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# PC MAGAZINE

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- After Hours: 6 Encyclopedias on Disk
- 11 Servers to Let You Share Printers
- More Jim Seymour Win 98 Survival Tips



### FIRST LOOKS:

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- 19" Flat-Screen Monitors
- Diamond Rio PMP300
- Deneba Canvas 8
- Sun's Solaris 7.0
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THE INDEPENDENT GUIDE TO PERSONAL COMPUTING VOL. 18 NO. 2 JANUARY 19, 1999

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Michael J. Miller

## Personal Multimedia

Remember when the promise of personal computers was just that—bringing computer power to individuals? People used PCs to create their own word processing documents and spreadsheets, things that automated processes done by hand or on large computers. Then, about ten years ago, we got desk-



top publishing applications and fonts and graphics in documents. Suddenly anyone could create professional-looking documents.

The same thing is happening now in multimedia applications, with software designed to let almost anyone create fancy graphics and even music. Such programs have been available for professionals for some time. Most of the publications and graphics you see are created in programs such as QuarkXPress, CorelDraw, or Adobe Photoshop or Illustrator. But for those of us who aren't graphics professionals, getting good-looking results from these programs is rather difficult.

On the other side of the spectrum, there are many template-driven and clip-art style programs that let you create graphics pretty easily but are aimed at home users.

Nowadays, many of us are creating our own Web sites and publications, and we want something unique but still professional looking. For those of us who aren't pros, this can be a challenge.

I recently met with a number of my colleagues to discuss some of the best software we've seen in the past year. The trend is clear: Many of the best programs are now trying to use the power of the PC to make it easier for anyone to create great multimedia elements.

This is particularly true in the graphics arena, where new applications aimed at typical business users—instead of graphics professionals—are the big trend. Among my favorites:

Microsoft PhotoDraw 2000 lets you start with your own photo or clip art and then format it for a document or a Web page. It offers basic photo-editing tools—for things like fixing red-eye—and lets you easily create compressed images that are the right size for putting on a Web site. It has a number of templates for logos and Web buttons, and was designed to fit in with the Microsoft Office suite.

Adobe ImageStyler is a bit more sophisticated


and is aimed specifically at people trying to create graphics for a Web site. You'd likely start with a photograph or clip-art image, but ImageStyler makes it very easy to create your own logos, graphics designs, and even Web buttons by applying predefined styles to your image. You can easily mix and match colors, textures, shading, and 3-D effects to create a unique image. And you can link graphics together, so that you can change them all at once, giving your site a consistent look. You can even attach things like specific HTML commands or roll-over text that pops up when you put your cursor on the graphic.

For those who want to get even more sophisticated, Macromedia Fireworks offers a vast array of higher-end tools packaged in a way that even those of us who aren't designers can use. Along with symbols and templates, it adds features such as bundled animations, color corrections, and image slicing (so users can download parts of an image first). It is designed as a complete environment for creating Web graphics, suitable for both business and professional users.

And it's not just graphics that are moving this way. If you want unique music for your Web page, check out

Acid, from Sonic Foundry. Acid lets you start with its music clips or your own files and then mix them together to create a unique sound. By combining various clips from multiple instruments, changing the tempo or the pitch, adjusting the volume, and adding a variety of effects, you can easily make your own music.

Taken together these programs represent a range of new tools that let anyone create pages that look and sound both unique and professional. With these tools, a digital camera, and a simple Web-site creation tool, you can easily create a top-notch site.

Letting average users create things only professionals could before is one of the PC's hallmarks. It's good to see it continuing. 

**Letting average users create things only professionals could before is one of the PC's hallmarks.**

### More on the Web:

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Michael J. Miller  
answers your computing  
questions every Tuesday,  
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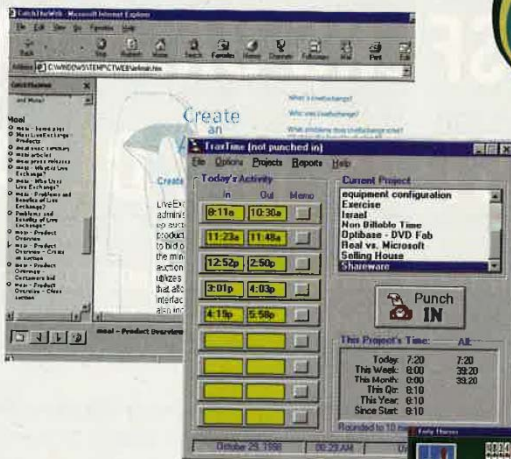
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BY GAIL SHAFFER

Downloading software. Besides sending e-mail, it's still our favorite thing to do online—especially if it's free or almost free! We scoured the Web and found a bunch of great programs for you that do all sorts of things. And we surveyed the best download sites so you can save some time the next time you're looking for something.....100



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BY SALLY WIENER GROTTA AND DANIEL GROTTA

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# Digital Cameras

BY DANIEL GROTTA AND SALLY WIENER GROTTA

They've come a long way (in a short time), baby. The latest generation of digital cameras delivers near-35-mm quality photos in larger sizes. Models range from \$300 to \$1,200 and vary in features, so we've awarded Editors' Choices in three market segments. For all that digital cameras offer, they're worth the price.....116



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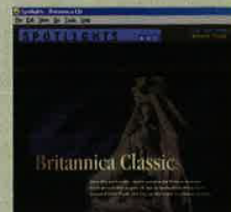
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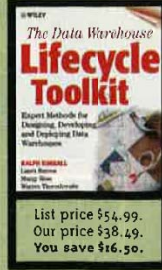
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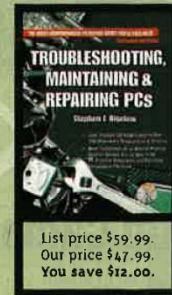
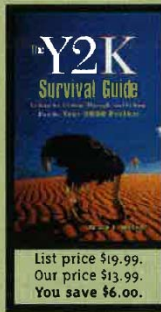


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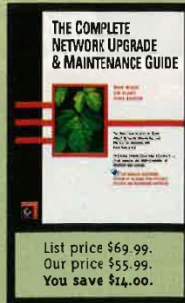


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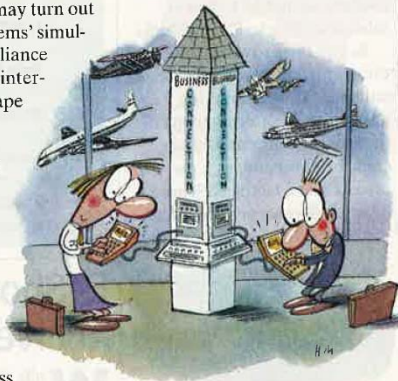
## AOL Gazes at Sun

**N**ow that AOL and Netscape have inked a deal for AOL to buy Netscape for \$4.2 billion, the far-reaching implications are becoming clear. It may turn out that Sun Microsystems' simultaneous strategic alliance with AOL is just as interesting as the Netscape side of the deal.

The AOL/Sun alliance is designed "to accelerate the growth of enterprise-class e-commerce, and to use Sun's Java technology to develop Internet devices that will help Internet users access America Online brands from anywhere, anytime," according to an AOL statement. As part of the deal, Sun will become a primary systems and service provider to AOL.

AOL will get more than \$350 million in licensing, marketing, and advertising fees from Sun. AOL's big hope, though, is that Sun's vision of ubiquitous networking—incorporating everything from Internet-connected soda machines to conference room tables with plug-and-play networking—can help make

AOL ubiquitous. Thus your Java-smart hand-held device might connect easily to an airport Internet kiosk, bringing up AOL and Netscape's browser.



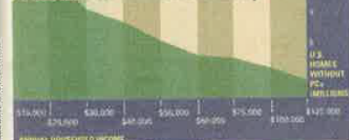
AOL CEO Steve Case has made clear that he has his eyes on Sun's hardware and software platforms as opportunities to marry AOL with enterprise e-commerce strategies. AOL and Netscape will continue development of the upcoming Netscape browser, called Communicator 5.0, and will add Version 1.2 of Sun's Java Development Kit to the browser. AOL will also embed Sun's scaled-down version of Java, PersonalJava, in all AOL clients.

## The PC Proliferates

**L**ow PC prices and the lure of the Internet drove almost 4 million buyers to purchase their first PCs in the first six months of 1998, according to data from ZD Market Intelligence. Some 50 million homes—almost half of U.S. households—now have at least one PC.

Declining prices have also led more lower-income families to buy PCs. Households with incomes of less than \$30,000 accounted for a third of all new PC purchases in the first half of 1998. Still,

Household Income Is a Factor in PC Ownership



households flush with cash are far more likely to house PCs than low-income households: Those earning less than \$30,000 constituted only a quarter of all homes owning PCs.



## Thinking Thin

of respondents to a recent PC Magazine Online poll told us that they didn't expect to have a flat-screen display on their desktops until 2001. Another 30 percent said that they'd have one by 2000. Only 13 percent of those responding said that they'd have one by 1999. Seven percent of respondents told us they already had flat-panel displays.

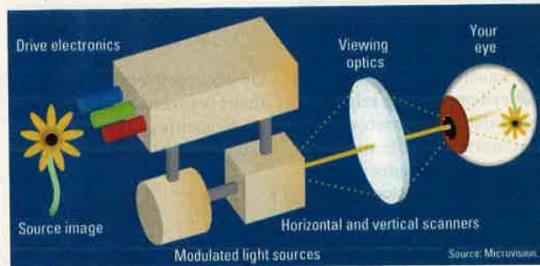
## The Eye Is the Display

**W**hat's round, super-lightweight, ultraportable, low-cost, and long-lasting? It can support millions of colors at perfect resolution and comes in blue, green, or brown. It's your eye, of course, and it may be the ultimate display of the future.

Microvision, a developer based in Seattle, acquired rights to a technology known as Virtual Retinal Display (VRD) from the University of Washington Human Interface Technology Laboratory in 1993. A VRD device sends an encoded beam of light through the pupil to the retina, stimulating the receptors so you seem to see a high-quality image an arm's length away. It eliminates the need for any screen, letting the eye complete the function performed by a flat panel's matrix array.

Built into eyeglasses or goggles, VRD could display images that don't block one's view, useful in image-guided surgery. And in cellular phones and pagers, it could let you view e-mail, Web pages, faxes, and files as if on a full-size monitor.

Microvision says VRD poses no danger to the eye and adheres to safety standards.



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# PIPELINE

## Walking Web

**W**ireless tablets for Web surfing on the run are due to arrive in 1999. The WebPad, from the Conceptual Products Group at Cyrix, is one of the most talked-about tablets. Powered by the Cyrix MediaGX processor, the tablet is about the size of an Etch A Sketch and accesses the Internet wire-



**NO WIRES:** The Cyrix WebPad.

lessly via a radio-frequency base station—a set-top box or standalone base station.

The base station options provide for cable modem, ISDN, or 56-Kbps connections. Once you connect to the base station, you can roam wirelessly at a range of about 150 feet and use a pen and on-screen navigation buttons to surf the Web. Though the unit is only a prototype now, Cyrix is talking to manufacturers and expects units to start shipping early this year. Cyrix foresees the WebPad being popular for use with home networks. No pricing information is out yet.

Global Converging Technologies is also working on a wireless tablet for Web surfing, the Cendis Net Display, to arrive in the summer of 1999. It will be touch-sensitive and priced around \$500. The Cendis Net Display, unlike the Cyrix WebPad, will have a monochrome display.

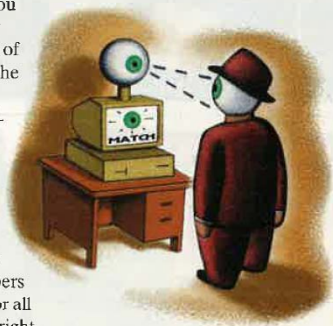
## Bio-Identities

**B**iometric identification systems—which rely on fingerprints, voice prints, retinal scans, and the identification of other unique attributes you carry around—are slowly making the transition out of the exotic stage and into the mainstream.

To move product development along, Microsoft and a group of software companies have come up with BioAPI (*API* stands for *application programming interface*), a tool that software developers can use to build support for all sorts of biometric devices right into their applications. Today developers need to write support for specific biometric devices and force their customers to use certain hardware.

A standard such as BioAPI

can offer complete interoperability between applications and any biometric gadget—a key ingredient that will help broaden



the market, says Karan Khanna, lead product manager for Windows Security at Microsoft. The proposal is only in the initial stages now, with product development a year away.

THIS ISSUE'S CONTRIBUTORS: Angela Hickman, Carol Levin, Sebastian Rupley, Don Willmont.

## Personal Projection

**W**orldwide sales of ultraportable projectors—models that weigh under 10 pounds—grew nearly 400 percent from 1997 to 1998, according to the market research firm Pacific Media Associates. The ultraportable market should nearly double by next year, reaching almost \$1 billion in sales, according to Pacific Media.

Key to this growth is that these projectors weigh less than half as much as competing designs, while offering many of the same features and, in some cases, brighter images. Low price is also a factor. Released nearly two years ago, the Lightware VP800 remains one of the



**PRESENTING:** The 6.8-pound InFocus LP425 is one of the lightest projectors you can buy.

best-selling projectors for professionals. Sales shot up last year when Lightware lowered the price to \$3,000—unprecedented in a market where most projectors were closer to \$10,000. The unit now sells for under \$2,000.

Soon you'll be able to carry a notebook and a projector that together will weigh less than a laptop did just a few years ago.

## Top-Selling Retail Software

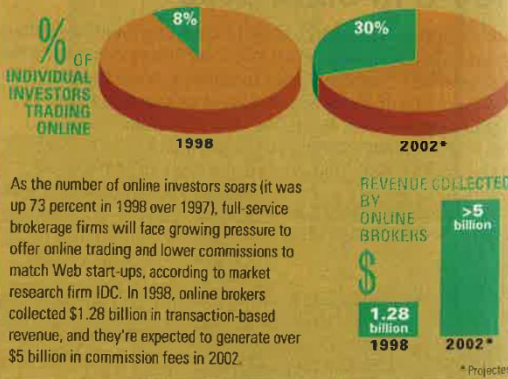
- 1 Sony MVC-FD71 (\$670)
- 2 Agfa ePhoto 307 (\$160)
- 3 Sony MVC-FD81 (\$790)
- 4 Kodak DC-50 (\$210)
- 5 Kodak DC-260 (\$940)
- 6 Sony MVC-FD51 (\$480)
- 7 Kodak DC-210+ (\$575)
- 8 Olympus D-600L (\$860)
- 9 Kodak DC-200 (\$390)
- 10 HP Photosmart C-20 (\$380)

Source: ZD Market Intelligence, data for October.

## E-Shopping Arrives

**W**hile the final numbers won't be compiled for another couple of months, 1998 appears to have marked the arrival of big-time e-commerce revenues. According to CyberDialogue, a research firm, about 6.7 million adults shopped online in 1998. According to America Online, nearly 50 percent of its 14 million subscribers have shopped online, with the numbers sharply increasing during the last quarter of 1998. A big boost came during the holiday season as major retailers such as Nordstrom offered online shopping options.

## Online Trading Rings Up Profits



**Oracle Express analyzes 50 times**

**more**

**data than Hyperion Essbase.**

	<i>Data Density</i>	<i>Query Execution Time</i>
<b>Oracle Express 6.1</b>	<b>5.0</b>	<b>0:34:02</b>
Hyperion Essbase 5	0.1	0:36:30



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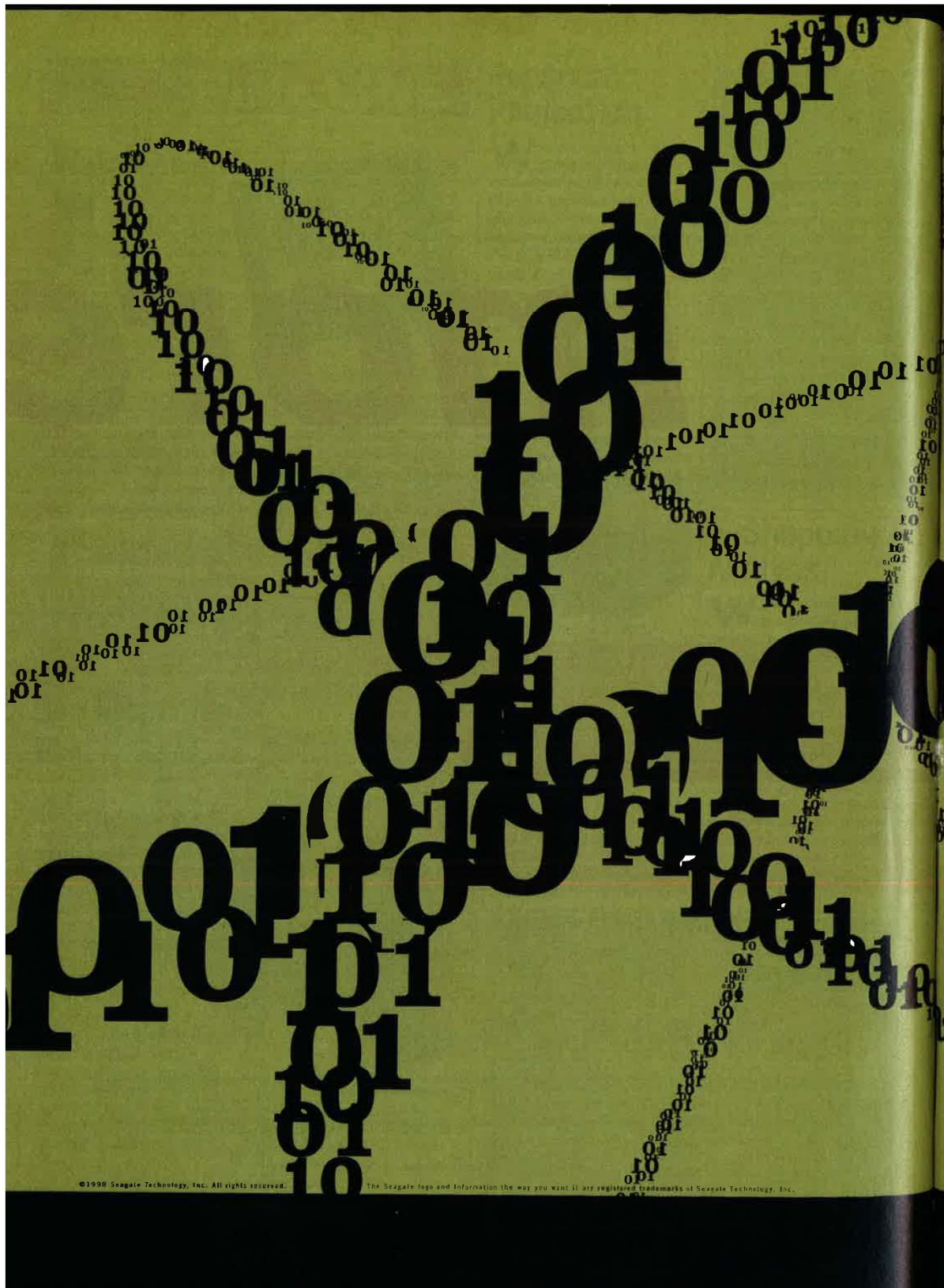
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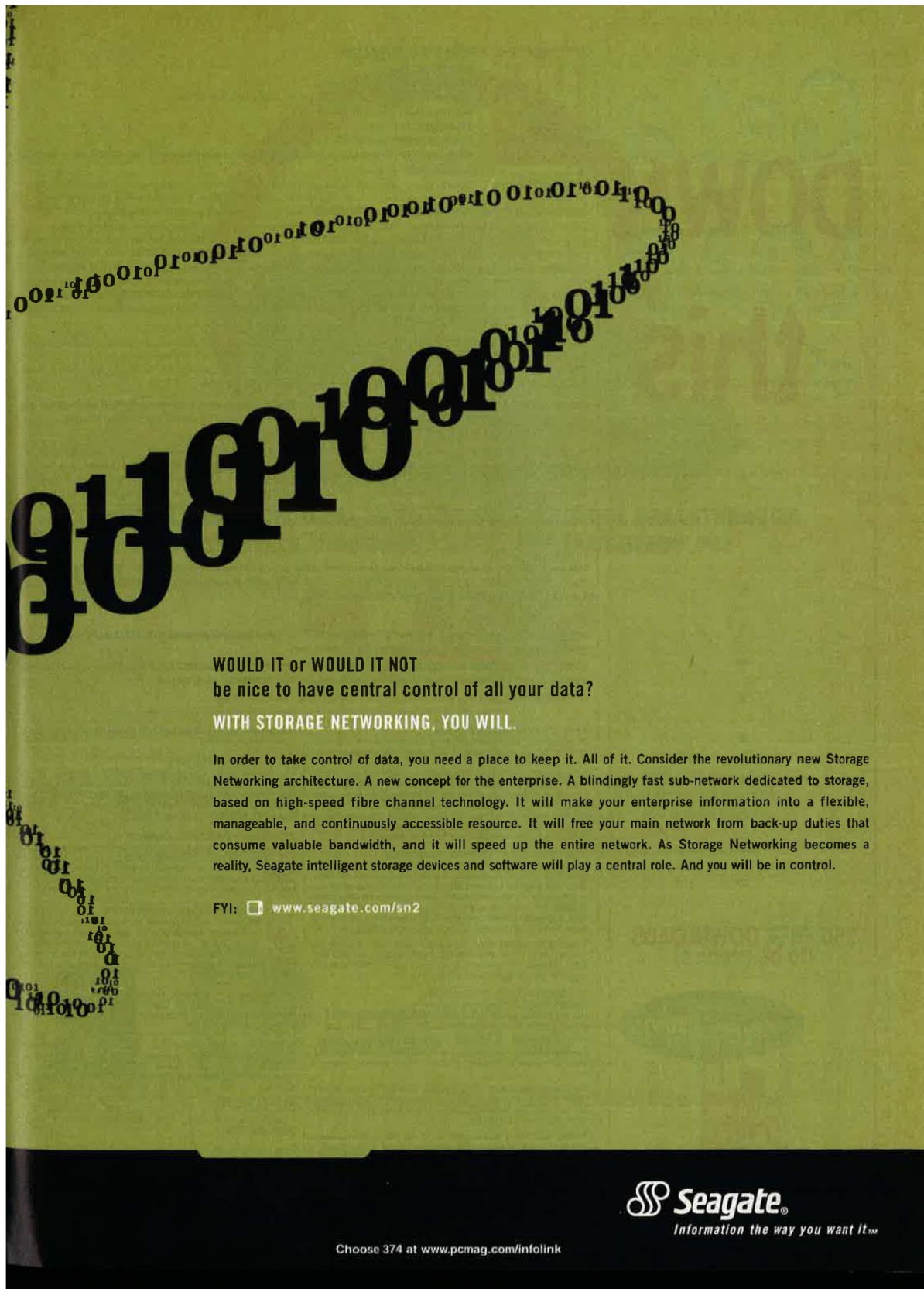
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John C. Dvorak

## Scarier than Spam

The entire antitrust case against Microsoft was bolstered by e-mail records, many of which were simply the outgrowth of sloppy business practices and the mess that the overreliance on e-mail has created. It's going to get worse, and I see no way out of it. And I'm not talking about the Microsoft case; I'm talking about e-mail users and what they have to face daily.

There is some irony here, because I myself have been promoting the use of e-mail as the primary form of intercompany and interpersonal nonverbal communication since I first got involved with computers. Even back in the 1970s, it was apparent that e-mail was more efficient than anything else. E-mail would have been a worldwide standard earlier had not the cheap fax machine come along to dominate the 1980s and put e-mail on the back burner.

Many of us, during the dark ages of e-mail, were plugged into CompuServe Mail, or even better, MCI Mail. Internet mail was more difficult and less universally accepted, and it appeared as if proprietary systems would rule. MCI fostered AT&T Mail and other systems, which all languished. MCI Mail itself was never improved, and before you knew it AOL came up with its "You've got mail" message and dominated the scene, followed by what we have today, which is mostly Internet mail.

Then only a few people were using e-mail, and it was manageable. Now that everyone does, it's become a disaster. This is worsened by mediocre e-mail organizational tools and a lack of verification for standard Internet mail. Combine these problems with the ubiquitous HTML "mailto:" command and the "reply to all" command and what we have is nothing less than a monster no tool can easily fix. Let's examine just a few of the e-mail problems.

- *E-mail is too easy to send.* This is the primary problem. It's simply far too easy to send e-mail, whether you need to or not. The natural barriers that force an individual to make a compose-and-send decision (printing, cost of postage, and so on) have been removed. To make things worse, it's too easy to develop mailing lists that let people broadcast e-mail as if it were bulk mail. Sloppy practices don't help, either. For example, I get numerous e-mails that don't concern me from various Ziff-Davis departments sent to broadcast lists.

- *It's too easy to reply to e-mail.* On top of the ease with which mail can be sent, it's even easier to reply

to. And the reply often has the old message embedded for reference. You also have the "reply to all" function, which turns each recipient into a broadcaster and any e-mail into nothing less than a chain letter growing in distribution with each iteration.

- *Fear of nonreceipt.* I've always considered this the biggest headache with general Internet mail. I'm not the only one, since I'm often subjected to the solution to this problem: multiple sends. I know that some people have multiple e-mail boxes, usually to help them sort through mail by levels of importance. Because I can't be sure that mail is received, no matter how many safety nets are in place to notify me of problems, I'll send multiple copies.

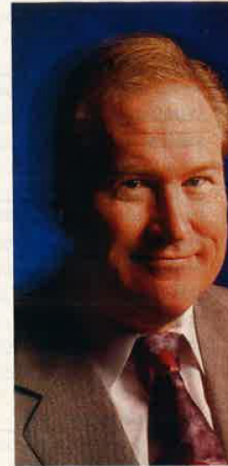
- *Mail storms.* Often when a mail thread begins, people will feel the obligation to chime in for no good reason except to make their presence felt. Adding "Amen," "I agree with this idea," or other such blather and rebroadcasting the message does nobody any good. And getting into an e-mail argument that is broadcast company-wide quickly becomes a nightmare. I can't imagine what productivity losses occur when a simple argument develops into a mail storm.

- *Attachments.* The ease with which someone can attach a program to an e-mail message causes bandwidth and server problems as well as lengthy downloads. Then there are support issues, such as the Mac user who wants to run the Windows program. The program, of course, is some silly animation someone collected off the Web and sent around as today's humor.

- *Organization.* This is the subject of another column. But suffice it to say, we have poor tools to sort and organize (or even find) the mail we collect.

- *The pack-rat phenomenon.* This brings us back to Gates and company and all the mail they collected for no good reason.

Needless to say, there are a lot of problems developing with e-mail, and they're continuing to grow. I didn't even have to mention spam mail to swamp you with problems. And I see no easy cure for this situation except discipline. It will sink us if we don't try to do something. Starting with strict policies would help.



Combine all the other e-mail problems with the "mailto:" and "reply to all" commands and what we have is a monster.

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