

I also wonder about some of the metrics on pp. 106-107: did U.S. retail e-commerce really triple in 2000? I don't doubt that U.S. interactive TV subscriber numbers stayed pretty much unchanged or that U.S. ISP subscribers only increased by 21%.

"The buzz stops here" (pp. 109-111) offers a few specific splashes of cold water. Linux still isn't ready for most PC users; using Web-enabled cell phones for commerce (or much of anything else on the Web) doesn't make much sense; and so on.

Weber, Jonathan, "The future is now," *The Industry Standard* 4:3 (January 15, 2001), p. 11.

This editorial includes Weber's personal predictions; see below for some other notes. Weber focused on the limits of the Net backlash, pointing out some trends that would *not* happen this year.

For example, Internet use won't stop growing, investors won't close their online accounts "and start paying broker fees again," job seekers won't stop using online services "and revert to newspaper classifieds," consumers are not going to stop shopping online, and so on.

Overall, it's hard to argue. Given that *The Industry Standard* seems to be the only "new economy" magazine that raised doubts about the extreme pendulum swing of "the Internet changes everything," it's only reasonable that its editor resists this winter's counter-swing, "the Internet means nothing." That's equally nonsensical.

The quotes represent places where Weber goes a little overboard; after all, he does edit a New Economy magazine. Job seekers *do* read newspaper classifieds; online investors *do* pay broker fees (with some exceptions, online and offline). The question isn't whether (some) consumers will stop shopping online; it's whether online shopping will continue to grow at a healthy pace.

I love the single pull quote, and will adopt it as my own (if I start making predictions again): "We agree to keep making predictions as long as you agree to not keep score."

"What to watch '01," *The Industry Standard* 4:3 (January 15, 2001), pp. 96-128.

This monster section profiles five trends, five people, and five companies that the magazine's editors regard as "worth watching in 2001." It's a fascinating read.

Trends? We won't see big online giveaways. We may get better voting procedures. The post-PC era. Realistic workplace habits among surviving companies. And profitable dot.coms. Other than the post-PC era, it's hard to argue with these.

Companies to watch? I have a lot of trouble caring about Walmart.com, but Celera Genomics should be a force to reckon with. The situation with NotHarvard.com (now Powered—"power plus education") is so odd you'll have to read the page. Crosspoint is a VC that turned down $1 billion in available capital because there weren't enough *good* companies to spend it on! Then there's Vindigo, a "portable content" supplier relying on the idea that men won't ask for directions—but will put up with ads on their PDAs in exchange for local movie times.

The running theme of this section may be incrementalism and, sad to say, blandness. If these are the people, trends, and companies that define the Internet Economy—wake me up when the next phase arrives. I see nothing in this section (except Celera) that promises more than gimmicks and wonderful new ways to Buy Stuff. Not even anything interesting to buy.

:Cueless in Cyberspace

Sometimes a hot new product comes along that's so special it deserves more than a writeup in "Product Watch." The :CueCat from Digital:Convergence is one such product. Issued by the millions, with substantial funding, and drawing a surprising amount of interest from library types, the :CueCat holds a special place among last year's innovations.

That place is, I believe, somewhat similar to DivX in 1999.

From the corporate Web site, combining four one-sentence paragraphs into a single paragraph for my advanced readership:

> We begin, as all good products do, with a story. In late 1996, a guy from Dallas had just landed a partner who would provide him with a distinct strategic advantage over all other so-called "convergence" technologies. That partner was the American consumer. Through his nationally syndicated radio talk show, Net Talk Live!, Dallas entrepreneur J. Jovan Philyaw began one of the most unique consumer dialogues in modern broadcasting.

There's more, but the heart of it is that Philyaw's audience was saying, "What I need is a way to make all this stuff work together, just the way it is." As Digital:Convergence puts it, "America wants Information Convergence, not Technology Convergence."

The answer to this desperate cry for Information Convergence? "The :CueCat (Keystroke Automation Technology) optical reader is a free hand-held device that is attached to the computer." It's cute, it's free, it reads bar codes—D:T's proprietary ones, ISBN, UPC, "and many others." And what it does is nothing short of miraculous:

> Search engines are like a compass, only directing you to a general destination on the Internet. The :CueCat device lets you navigate the web with pinpoint accuracy, taking you exactly where you want to be on the web instantly. The :CueCat device is like a global positioning system for the Internet.

Here's the scenario. A person says "that looks interesting, I'd like to know more." The person does his or her reading while seated at a computer, or takes the reading (or can, or book, or box of Q-Tips) over to the computer. She's previously installed the :CueCat and either has a continuous connection to the Internet or is willing to wait for the logon. He starts up the software (or is it always running?), swipes the cat's nose across the bar code, and goes…well, to Digital:Convergence, of course. Then, if the bar code is in Digital:Convergence's database, this miraculous GPS takes her right where she wants to go—and, presumably, the grateful vendor pays D:C a fee for the referral. (I assume D:C intends to earn back the cost of those millions of free readers and the hub site somehow.)

Say What?

When I first read about :CueCat, I dismissed it as a bizarre little toy. Sure, *Wired* sent them to their subscribers, but I don't consider *Wired* an arbiter of sensible technology. Some library folk were more enthusiastic. Tim Wojcik, "your guide" to the About.com Librarians and Library Science site, plugged in his freebie. "I seek information for a living. Maybe this thing will be more helpful than not." (I almost forgot: theoretically, you can also get :CueCat addresses from audio cues on TV…assuming your TV and PC are in the same room.) Wojcik scanned everything in sight, with impressive results:

- Scan a box of Kraft macaroni and cheese, get the *Kraft Interactive Kitchen* Website.
- Scan Nutter Butter, get the *Nutter Butter* homepage.
- Scan *Health Magazine*'s ISSN, get the homepage for Time Warner Books—with no link to *Health*.
- Scan one CD, get a page for some entirely different CD.
- Scan one of the special CUE barcodes in *Forbes Magazine*, get a Web page with (wait for it!) *exactly the same content as the printed source*. But now you can *read it online!*

It gets better. CUE barcodes took five to 15 tries to scan correctly; UPCs did much better. Some UPCs and ISBNs led nowhere (not surprisingly), but then you get a D:C webpage asking *you* to fill in the information.

Ever the technophile, Wojcik thinks that libraries could find :CueCat "viable" by adding the technology to current scanners—particularly, I assume, for all those scanners attached to Internet access computers. (Haven't seen them in my library, but Mountain View is pretty primitive, I guess.) Or do you go to the circulation counter to call up vendor pages on consumer products? I quote Wojcik (if only because his About.com site makes him a visible library personage):

> Given the data gathering nature of the whole scheme, libraries could benefit from the use of CueCat by demonstrating the abundance of potential product visibility at the library. Yes, libraries are supposed to be for research. But what do many library users research on library Internet terminals anyway, but product? Using CueCat from an inherently anonymous place such as the library imparts no privacy risk. It may clog up the library network with push popup ads back to the library terminals from advertisers, however.

Say what? Librarians should countenance the idea that "product research" consists of going to a Web page owned by the product maker? First, isn't there more to research than that? Second, how many users will carry their frozen dinners in to the library because they can't be bothered to (ahem) write down the product name and fire up Google? (Not that Google is a substitute for library research, but it's better than being led solely to the corporate site.)

Mixed Reviews

Many technology journalists hop on any available bandwagon, but :CueCat was a bit much for most of them. David Coursey didn't see the point. "All retail barcodes already have numbers associated with them and magazines have long had reader service numbers tied to specific advertisers. Why not use those instead of a swipe. Using a URL such as www.radioshack.com/123245 (the catalog number of the product appended at the end) or www.forbes.com/121 (an advertiser reference number in this case) doesn't seem like so much trouble to me." He looked at the concept that "people reading a print publication will dash to their computers to swipe a barcode for more information" and judged it a "crazy notion." That was in a ZDNet story on September 4, 2000. Three weeks later he commented on the $100 million that D:C claims to have raised (NBC, Coca-Cola, etc.) and noted some other problems:

- Each :CueCat carries a unique identifier; D:C's privacy policy boils down to "trust us."
- When people started hacking the :CueCats—received *free* with no advance signature—D:C sent them cease & desist letters, asserting that uses don't really *own* these arrived-in-the-mail devices, they're just "on loan" subject to a license "agreed to" by installing the software. If a hacker didn't install the software? The general rule on unsolicited material arriving in the mail is that it's yours to do with as you please; maybe UCITA changes all that?

Coursey recommended asking for free :CueCats at every local Radio Shack, cutting the cords and dumping them into the trash, then doing the same with the ones that friends get from magazines. I wouldn't go that far, but it does have the effect of increasing the cost of D:C's "business plan."

Salon's Scott Rosenberg also chimed in during September 2000—the month that *Wired* subscribers got their surprise packages—summarized the usual problems (who reads magazines at their PCs, and why is it hard to key in Web addresses?) and noted that installation doesn't work well, registration is intrusive, it doesn't work very well, and it expects people to adapt to technology rather than the other way around.

Don't look for Digital:Convergence by trying "www.digital:convergence.com." You can't use a colon as part of a domain name. So, despite D:C's colonomania, the domain name lacks one.

The "Buzz" columnist in the *Dallas Observer* got a bit nasty. Belo Corporation owns one of Dallas' TV stations and invested $40 million in D:C. Are you surprised to hear that the Belo-owned station ran *three* "news" reports on :CueCat technology in mid-September? Buzz suggests that "the colons…were concocted by someone in the company's marketing company who is a :jackass." His (or her?) experience with the device: "If you're sitting at your computer, surfing the Web while reading the paper—God knows why you would do that—you can simply drag the scanner 600 or 700 times over bar codes printed next to stories and ads, and presto, you get an error message."

The *Wall Street Journal*'s Walter S. Mossberg commented on :CueCat (*WSJ* ignored the bloody colon) in his October 12, 2000 "Personal Technology" column. His twin standards: usefulness and convenience. "On the first standard, convenience, the CueCat fails miserably. Using it is just unnatural." Unless, of course, you have a PC next to your easy chair, always on and always net-connected. He then tried more than two dozen labels—ten product labels and 15 of the special labels in *Forbes*, *Wired*, and *Parade*. (That's right: *Parade* seems to use precisely one Cue label each week, probably the broadest penetration reached by this technology.) "Nearly every Web page the CueCat called up for me was general and useless. … Not only that, but it usually took so much rubbing and dragging to get the scanner to read the codes, that in many cases I could have typed in the Web address more quickly." There were exceptions, but not many. He concluded that :CueCat "isn't worth installing and using" but still holds out hope for portable bar-code scanners. Or does he? The final comment: "We'll see."

Steve Fox's *CNET Insider* for October 26, 2000 reviews the device and some concerns related to it, particularly D:C's attempts to assert vast licensing restrictions on these unsolicited pseudomice. His headline tells the story: "The CueCat: When free isn't worth the price."

There were semi-positive reviews; some technojournalists are geeky enough to be entranced by the possibility of bringing up Web pages without keying in URLs, no matter how absurd the process might be.

Librarians Redux

Roger V. Skalbeck, technology services librarian and Webmaster at George Mason University School of Law, discussed :CueCat in his October "Notes from the Technology Trenches" in LLRX. He had been entranced by the idea (and is another *Wired* subscriber). "Imagine it: A free personal barcode reader that could be used to link print with the Internet, avoiding all of the hassles of long, complicated and ever-changing URLs." He couldn't get it to work properly *at all*—after trying two versions on three different computers. But he still believes "there will be a market for using this kind of device to link the physical world to the Internet" and that it is "a great product in concept." See Skalbeck's article at http://www.llrx.com/columns/notes35.htm. His discussion of "shopping and browsing by barcode" makes no sense to me, but you might find it convincing.

A number of other librarians have commented on :CueCat on Web4Lib and in other library venues. While some continue to enthuse over the possibilities, most have concluded that this device has no place in libraries—or, for that matter, in sensible households.

Product of the Year: The DivX Memorial Award for 2000

So we come to late December 2000 and Rob Walker's *Moneybox* column in *Slate*. The title: "What was the most questionable innovation of 2000?" Oddly, although Walker understands the importance of innovation and works for a Web magazine (and indirectly for Microsoft), "Although I received two complimentary Cuecats in connection with magazines I subscribe to, I've never been tempted to try the thing." He's one of those who does *not* hold a product in his hand and yearn for "a fast and easy way to go to a related Web site." When he sees a Web address in a magazine article, he apparently doesn't "ache for some method of accessing that address without actually having to spend the time it would take to type it in."

Walker cites :CueCat as "a classic example of an elaborate solution to a nonexistent problem." He goes on to explain why such "solutions" seemed to happen so often in recent years; it has a lot to do with too much venture capital.

Why do I lump the :CueCat together with DivX? They both meet four essential criteria, one of them never mentioned in the sources I reviewed:

- A solution for a nonexistent problem (at least from the consumer perspective).
- No real benefit to the consumer but substantial potential for invasion of privacy.
- Massive capital backing with the likelihood that, if there's any justice in the world, huge losses will ensue.
- Ecological depravity: creating huge amounts of junk that can neither be recycled, converted to any sensible use, or even admired as objects. With DivX it was expired DVDs; with :CueCat, it's millions of essentially-useless scanners.

Fortunately, I subscribe to neither *Forbes* nor *Wired*, so I've been spared the "temptation" of a :CueCat.

Press Watch I: Articles Worth Reading

Helft, Miguel, and Jennifer Couzin, "The next big thing: Gadget fatigue," *The Industry Standard* 3:52 (December 25, 2000), pp. 38-9.

Short and sweet: if there was a slowdown in Christmas technology sales last year, maybe it's because we're gizmoed out. Maybe you'll buy a DVD player if you passed a year ago—but now you'll pay $350 for a midrange model that would cost $600 a year ago, and as little as $99 for an entry model. Some people were short of money, but one good comment came from a technology manager who said he had money to burn. "Who wants a camcorder, a pager, a phone and a Palm all in one?" He recently got rid of his cell phone: "You can't get away from it unless you get it off your body."

Cohen, Hal, "The price is wrong," *The Industry Standard* 4:1 (January 1-8, 2001), pp. 82-3.

Suppose AT&T WorldNet offered to sell me Internet access for fifty cents an hour, instead of the $19.95 I'm currently paying (which may only cover 150 hours). Would I take the offer? Would you? I know the first answer is "No," and suspect that the second is also—even though I also know that I rarely spend anywhere near 40 hours a month connected to the Internet at home. What's going on here?

This article says I'm "irrational" and notes that most other people are too. For certain items, we cheerfully pay a flat rate that we *know* may not be "fair" for us. Many of us (me included) prefer a known (and not wildly unfair) price to haggling, even though we know that haggling may get us a better deal. I dislike buying items in countries where haggling is the only way to get a fair price, and Saturn dealerships have done quite well with no-negotiation car pricing.

According to this article, George Fox (founder of Quakerism) was one of the first to recommend fixed pricing, in 1653, because haggling was inherently biased against the meek. It took two hundred years before shopkeepers actually tried fixed pricing. Some "new economy" blowhards believe that fixed pricing is irrelevant: we'll all deal in "perfectly frictionless" marketplaces that make haggling more feasible.

Maybe not. Flat rate pricing for services represents "unfair" pricing: unlike fixed prices for products, different people pay the same rate for different levels of service. That should offend rational sensibilities, but it doesn't. Much as I've derided Andrew Odlyzko for his strident death-of-print stance (and his view that the purpose—possibly the sole purpose—of academic libraries is to provide journal articles to researchers), his comments in this article are right on the money.

"So long, shrink-wrap?" *PC World* 19:2 (February 2001), pp. 110-20.

This isn't the first examination of application service providers, but it's a good summary of the state of the field. Some industry prophets assure us that ASPs will make everything better for PC users. Instead of buying software and needing to deal with installation and upgrades, we'll *rent* our software as we need it, quite possibly storing our files on the same remote site from which we access the software. No hassles, no doubt about currency, cheaper, and we can use our files from any computer anywhere. And software vendors love it: ASPs should prevent software piracy.

If you sense that "cheaper" and "software vendors love it" may be conflicting attributes, welcome to the real world. Even this generally-skeptical article says that ASP use is "generally cheaper than a boxed program," with most programs costing less than $20 per month per person. I don't know about you, but I know *my* software purchases don't average $20 per month, and I don't need $40/month (or more) broadband access in order to use them effectively.

While this article gives all the reasons that ASPs might make sense, it also looks at today's realities. "Is it feasible for Web-based applications to replace shrink-wrapped software? In most cases, the answer is, Not quite yet." There's a clear bias in the article toward that "not yet" rather than "No"—after all, eventually it's inevitable. Isn't it?

This story is long and deserves careful reading. The team of writers evaluated available software services in several categories. There are bright spots, but for everyday tasks the goods just aren't there. One sidebar considers Harry McCracken's attempt to do without MS Office for one week, relying on the best "Web-ified alternative" instead. ThinkFree Office is file-compatible with Office applications (a necessity for any plausible competitor). It's also not entirely "Web-ified": it runs from your own hard disk as a series of Java applications. How did McCracken do? He cheated—and he was only too happy to return to MS Office at the end of the week, although he could see using ThinkFree as a kind of "folding travel iron" in travel emergencies.

"Broadband," *PC Magazine* 20:3 (February 6, 2001), pp. 141-61.

I marked the editor's note that "everybody wants" broadband, repeated as a subhead within this special report. That's nonsense (as *Industry Standard* has pointed out, most people who can get broadband aren't willing to pay for it), but it doesn't negate the worth of this overview. Several individual stories discuss each variety of broadband Internet access, with actual speed tests for various providers.

I admit to considerable surprise at the repeated assertion that V.90 modems have an "average actual throughput" of 5Kbps. I'm almost certain that I download files at a lot more than 5,000 *bits* per second. That rate means that overhead uses 90% of the 50k connection I typically get. I'll be looking for a possible correction. In the meantime, it's a good set of articles, with the varied perspectives and careful analysis that represent *PC Magazine* at its best.

Don't miss the PC Labs page (p. 56 in the same issue), which discusses the hype over broadband speeds and summarizes actual results and how they measured throughput.

Nielsen, Jakob, Kara Pernice Coyne, and Marie Tahir, "Make it usable," *PC Magazine* 20:3 (February 6, 2001), pp. IP01-IP06.

Jakob Nielsen is the Grand Guru of Web Usability, and he *knows*. Get past that and such nonsense as "no one will suffer a poorly designed site," and this article makes interesting reading. (If that quote is true, how do you explain the visitor counts for ZDNet, Yahoo, Excite, and Alta Vista, to name just a few?) I would regard Nielsen's absolute rules as one set of useful considerations, not as the revealed truth.

Lessig, Lawrence, "The rules of politics," *The Industry Standard* 4:4 (January 22, 2001), pp. 32-3.

Since I cited Lessig's earlier column—in which he asserted that the Supreme Court would rise above politics in dealing with the recent presidential unpleasantness—I should also mention this column.

I don't have many heroes. If I did, I suspect Lessig would be one. This column includes the following paragraph, cited in its entirety:

> I was wrong. It is impossible to read the opinion of the court to be consistent with the ideals that I sketched.

"I was wrong." Proper pundits *never* say that. Honest writers and thinkers do. Worth reading.

CD-ROM Retrospective
Oldies: A Miscellany

I still care about CD-ROMs, even if the title CD-ROM field seems to have collapsed. In many issues I plan to:

- Re-evaluate one of the CD-ROMs that I gave high marks to in the past (and decided to keep around), to see how it holds up some years later on a faster PC; or
- Review CD-ROMs from my local library's circulating collection, mostly fairly old, as indicators of what's still in use (until they wise up and replace the CD-ROM area with DVDs…)

Herewith, two CD-ROMs from my local public library (reviewed some months back).

Survey of Western Art
✰: **Fair** [69]
Windows/Macintosh, issued 1994
TDC Interactive

Art on CD-ROM makes some sense, and there have been quite a few art-related discs, including two stunning discs on Leonardo da Vinci and Softkey's outrageous *Artrageous*. A number of gallery-specific and museum-specific discs offer worthwhile introductions, even if they can't really replace visits to the museums themselves.

This 1994 disc claims to offer "instant access to the finest art images from around the world." It "explores art history by presenting thousands of color art images" and invites you to "study paintings, sculpture, and architecture while learning about the social and economic factors that shaped the lives and styles of the masters." The copy goes on to say that you can explore collections of text essays, museum and artist listings and databases, dictionaries and other useful tools.

The reality, alas, is somewhat less than the promise—surprisingly so, even for a 1994 disc. Naturally, there's no AutoPlay support; instead, you can choose either a "no disk space" version or one that copies 1.1MB of programs to disk. The "no space" version actually forces its own program group, taking 49K of space, but that's not a major problem.

The program opens with music and a title page centered on an autoscaling Windows screen. Unfortunately, that's all you get: pull-down menus and the title screen. You have to explore the help (adequate) and other menus to actually do anything. While the autoscaling is a pleasant surprise, that doesn't mean pictures will grow to take advantage of space. Most of the pictures are relatively small; you're better off using 800x600 on a 17" display, or whatever will yield the largest pictures without obvious pixels.

You do get "instant access" of sorts using six browse lists: artist, title, medium, object type, date, and school. All you can do is choose a starting point within one of the lists and whether your browsing will use a data-card interface (showing the current thumbnail's brief identity) or a multi-thumbnail interface (with no textual data). Either option provides forward and back controls, curious fast-forward and fast-back controls with no clear level of speed, and unobvious controls to see the large version of a current thumbnail or close the current browse so you can open a different one. You can also opt to have one of four badly-orchestrated MIDI pieces accompany your browsing.

Every full-size image (most seem to be 500x300 pixels or smaller) includes a "details" button that brings up the same sketchy info that's in the browse cards. Most include "bio" buttons that bring up one- or two-paragraph sketches on the artist. Roughly one-third include "details" buttons that bring up an enlarged detail from the painting. Except for the "details" boxes, these are all independent Windows boxes: you can leave several of them open and move them around the screen. Curiously, pictures and details don't always open full-size. Many of them are somewhat fuzzy even at full size, worse when reduced. The multi-window capability means that you can compare different paintings. The little-used Windows control box lets you copy any window to the clipboard, the only way to export paintings or biographies.

That's not quite true. The paintings are actually pcx (Paintbrush) files on the CD-ROM, and most modern graphics programs can import them directly for manipulation or conversion to more common contemporary file formats. There aren't "thousands" of paintings: the file count is roughly 1,400 *including* details, just over 1,000 without. I didn't find any dictionaries, text essays, list of museums, or other tools; maybe those are only on the Macintosh side.

This isn't a terrible collection, but it isn't very impressive either. It uses 184MB disc space, only one-quarter of the available space. There's just a little background on the artists, none on the paintings or periods; most of the paintings aren't reproduced well enough to capture the spirit or technique of the artist. (For example, I would think of Marc Chagall as a dreary painter based on the examples here.)

I have no idea how much this cost in 1994. At $10, it might be interesting. At $30, there are better choices—ones that actually involve the user in learning about and exploring art, rather than just offering a bunch of low-quality images.

Microsoft Composer Collection
☆☆: **Good** [71]
Windows 3.1, issued 1993-1994
Microsoft

This three-CD set is three entirely separate programs, each on its own separately-installed CD: *Multimedia Schubert: The Trout Quintet*, *Multimedia Beethoven: The Ninth Symphony*, and *Multimedia Mozart: The Dissonant Quartet*. Voyager issued all three CD-ROMs in Macintosh versions. They were licensed and converted to Windows by Microsoft.

Not surprisingly, none of the discs works under AutoPlay (not supported until Windows 95). Each installation is reasonably polite, with hard disk footprints ranging from two to six megabytes. Somewhere along the line bit-mapped fonts get installed, which proved surprisingly difficult to get rid of. None of the discs includes uninstall components.

All of the discs run as fixed 640x480 windows, all make heavy use of true CD-quality sound, most tracks on each disc can be played on an audio CD player, there's no video, and they don't offer scores to follow while the music's playing. Indeed, only one of the disc showed a partial page of a score: you get a lot of commentary about musical themes and techniques, but nothing about notation.

Each disc has several chapters, including a words-and-pictures essay on the composer, some number of essays on the piece and on other musical topics, a bibliography, a glossary (heavily used for links in the essays), and a "close reading" that offers textual commentary on the music along with the music itself.

Curiously, two of the three discs impose a Windows 3.1 interface within Windows 95/98, which suggests that the interface is simulated. The third, for Beethoven, uses Toolbook and appears as a standard Windows application.

These discs do offer reasonable introductory essays on the composers and these particular pieces, with some useful comments on musical theory and practice, but I found that I wasn't willing to go through any of the pieces while sitting at the computer. In that sense, these are failures. For me, at least, they never led me to the music. Maybe the bar is simply that much higher—or maybe these are examples of why Voyager has essentially disappeared.

Review Watch

Handheld Computers (PDAs)

Broida, Rick, "Handheld heaven," *FamilyPC* 8:1 (January 2001), 110-12.

Five handheld PCs tested for family use—unfortunately, omitting breakdowns of the ratings. All five will synchronize data with desktop PCs. The units cost $149 to $549 and run Pocket PC (the new version of Windows CE), the Palm OS, or Vtech's custom VT-OS; weights range from 4.3 to 9 ounces. It's an odd combination of devices; the Pocket PCs are more expensive and heavier than the others, but also include color screens, twice as much display space (oddly unmentioned in the reviews), and pocket versions of key Windows applications: they're in a different class than the others. Then again, Sony's CLIÉ crosses one line: although it's as light as other Palm OS computers and has a similar gray-scale screen, it's almost as expensive as the Pocket PCs.

Four of the five devices (including VTech's $179 Helio, an unexpandable but capable exotic) earn Recommended seals. Highest rated is the $149 Palm m100 (a stripped down Palm), with Compaq's $499 iPAQ H3650 one point behind.

Graphics and Displays

Dahl, Eric, "3d graphics grand prix," *PC World* 19:2 (February 2001), pp. 123-30.

You probably don't need one of these 14 "turbo-charged" graphics boards, but you may find the descriptions and results interesting. The fastest cards in this roundup cost as much as $500 and seem primarily targeted at gamers, but some cards costing $120 to $130 also offer good performance. Best Buy is the $129 CardExpert GeForce2 MX; while it isn't really up to high-speed performance in high resolution and true color (that is, 1600x1200, 32-bit color), it's cheap and does a good job in other circumstances.

Most cards in this group are based on NVidia graphics processors, primarily the GeForce2 family. Exceptions are two cards from ATI, both using ATI's Radeon chip, and a lonely 3dfx card using its own chip. NVidia has purchased 3dfx, so now there are only two—and both the Radeon and the GeForce2 family offer graphics power that would have been incredibly expensive just a year or two ago.

Fott, Galen, "Go beyond iMovie," *Macworld* February 2001, pp. 50-6.

If you're one of those with the talent and need to edit your own videos, you probably use a Mac—and you may be frustrated by the limitations of iMovie, Apple's $99 video editor. The next step up from Apple is Final Cut Pro, and that's a big step: $999. This review discusses three midrange programs: Adobe Premiere 5.1c ($549), EditDV 2.0 from Digital Origin ($499), and VideoShop 4.5.1 from Strata ($249). If you ignore the obligatory slaps at programs that might have originated on the Windows side, it's a careful comparison. Interestingly, the summary ratings box gives iMovie the highest overall rating with 4.5 mice; Premiere and EditDV tie at four mice, with VideoShop trailing with three. Which program meets your needs? Read the article and consider what those needs are.

Poor, Alfred, "Look at this," *PC Magazine* 20:3 (February 6, 2001), pp. 164-75.

Reasons to favor LCD displays on the desktop: they're lighter, take up much less space, use less electricity, throw off less heat, and may be crisper. They also have lower electromagnetic emissions and are inherently flicker-free. The best reason continues to be desk space.

Reasons to stick with CRTs? Better color purity, better motion display for movies and games, better scaling ability for different screen resolutions—and two big factors. You can still buy three 16"-viewable CRTs for the price of one 15" LCD—and if you need *bigger* screens, LCDs are extremely expensive.

This review includes 13 15" LCDs costing $700 to $1,240, with objective and subjective test results. None of the displays earn perfect five-dot ratings. The Editors' Choice, Samsung's $850 SyncMaster 150T, scored reasonably well in all areas and includes built-in speakers; it's also one of the better-looking units and the cheapest four-dot display.

Other four-dot ratings go to EIZO Nanao's $1,240 FlexScan L371 and Philips' $900 150X (the only display to earn a five-dot rating for text and graphics quality).

A sidebar offers a quick overview of 18"-viewable flat-screen CRTs. Again, no five-dot ratings appear; four-dot units come from Compaq, CTX, Hitachi, MAG Innovision, Nokia, Samsung, and Sony. The Hitachi and Samsung use traditional shadow-mask CRTs; the others use Trinitron or Diamondtron aperture-grille tubes.

Internet Appliances

Broida, Rick, "Next stop: Net appliances," *FamilyPC* 8:1 (January 2001), pp. 114-15.

Maybe it's forward-looking of *FamilyPC* to review a group of net appliances; maybe it's a fit of technophilia or just plain foolishness. Three of these four appliances can only handle e-mail (no attachments, no way to save mail except printing) and low-end Web surfing through the appliance's ISP of choice. But the unstated review criteria result in "recommended" seals for all three pure appliances, with Compaq's $599 iPAQ Home Internet Appliance IA-1 in the lead. Second place goes to a device that I believe is now off the market; third place is a unit that costs $350 *without display*, making it almost as expensive as a low-end PC but without any of the PC's local capabilities. The fourth, which ranks lowest, is a true oddball: the $399 MyTurn GlobalPC, which comes without a monitor (or hard disk), uses its own proprietary operating system and includes some proprietary business applications, and can work with a TV or VGA (640x480) display. I can't imagine why anybody would buy this proprietary toy. Then again, I can't imagine why anybody would buy *any* of these units—none of which, incidentally, can handle broadband access. The best case I've heard for home Net appliances is as additional units for Web-happy families who already have desktop access. If you're that anxious to be on the Net, shouldn't you have broadband access?

Mass Storage

Loyola, Roman, "Internal ATA hard drives," *Macworld* February 2001, pp. 88-9.

Remember the good old days when Macs used "clearly superior" SCSI devices while PC owners had to make do with inferior IDE drives? At some point, even Apple recognized that for most applications, IDE (now called ATA) offers sharply better value. Now ATA drives are as standard for the Mac as they are for the PC. This quickie comparison discusses seven high-capacity drives for Mac owners who have spare drive bays and cables (G4, yes; iMac, no)—and, with one exception, all the drives come with manufacturer's names. That's the rule for PCs but has been the exception for Mac drives. But then, these are internal drives (IDE/ATA doesn't really work for external devices).

The top rating goes to Seagate's $190 Barracuda ATA III, a 40GB drive running at 7200RPM. It's the fastest and it's easy to install, although it's not the cheapest drive around. But then, *all* the other drives (but one) tie for second. Except for Maxtor's $180 DiamondMax Plus 45 (which had relatively slow test results), any of them would be plausible. At $4 to $5 per gigabyte, these are remarkably well-priced drives by any standard—and compared to traditional Mac drive prices, they're absurdly cheap.

Utility Software

Canter, Sheryl, "System migration utilities mature beyond cloning," *PC Magazine* 20:2 (January 16, 2001), pp. 32-3.

Moving your digital stuff from an old computer to that speedy new toy is bad enough; when your library has dozens of PCs, configuration can become a nightmare. This review describes and rates three programs that can help. The quick summary is that PC Transplant Pro 2.0 ($300 for 10 licenses) gets the only five-dot rating, but you need to read the reviews to see what these programs do and whether they make sense for your institution.

The Details

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