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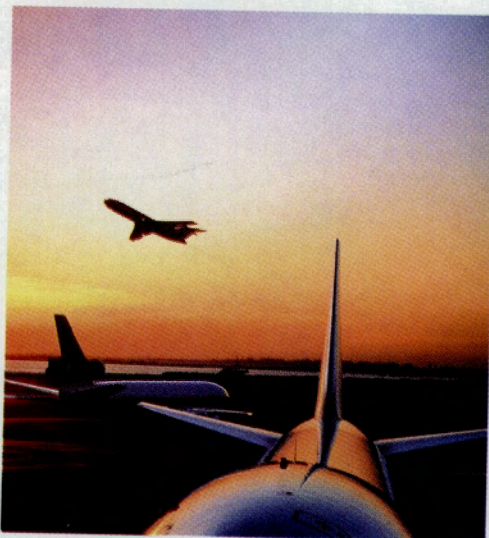
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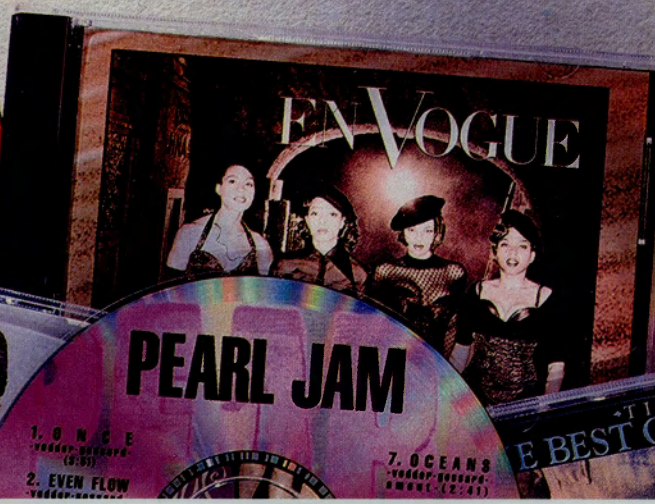
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COMPU SERVE

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Dear Reader

Keeping up with the latest technology isn't easy; even the techno-pundits have a difficult time of predicting what's next in computerdom. But staying informed is easier to do in some places than it is in others.

Take CompuServe, for example. It's technophile heaven—a locus for discussion of, and, sometimes the very birthplace of developments and trends in computer technology. The Information Service contains an unparalleled concentration of some of the most advanced and highly qualified hardware and software experts in the world. Many forum members are not only interested observers but also important participants in the continuing high-tech revolution.

Despite the inherent difficulties of “predicting the future,” we give it a shot this month, courting some of the Service's resident experts and futurists for their opinions and predictions. Contributing Editor (and technology buff) John Edwards polled some key people in CompuServe's hardware and software forums and asked them where they think computers and attendant technologies are headed in 1993 and beyond. The result is this month's cover feature beginning on page 10—a look at developments in important areas such as multimedia, virtual reality, pen-based computing and personal digital assistants. We even interviewed CompuServe's chief technical officer (see p. 13) to find out where CompuServe itself is going as we approach the year 2000.

* * *

Next month you'll observe a few changes in *CompuServe Magazine*. Here's a quick overview of what you can expect:

Starting with the January issue, we'll introduce a new section called “Personal Enterprise.” The section will cover many facets of personal productivity for home and business life, with an accent on utilitarian articles for work-at-homers/consultants, small business operators and telecommuters. Other areas to be covered here include information retrieval, personal financial management, and the latest methods of enhancing creativity and productivity.

Also appearing next month will be a new two-page section called “Readers' Writes,” with several special features including a write-in question-and-answer column with Contributing Editor Charles Bowen, co-author of the famous *How to Get the Most Out of CompuServe* book series from Bantam. Also included: “Member Essay” (a longstanding reader-written column now featured in the Monitor section), a graphic download of the month, user tips, and other assorted features.

John Edwards will also make an appearance in the magazine with a print version of “Behind the Screens,” a popular column published in *Online Today*, *CM's* online companion. Edwards' wit and wisdom about the world of computers, high technology and the Network Nation have entertained OLT readers for more than eight years and have gained him a following online. We're pleased to offer samples of his work in the Monitor section every month, starting in January.

Finally, the magazine's lifestyles section, now known as “Personal Business” will become “Random Access,” and will offer leisure/hobby subjects, CompuServe community articles, health and fitness, games, entertainment, travel and other light features. Because the subject matter now contained in “Money Matters” and “Travel” will be covered in other areas of the reorganized magazine, those sections will no longer appear. “Money Matters” is phased out effective this month and “Travel” will not appear next month.

We trust that these changes will make the magazine more useful to you and enhance your CompuServe membership even more. As always, we welcome your feedback. Write to us via CompuServe Mail at 76004,3302, or stop by Section 10 of the CompuServe Help Forum (GO HELPFORUM) and post a message.

Douglas G. Branstetter
Editor

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Can I Do That Online?

I just thought I should write to say how helpful the article "Killing Time on the Connect Clock" (Oct., p.17) was. I use CompuServe Information Manager, and access the Earth Forum a lot. I used one of the suggestions to download a free program from one of the IBMNET forums. It works very well and has cut my CompuServe connect time by more than 50 percent. I want to thank *CompuServe Magazine* for sharing this article with its readers.

Chad Richardson
Boerne, Texas

Thank you very much for doing such a great job with *CompuServe Magazine*. You and your team give us many interesting articles, but I especially enjoy the tips on how to use CompuServe and the "hidden" services on CompuServe that I would never have discovered on my own.

Will Deatrick
Poway, Calif.

Financial Planning

I read with great interest the cover story "One Nest Egg Over Easy" in the September issue of *CompuServe Magazine* (p.10). The article was well written and could stand as a tenet for investing and living in the current economic climate. Ms. Conroy's emphasis on establishing goals is essential to any economic plan but tends to be the one most overlooked by the small investor. Ms. Conroy's differentiation between long- and short-range goals was right on. How many of us have asked ourselves the simple question—do I *need* it or do I *want* it—when debating the purchase of an item?

It is obvious Ms. Conroy did her homework in preparing this feature. So much so that I had to take a hard look at my own financial position. The reflection was not as solid as I thought; now I regularly access the Investors' Forum's Novice Investor section and Money Magazine's FundWatch Online.

Richard D. Potenza
Setauket, N.Y.

Newsletters

Thanks for the complimentary mention of *TidBITS* in the article on newsletters in the October *CompuServe Magazine*. I certainly can't complain about being called "witty and slightly cynical," but the notice claims incorrectly that *TidBITS* focuses on the Macintosh desktop publishing world. In fact, we write little about desktop publishing specifically; instead, we take a broader (and occasionally lighter) look at current issues related to the Macintosh and electronic communications. We avoid press-release jargon and try to provide a consistent (if slightly cynical) opinion.

In addition, although CompuServe and ZiffNet/Mac rank high among our popular distribution places, we estimate well over 40,000 readers worldwide, primarily on the global Internet.

Adam C. Engst, Editor
TidBITS
Redmond, Wash.

Naturopathy

I appreciated Dr. Kirschner's letter in the October *CompuServe Magazine* concerning the article "A New Prescription for Health" (Letters, p.4). His points on the dangers, risks and experimental nature of mainstream, modern medicine are quite valid.

Regarding his statement that "the only licensed alternative primary care in American medicine today (is) naturopathic medicine," I wish to point out that in many states including California, Florida and New Mexico, acupuncturists are licensed as primary care providers.

Further, individual states are responsible for the licensing of health care practitioners. It is misleading to the public to claim that naturopathy, acupuncture or any modality has any legal status without qualifying it to a particular state. For information on the legal status of acupuncture in a particular state, contact the American Association of Acupuncturists and Oriental Medicine at 919/787-5181.

I am pleased that there is an N.D. on the National Institutes of Health panel to investigate alternative medicine. I wish him all the best in providing a balance to the investigation.

Mark Melchiorre, L. Ac., Dipl. Ac.
Los Angeles, Calif.

Member Essay

The member essay in the September issue of *CompuServe Magazine* by Mr. Rosenthal was interesting. We have been using electronic mail for several years to assemble and review documents (usually proposals) when the contributors are at several geographic locations.

I would like to suggest a modification to Mr. Rosenthal's method. Instead of saving the WordPerfect document as a DOS text document, thus losing all the WP formatting codes, we use the file compression utility PKZIP, send the compressed file, and then use PKUNZIP at the receiving end to decompress the file. The ZIPed file is smaller, so you save money in the transmission. You retain all the WP formatting codes and any transmission errors are less likely since the ZIP utilities provide for error detection. The ZIP utilities are available in quite a few CompuServe forums.

Al Aulbach
Albuquerque, N.M.

Going Portable

I enjoyed the story on portable computing ("Going Portable," Aug., p.10), and it appeared at an auspicious time. The magazine arrived one week before my vacation and the article made me wonder how to power my laptop in a primitive campground.

I found the solution in a DC-to-AC inverter. The plate on the power supply indicated the computer needed 55 watts, and with a 50 percent efficiency factor, I needed at least 100 watts of AC power. I found a 200 watt unit, which left plenty of power to spare, and tried it two days later in the campground. I was skeptical, but the power supply worked perfectly. I was computing in the wild! This was the freedom we all imagine during the afternoon coffee breaks, when we gaze at the sunny day and wish we could move our desks outside. Laptops are not just for executives and salespeople, flitting about the world from one multi-million dollar deal to the next. They are also for storing the recipe for S'mores.

Michael Soots
Tillamook, Ore.

Social Security codes

In "Your Old Weight is Also in There" (Sept., p.5), the file DECODE.SSN was mentioned. After checking online, I noticed that the file should be updated.

For example, in Arizona, we ran out of numbers, so now Social Security also uses 600 and 601. I think California also has some new numbers assigned.

I discovered this list of state codes when I worked for the U.S. government in the 1970s and since have amazed friends and clients by telling them which state they are from—some of them never catch on that I don't guess until I see their Social Security numbers.

Bob Kamman
Phoenix, Ariz.

Send a Letter

Send your letter to the editor by CompuServe Mail to 76004,3302. A \$25 connect credit is given to the writer of each letter published. *Sorry, we cannot acknowledge letters or answer questions through this service.* Please use CompuServe's Feedback system (GO FEEDBACK) or call 800/848-8990 for questions, problems, address changes, etc. A representative from Customer Service will be glad to help you.



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MONITOR

Look—Up in the Sky! Metal!

While most astronomy buffs find fulfillment observing stars, planets and other natural heavenly bodies, the members of the Astronomy Forum's (GO ASTROFORUM) Section 3, "Satellite Observing," get their kicks by viewing the various pieces of hardware earthlings have chucked into orbit over the past three or so decades.

"There are plenty of expert satellite observers and trackers in the forum," says member Alan Bose, who broadcasts a daily report on the subject for Chicago radio station WGN. Bose's job is to "let people know when they can take the kids and grandkids out into the yard to see some of the bigger, brighter birds fly over."

Bose notes that a satellite is visible from the ground when the sun has just set and the sky has darkened. For the next hour or so, a satellite overhead is still in full sunlight and will reflect light downward.

On any clear night, numerous satellites can be seen with the naked eye, says Bose. If you see a point of light racing across the sky that suddenly disappears as it flies into the earth's shadow, you've spotted a man-made moon.

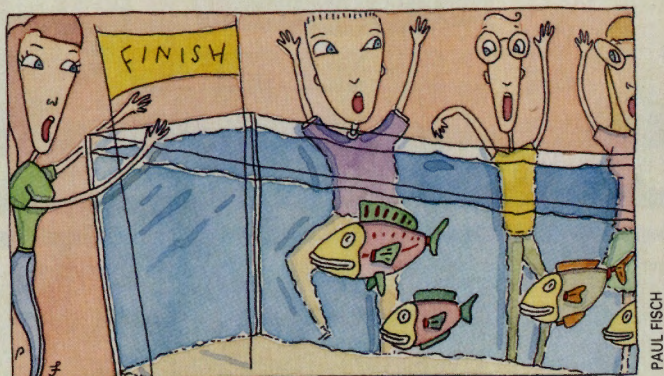
Bose offers an introduction to the pastime entitled, "There's a Satellite in Your Back Yard!," in the Astronomy Forum's Library 3, "Satellite Observing," as SATDOC.TXT.

"How do you spot a hardy satellite spotter?" asks Bose. "He's the one who leaves his reclining lawn chair out in the back yard all winter."

Monitor

Contributors:

Cathryn Conroy, John Edwards, Mike Pietruk, Lindsay Van Gelder



And They're Off ... Sort of

For weeks, some folks in the Aquaria/Fish Forum (GO FISHNET) have been duking it out over an ethical question that even most animal rights activists might find sur-

prising: the ethics of fish racing. It seems that an aquarium society in Pittsburgh arranged one such underwater tournament not long ago. Owners were permitted to do anything except

disturb the water or the other fish. The idea was that you make fish-feeding motions and get your fish to follow. The best fish won (although not by a nose, of course) and a good time was had by all, apparently.

But some other forum members questioned whether a good time was had by the fish, who hadn't consented to all that activity in and out of strange nets. Even if they had, however, we bet the sport is never going to replace the Kentucky Derby ... although for the odds on that, you'd have to consult a tout (a brook tout, a brown tout or a rainbow tout).

A New Wrinkle for CIM-made Stock Quotes

CompuServe Information Manager (CIM) users who retrieve stock quotes may want to take advantage of three new utilities.

Two of these can be obtained in the IBM Applications Forum (GO IBMAPP), Library 4, "Personal Acct [a]." The first, CIM2QK.EXE, is a \$15 shareware tool (41.5K) that converts quotes gathered by CIM into a format valid for import into Quicken. A second file, CIMQUI.ZIP, is a smaller (11K) utility that reformats CIM (and other) stock quotes files into a format suitable for import (symbol and closing price) into either Quicken 5 or Lotus 1-2-3.

Of special note in the Investors' Forum (GO INVFORUM), Library 14, "EQUIS/MetaStock," is Martin Moore's frequently updated PTT.ZIP.

This powerful program captures quotes from CompuServe, along with those of other services, and reworks them into MetaStock- or Megatech-compatible data files as well as an ASCII format for input to spreadsheets.

PTT goes beyond being a mere quote-massaging utility. Owners of MetaStock, a commercial stock market technical analysis package, can employ PTT to produce summary reports highlighting those stocks that exceed either price or volume limits set in the installation procedure.

In addition to supporting CIM Quotes, PTT also works with Basic Quotes (GO BASIC-QUOTES), part of basic services, and Current Day Quotes (GO QQUOTE) formats.

Bugs in the House (and Senate)

Weird spider" was the name of the message posted in Section 7, "Wildlife," of the Earth Forum (GO EARTH). "I have a large brown spider outside my bedroom window, and I wonder if anyone can identify it for me," the message-poster wrote. "It's brown and furry and has a black trapezoidal mark on its belly. Its legs are brown with black rings."

Hmmmm, wrote back the resident bug experts. Not a Wolf Spider—too furry. Not a Brown Recluse, either—that one has a fiddle-shaped mark on its back. But when the spider-spotter noted that after his resident arachnid traps its prey, it "quickly wraps them up in a cocoon and sucks the life out of them, leaving nothing but the shell," the verdict was unanimous: a politician.



J. CARMICHAEL, JR./THE IMAGE BANK

Africa Joins Global Village

CompuServe Africa has been launched to meet the needs of users in southern Africa, including the countries of Lesotho, Swaziland, Botswana, South Africa, Mozambique, Namibia and Zimbabwe. Presented in conjunction with the licensee CSIR, the service features cost-effective network access, local currency billing, local customer support and a customized version of CompuServe Information Manager software. Members in southern Africa can access CompuServe through the CSIR network, CSIR-Net, for R47/hour (\$18 U.S.) in addition to CompuServe's standard connect-time charges. For more log-on information, GO LOGON.



The Pacific Forum (GO PACFORUM) is now open and welcoming anyone interested in meeting Pacific members and discussing Australian and New Zealand topics. The forum has seven library and message sections, including support areas from some Australian and New Zealand hardware and software vendors, including modem manufacturer Maestro; NetComm, a maker of modems and distributor of networking and communication products; and Computamart, an Australian distributor of SoundBlaster products.

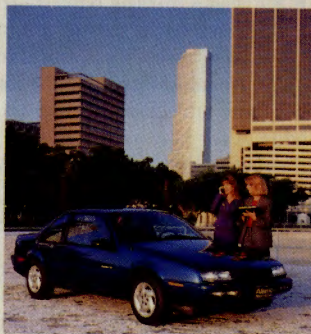
To celebrate the forum's debut, a contest was held to rename the "Aussie Chat" and "NZ Chat" sections. The winners are "Roo Crew," submitted by Narelle J. Coleman, and "NewZ," by Graham Starky, who each win one month's free access to the forum and a copy of the book *CompuServe A to Z*.

The Pacific Forum is a service of CompuServe Pacific, which provides access to the CompuServe Information Service and locally oriented services to members in Australia and New Zealand. CompuServe Pacific is the result of a licensing agreement between Fujitsu Australia Ltd. and CompuServe.

Remember 'Alamo': Big Car Rental Savings

The cost of traveling just got a little cheaper for CompuServe members.

The Travel Forum (GO TRAVSIG) has negotiated with Alamo Rent A Car a deal that offers CompuServe members a 15 percent discount off the company's already low "association" rates, bringing the daily cost of renting a car to \$23.80 in Florida, \$29.75 nationwide and 15.72 pounds in the United Kingdom. Weekly rates start at \$76.46 in Florida, \$101.96 throughout the United States and 65.45 pounds



in the United Kingdom. No city surcharges are added for areas that are typically higher priced.

To cash in on the offer, call your travel agent or Alamo Rent A Car at 800/354-2332 and say you want Rate Code BY. Give the Travel Forum I.D. number: 261928.

Special discounts for weekend rentals are also available with the Rate Code A1, followed by I.D. number 261928.

A 24-hour advance reservation is required.

To learn more about this and other upcoming Travel Forum discounts, read SAVE.CAR in Library 0, "General Interest."

Tomorrow, Tomorrow, It Won't Play Tomorrow

Sure, everyone remembers *My Fair Lady*, *The Sound of Music*, *Show Boat* and *A Chorus Line*. But what about those shows—those truly awful bombs—that will never be immortalized on the dinner theater circuit?

Members of the Music/Arts Forum's (GO MUSICARTS) Section 5, "Broadway/Theatre," know a lot about the musicals that have played the Great White Way, if only ever so briefly. Among the shows the members have nominated for the Unofficial Broadway Hall of Shame:

- ▶ *Wildcat* (1960)—Lucille Ball sang (kind of) and danced (in a way) and proved to all that she was the queen of TV, not the toast of Broadway.
- ▶ *Gone with the Wind* (1972)—A Tara with tunes that closed out of town.
- ▶ *Sugar* (1972)—A musical based on the life of Marilyn Monroe. Enough said.

▶ *Mack and Mabel* (1974)—The life of silent movie producer Mack Sennett set to music. The show had sound, to the dismay of many onlookers.

▶ *Rockabye Hamlet* (1976)—This rock version of the Shakespearean play may have been Broadway's first musical tragedy.

▶ *1600 Pennsylvania Avenue* (1976)—A bicentennial musical with harmonizing chief executives, composed by Leonard Bernstein with book and lyrics by Alan Jay Lerner.

▶ *Rex* (1976)—Henry VIII singing songs composed by Richard Rodgers.

Truly terrible musicals one and all. But as Steve Ledbetter, one of the forum's sysops, observes, "The worst Broadway musical is probably one that none of us has ever heard or even heard about—probably so bad, it died aborning."

A Clearinghouse for Previously-Owned Parts

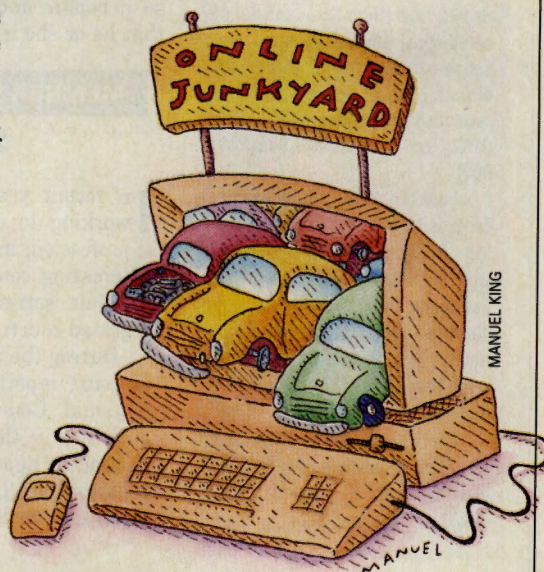
Junkyards are messy, unsightly and certainly not the sort of thing anyone wants in his neighborhood. But how about an online junkyard?

Library 10, "The Swap Shop," of the Automobile Forum (GO CARS) may not qualify as a full-fledged junkyard in the traditional sense of the word, but with real junkyards becoming as scarce as a 1939 LaSalle, it certainly serves as a convenient alternative.

Like a real junkyard, "The Swap Shop's" selection changes over time. A recent search uncovered listings for:

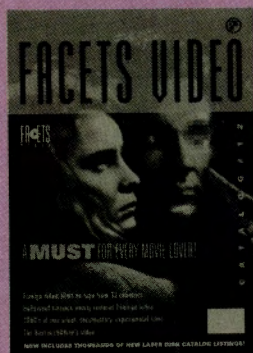
- ▶ A 1928 Essex.
- ▶ A bullet-proof 1989 Rolls Royce Silver Spur.
- ▶ Parts for 1968-72 Chevrolet Chevelles.
- ▶ A variety of Corvette parts.

The forum's Section 10, "The Swap Shop," is also used by members to describe available products and negotiate deals. The only thing missing: the online junkyard dog.



Where to Go When Video Hut Doesn't Have It

Are you looking for that special video, but find that you're striking out with local stores that stock only best sellers and a few classics? Film critic Roger Ebert (GO EBERT) has some helpful suggestions in Section 6, "A Movie Lover's Source List." Many of his favorite mail-order dealers have toll-free numbers, and some of their catalogs, particularly those of Movies Unlimited and Facets Multimedia, are so comprehensive that they can double as reference works.



Chicago's Facets Multimedia, according to Ebert, is the nation's leading specialist in international, classic, documentary and independent films, including a wide range of American titles. Quality is paramount; Facets doesn't stock potboilers. Its literate catalog (\$6.50) has the page size of a tabloid newspaper, runs 304 pages and lists thousands of selections, including even obscure underground films. All videos can be rented (VHS and laserdisc only). Phone 800/331-6197, or in Illinois, 312/281-9075.

Located in Philadelphia, Movies Unlimited offers a catalog the size of a major metropolitan phone book. It claims to list more than 25,000 titles (including VHS, Beta and laserdiscs). Regular updates are issued throughout the year. Place orders by calling 215/722-8398.

For Ebert's reviews of new releases on video and laserdisc, visit Section 9, "Video Alert: New on Tape and Disc."

An Online Search Ends a Lifetime Search

He was a miracle baby. Born three months premature in a New York City hospital in 1950, Angelo Morris fought for life and survived against the odds. After he was placed in an incubator that left him totally blind, Morris' terrified, 17-year-old, unwed mother abandoned him.

When the boy was seven years old, his grandmother rescued him from foster care and reintroduced him to his mother, but she refused to tell him anything about his father.

Years later Morris began the search for his dad, starting at the New York Foundling Hospital where he located his own

baptismal certificate. Although his father's name was misspelled, it led him to the church where he was baptized and where his father was later married. Unfortunately, the trail ended there.

Now living in Kill Devil Hills, N.C., Morris thought the Genealogy Forum (GO ROOTS) might help him continue his search. "I had given up the idea of trying to find him," he admits. But Section 12, "Adoption Searches," was a hub of activity and before long, Mary Jo Rillera, the section's leader, helped Morris find a copy of his father's birth certificate. "It was just the key I needed to find

him," he says.

Tapping into Phone*File (GO PHONEFILE), Morris searched the New York and New Jersey directories. He sent a letter to every match he found, and one of them was his father.

Morris describes his father, Theodore Sonnessa, as a quiet man. Denied access to his son by Morris' mother, Sonnessa was suspicious of Morris at first, but they "have developed a very close relationship in a short period of time," says Morris, noting the two first met last January. "If there is a message here, it is don't quit (searching) and don't be afraid to ask for help."



Eating Out Tips for the Culturally Un-Elite

OK, most of us can tell aspic from Jell-O by now, and we know that the sticks they put on the table in Asian restaurants aren't used for knitting sweaters, and we can even pronounce *vichyssoise* without someone else responding *gesundheit*. But who among us is so debonair and sophisticated that he or she isn't intimidated

by a snooty headwaiter?

Luckily, help is at hand in the form of file 3STAR.THD in Library 13, "Dining Out," of the Cooks Online Forum (GO COOKS).

No napkin is left unturned as gourmets, food critics, former waiters and waitresses, and others discuss such matters as how much to tip, when it's OK

to eat fried chicken with your fingers, what behaviors drive diners and waiters bonkers, how to figure out which fork does what, and what it means when your waiter moves your salt shaker. You'll also find reminiscences of members' most elegant dining experiences.

MEMBER ESSAY

Setting the Public Record Straight

In recent years, court reporters have been working to educate the public about their profession, including the technology they use in creating court transcripts and in reporting in court settings with the new computer-integrated-courtroom environment.

During the past year, an increasing number of court reporters, including members of the National Court Reporters Association, have gathered in the Legal Forum (GO LAWSIG), Section 7, "Reporter/Paralegal." Whenever court reporters are incorrectly portrayed in print or electronic media, members can post messages

the same day about where to send responses. This has resulted in public responses from the NCRA's past and current presidents to articles in *The Wall Street Journal*, *The New York Times* and *Time* magazine.

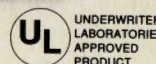
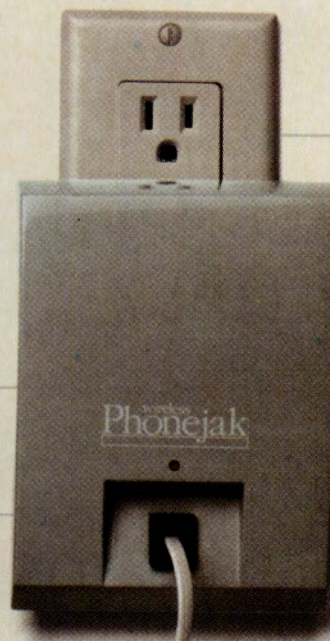
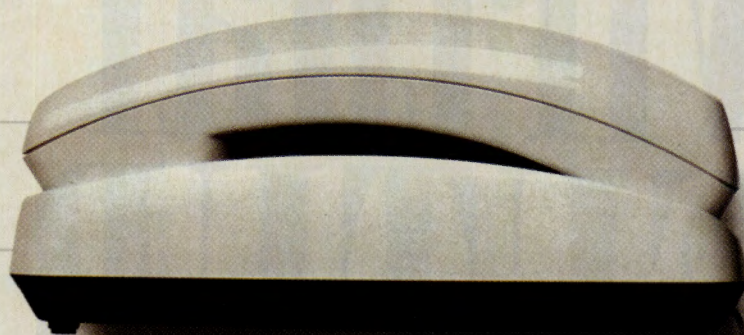
Prior to this appearance in the Legal Forum, efforts to respond in a timely manner to these articles were infrequent at best and nonexistent at worst. CompuServe and the Legal Forum have been valuable tools in allowing court reporters to "correct the record."

Walter R. Ledge
Pasadena, Calif.

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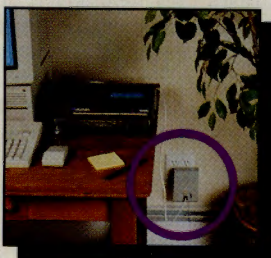


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A Once and Virtual FUTURE

► **What do tomorrow's PCs hold in store? Here's a look at everything ahead of the technology curve.**

Predicting the future is a tricky business. Predicting the future of computers is especially difficult, even for people who are experts in the field.

Example: the 1964-65 New York World's Fair was a coming-out party of sorts for the computer industry. Digital optimism was unbridled, and the exhibitors made predictably lofty forecasts (usually with the help of animated figures and plenty of flashing lights). In one way or another, the computer powerhouses of the era projected that by the 1980s, or thereabouts, centrally located computers would control homes, businesses, factories and schools.

Only one small item was overlooked—the one that would turn out to have the greatest impact of all. Not a single exhibitor forecast the development of the desktop computer, much less an “electronic brain” that would fit into a user's pocket. So much for Rocket Age futurists.

Today, a personal computer industry that was never envisioned by the “experts” who gathered at Flushing Meadows more than a quarter of a century ago stands at a crossroads. The PC is being tugged at by forces

that promise to transform it, on the one hand, into a home/business audio/video workstation and, on the other, into a miniature pocket companion/communicator that can link its user with millions—perhaps eventually billions—of people around the world. How the market will develop is a point of prime concern to people interested in the future as well as the companies that hope to profit from the new products that are on the way.

Technology development is also a major concern to the CompuServe community, where industry movers and shakers, programmers, futurists and advanced technology buffs gather and interact in the forums. These CompuServers not only follow events and discuss trends in leading edge technology—in many cases they help shape those events and trends. Seeking out the views of CompuServe's futurists about what's in store for 1993 and beyond revealed that most activity concentrates in three main areas: multimedia, virtual reality and pen-based computing.

Multimedia Leads the Way

Today's computer industry observers are tracking the emergence of a new kind of desktop PC, a multimedia system that combines the best of personal computing and intelligent television. Like traditional PCs, the unit can handle word processing, spread-

FEATURE

CM's Cover Story:
More Personal and
Mightier Computers

▼
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Ahead, p. 13**

▼
**24 Hours at the Turn
of the Century, p. 14**

▼
Futuristic Forums, p. 17



sheet and other routine text- and number-management chores. But with the addition of an appropriate operating system—such as Microsoft's Windows 3.1 or Apple Computer's System 7.0—a CD-ROM drive (a disk drive that uses optical compact discs capable of storing hundreds of megabytes of data) and a high-quality display, it also can serve as a desktop library, a home entertainment system or a desktop business presentation center, combining the best of computer, audio and video technologies.

Like the microcomputer industry in the late 1970s and early 1980s, today's budding multimedia market is divided among several competing and noncompatible standards. Microsoft, for example, is touting its Multimedia PC (MPC) benchmark, which requires the use of a Windows-based computer, a CD-ROM drive, a sound board and several other components.

Apple Computer, on the other hand, is pegging its hopes on the Macintosh/System 7 platform. Over the long term, the company is involved with IBM in a joint venture called Kaleida, which is developing a wide range of multimedia technologies. The venture's first products are due in the mid-1990s.

Three major manufacturers, Philips Consumer Electronics Co., Commodore Interna-

TV. Commodore's CDTV system is similar to CD-I, but allows users to add a keyboard and disk storage to turn their system into a full-fledged Amiga-compatible computer. Tandy's offering, the Video Information System (VIS), works like CD-I and CDTV and recently arrived in Radio Shack stores and other consumer electronics retail outlets. (Tandy is also hedging its bets by offering a line of MPC-compatible systems.)

With so many different types of systems to choose from, it's no wonder that the Multimedia Forum (GO MULTIMEDIA) has become a favorite place for members to discuss and analyze

the diverse multimedia field and its many products. Once they've become acquainted with the technology's choices, most members also go on to join the Multimedia Vendor Forum (GO MULTIVEN), the online home of many of the industry's most important soft-

CompuServers not only follow events and discuss trends in leading edge technology—in many cases they help shape those events and trends.

tional Ltd. and Tandy Corp., have decided to sidestep the traditional desktop computer altogether, opting instead for a video game-type of setup. Philips' Compact Disc-Interactive (CD-I) standard uses a computerized CD player that attaches directly to a

CD-ROM: A Rare Medium for Shareware

If you've ever used a CD-ROM, or even played a regular audio CD, you've probably wondered how those mysterious little shimmering discs manage to hold so much information. The answer lies in some pretty sophisticated—and expensive—technology.

From a PC user's standpoint, the big drawback to CD-ROM technology is the fact that you can't erase and rewrite data—at least not without the use of sophisticated "mastering" equipment costing tens of thousands of dollars. This serious limitation prevents ordinary CD-ROM users from sharing their software with other users, either for free or on a shareware "try before you buy" basis.

While the early microcomputer business thrived on basement- and garage-based software publishers who could crank out a handful of diskettes at a negligible cost, the CD-ROM field, with its need for costly mastering equipment, has so far been dominated by a handful of well-financed corporations.

Rich Bowers, executive director of the Columbus, Ohio-based Optical Publishing Association, says

that trend isn't likely to change in the near future. "CD-ROM isn't a very practical path for individual shareware authors," he notes. "The arithmetic is really pretty simple. Most of the manufacturers will offer you a deal for doing the mastering and giving you a hundred or so discs for between \$1,200 and \$1,500. That works out to between \$12 and \$15 per disc, an OK price if you plan to distribute your software via retail, but not very practical for shareware." Unless, of course, hundreds or even thousands of shareware programs from many authors are packed onto a single CD-ROM—a technique pioneered by such organizations as the CD-ROM Users Group of Santa Barbara, Calif., and Quanta Press of St. Paul, Minn.

"There are probably 30 or so shareware discs out there, collections of stuff," says Bowers. "Some publishers try to attract the widest possible number of users by placing games, accounting programs, word processors and anything else onto a single CD-ROM. Others attempt to find a market niche by zeroing-in on communications soft-



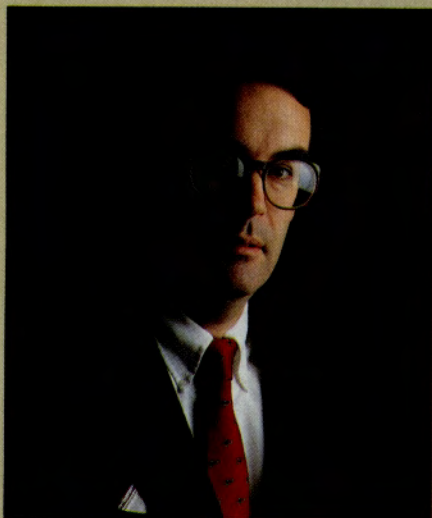
DOUG ROSS

ware, for example. It's still up in the air as to which approach is best. But then, the entire CD-ROM field is still pretty fluid."

In-depth information on CD-ROM mastering and distribution approaches can be found in Library

8, "CD-ROM Production," of the CD-ROM Forum (GO CDRUM). Budding shareware authors can receive hands-on help from the members of the ASP/Shareware Forum (GO ASPFORUM).

—JE



Faster graphics, and virtual CB, perhaps: Trevor

Advancing technology provides users the opportunity to do more with their computers than ever before, and to do it faster. CompuServe is working to keep online services moving in tandem, so members can make the most of the speed and power in the newest PCs and applications. If you've wondered how CompuServe is keeping up, Executive Vice President of Support Services and Chief Technical Officer Sandy Trevor here gives some answers about what's being done now or will be done in the near future, as well as some blue-sky thoughts on what the 21st century might hold.

Can I access CompuServe with the new 14,400-bps modems?

Currently our members cannot access the service at 14,400 bps because our modems are restricted to 9600 bps. We hope to be able to run at 14,400 bps in the future, but we must make

CompuServe in the Crystal Ball

significant changes to our network before that can happen. We do support those modems with V.32bis modulation standard. There are also 9600-bps V.32 modems with V.42 compression, which are advertised as running at 14,400 bps or higher. It's doubtful we'll support the V.42 compression scheme. It wouldn't speed up the downloading of most files, which are already compressed. When the download is in a ZIP or ARC or some other format, you're effectively getting a higher baud rate anyway.

Will I be able to download graphics more quickly?

We are looking at using a data-loss compression scheme for graphics. The current GIF format has no data loss. But with graphics you can take advantage of the fact that some parts of the image are more important to the human eye than others. If you're willing to tolerate some degradation in less-noticed parts of the image, then you can achieve much greater compression. One of these formats is JPEG, a decoder for which will probably be included in later versions of CompuServe Information Manager.

Will there be more online graphics like the weather maps?

We're working on that. Some of it is tied to how can we deliver it faster, waiting for JPEG to become prevalent and for the average user's baud rate to go up. We could have online airline seating charts, news photos to go with wire stories and high-quality images of items available in The Electronic Mall. There's a whole list of things we're hoping to do.

Will I see my service affected as more people log on at higher baud rates?

We have to add capacity to our network and our host computer physical plant to handle the additional demand. We hope people won't see diminished service. We're going to make a major investment in host computer facilities this year in anticipation of increased 9600-bps usage.

Will I be able to use more than one online service at a time?

Current versions of CIM let you download a file and read messages at the same time within a forum. Some fundamental changes in CompuServe's host software architecture will eventually permit members to use two services simultaneously. You could be running the Official Airline Guides Electronic Edition in one window and checking weather in a destination city in another, for example.

Does virtual reality hold any promise for online interaction?

Multiplayer games right now have the strongest possibilities for VR. You have a view of this virtual place, a playing field of some kind. That could just as easily be a 3-D view where you have your goggles and gloves and move around within the field. We could eventually have other people walk into the room, and the motions that they're completing on their VR sets would be sent through CompuServe and be visible to you. In the case of CB or conferencing, instead of typing, you'd be physically moving around the room and talking. Everything will come down to what the VR machines will cost, the data exchange rate needed to do all this, and if the reality is realistic enough to make it worth it. That will all improve in time.

ware and hardware companies.

Nick Arnett, the sysop of both forums, says the word "multimedia" is actually an umbrella term that covers many types of products and activities. "There is no such thing as a multimedia market," he claims. "It's a set of technologies that has a widespread impact on computing in general. Five years from now, all computers will have multimedia capabilities."

Multimedia consultant/producer Phil Shaddock used both the Multimedia Forum and the Multimedia Vendor Forum to research his new book, *Multimedia Creation: A Hands-on Workshop for Exploring Animation*, published in October by The Waite Group Press. He says multimedia is evolving "in a very organic fashion."

He describes a robot he saw at a trade show that acts as a roving salesperson. It sings James Brown's "I Feel Good" and prompts observers to speak into its microphone. It will entertain you and file your name, address and phone number in its data

bank. It uses a PC and a garden variety sound board. In other words, it's composed of off-the-shelf components, says Shaddock. "It's definitely a multimedia creation, although many people probably wouldn't think of it as such."

Mike Wilmer, sysop of the Photography Forum (GO PHOTOFORUM), notes that while most people associate multimedia with encyclopedias, atlases and other all-encompassing reference works, many future multimedia applications will be geared toward filling a specific niche. The forum has recently become a clearinghouse for information on Photo CD, Eastman Kodak's new technology for placing standard 35mm prints or slides onto a CD-ROM disc. The film-to-disc transfer process is handled by Kodak's extensive network of photo processors throughout the United States. The company also has developed products that allow personal computer users to view and manipulate images on their machines.

FEATURE

Wilmer notes that forum members learned about Kodak's Photo CD technology long before the general public was aware of the system. Forum regular Paul McAfee, a Kodak public relations executive, fed press releases and background and

technical information into the forum's libraries as soon as the material became available. He also fielded members' questions on the products and received a wide range of suggestions for improvements. "It's interactive support like this that makes learning about new technologies on CompuServe so much better than reading about them in a newspaper or magazine," says Wilmer.

Steve Ahlstrom, chief sysop of CompuServe's Amiga forums, including the multimedia-oriented Amiga Arts Forum (GO AMIGAARTS), notes that multimedia is also having a significant impact on the performing arts and popular culture. He points to the Video Toaster program, published by NewTek Inc. of Topeka, Kan., as an example



A Day in the Cyber Life, 2000 A.D.

The year 2000 (pronounce it "20 hundred") is closer than many of us think—a mere eight trips around the sun away. But considering the pace at which computers and consumer electronics are progressing, our daily lives will likely be quite different by the turn of the century.

To get an idea of the magnitude of the changes in store for us, think back eight years to the beginning of 1984. While we weren't exactly riding in horse-drawn buggies and shaving by candlelight, we did live without notebook PCs, VGA graphics, fax modems, 2400-bps modems and desktop publishing. The Macintosh was still vaporware and nearly all PC users operated first-generation 8086/88 systems. In fact, many computer users still stored data on audio-tape cassettes. We all listened to music on LPs, a "portable" VCR was about the same hefty size as a "portable" computer, and stereo TV had barely arrived.

So what will life in 2000 be like? Based on discussions with experts in several CompuServe forums, here's a thumbnail look at what an average day in a typical CompuServer's life could be like at the turn of the century:

6:45 a.m. — Bill's CD-equipped personal digital assistant (PDA) awakens him and his spouse, Jane, to the sweet sounds of a Mozart piano concerto. A quick look at the PDA's screen tells Bill

that a message from a client in Singapore is pending in the unit's mailbox directory. The message, a new product announcement, was received overnight via the PDA's built-in radio receiver. Jane gets travel confirmations for a business trip to Germany.

7:15 a.m. — After a quick shower and shave, Bill looks through his morning newspaper, which was delivered via CompuServe. This morning, he reads a hardcopy of *The Daily Bugle* printed overnight on his 1,000 dot-per-inch high-speed printer. On days when he has more time, Bill reads the newspaper electronically on his workstation. The online newspaper lets Bill press his pen onto photos and keywords to launch full-motion video of news events and detailed written analyses of key issues. Whether presented in hardcopy form or online, Bill's newspaper is pre-configured to emphasize the topics he's most interested in. Other family members can view their own pre-configured newspapers.

8:00 a.m. — Time to hit the road. Bill's new 2001 Millennium has all of the latest features, including a collision avoidance system and a "head up" video display that projects speed, road information and other data onto his windshield. The data appears to float just above the vehicle's hood ornament. Someday, cars will drive themselves—but not in 2000.

9:10 a.m. — At the office, Bill's boss tells him, via a picture mail window on his workstation, that a report on the history of cuff links is due next Thursday. No problem. Bill's a CompuServe member and his software, CompuServe Information Manager 12.0, will automatically scan through thousands of databases to retrieve all of the pertinent information on cuff links.

9:35 a.m. — While Bill is working on a spreadsheet, CIM 12.0 pops up a window on his workstation's display to tell him that it has completed the cuff links search. Bill suspends the spreadsheet to look at an index of the material collected by the software. A written report on cuff link history compiled by experts at the British Museum catches his eye, as do several cuff link documentaries produced by TV filmmakers in the United States and Canada. He downloads the text file and three video clips. High-speed integrated services digital network (ISDN) lines allow Bill's workstation to access CompuServe at speeds of up to 64,000 bits per second on two channels for a combined throughput of 128,000 bps—quite an advance from the early 1990s, when most members poked along on one line at 2400 bps.

9:45 a.m. — Using his presentation graphics software, Bill spends the next two hours integrating the text and video into a multimedia report that he'll electronically send to his boss.

of multimedia's influence on people who use computers outside the home or office. (NewTek can be found in the Amiga Vendor Forum, GO AMIGAVENTOR, Section 3, "NewTek.")

"The product is basically a high-powered, low-cost broadcast effects system. It's taken the industry by storm because it's about 10 times cheaper than anything else that's comparable," says Ahlstrom, who notes that a number of rock performers, including Todd Rundgren, have used the product to create music videos. "The Amiga more or less invented multimedia, and I'm sure its presence will be felt in a wide variety of fields in the years to come," he says.

While images are a crucial multimedia element, users and product developers are also beginning to pay close attention to the way multimedia systems sound. Jim Maki, chief sysop of CompuServe's MIDI Forums (GO MIDI), sees sound playing an increasingly significant role in multimedia technology in the years ahead.

"PC users have been visually oriented from the very beginning," he says. "Most people are accustomed to working with a silent PC. But as companies begin introducing computers that incorporate sound capabilities—like the latest Macs—users will start to take advantage of the sound capabilities that are available to them."

Maki points to Microsoft's Multimedia Beethoven, *The Ninth Symphony*, an interactive analysis of the composer's masterwork, as an example of a multimedia product that places sound on an equal footing with images. "As people become accustomed to listening to their computers, I suspect we'll see an entire spectrum of audio-oriented multimedia software arriving on the market," notes Maki.

Maki predicts that over the next couple of years, 16-bit, CD-quality sound will become the multimedia audio standard. "Users want the highest-quality sound possible on their PCs, just as they do on their stereos and TVs. CD-type sound will help to enhance business presentations as well as home and educational products."

Into the Future with Virtual Reality

If you've watched any TV news shows within the past year or so, you've no doubt seen reports on virtual reality systems. You probably know that by putting on a helmet/display, body sensors and a control glove or two, you can literally transport yourself into a computer-created world.

Many people familiar with virtual reality technology point out that current-generation PC simulation programs, such as Microsoft's venerable *Flight Simulator*, are actually a primitive form of virtual reality, since they

allow users to freely roam around an imaginary world.

But Mike Barrs, associate sysop of the Flight Simulator Forum (GO FSFORUM), disagrees. "I don't consider the current crop of flight simulators to be an example of virtual reality, because they display their 3-D worlds on a 2-D screen and they don't

provide a way to block out the external world," he says. "You don't feel you're 'inside' the simulation. To me, that's an

essential ingredient of virtual reality." Barrs notes that we probably won't see full-scale virtual reality in the home in the near future because CPU speeds will have to be at least twice as fast as they are now to process images for a true 3-D display, and the cost of the headset display is still prohibitive. He expects the CPU speeds to handle virtual reality on a \$2,000 desktop PC within a couple of years, but doesn't know how soon the cost of the headset display will drop to an affordable level. "When it does, I expect flight simulators will be one of the first virtual reality applications. They're so well suited for that environment, and flight simulator enthusiasts are more likely than other gamers to have powerful machines to run the programs on."

Alan Meckler, president of Meckler Corp., a Westport, Conn.-based company that sponsors virtual reality industry conferences, has a more liberal definition of what constitutes virtual reality. He says the field can be divided into three areas:

- ▶ Full immersion systems that provide first-person interaction within a computer-generated world via head-mounted stereoscopic video displays.
- ▶ Through-the-windows systems, such as *Flight Simulator*, that allow the user to view a 3-D world on a computer screen and that support the use of a control device such as a mouse or trackball.
- ▶ Video projected systems that provide a second-person experience in which the viewer stands outside the imaginary world and communicates with characters inside it (such as talking with a life-sized Abraham Lincoln about the problems he experienced as president).

"Virtual reality is no longer a chapter out of a Ray Bradbury novel," says Meckler. "It has left the academic environment and entered the business world."

CompuServe's most active group of virtual reality enthusiasts can be found in Section 13, "Virtual Reality," of the Computer Art Forum (GO COMART). Section leader John Eagan says the members are taking the technology very seriously. "Most of the members see unlimited opportunities in the field," he notes. "They're working on the software tools and hardware peripherals that will

FEATURE

11:45 a.m. — A voice suddenly fills the office. "Time for lunch with John Dexter at noon." The voice comes from Bill's PDA. It's reminding him of an appointment he entered into the device several weeks ago.

2:30 p.m. — The kids love playing virtual reality games, but for Bill the technology is a serious business tool. Today, he puts on the pair of goggle-like devices that are connected to his workstation and "walks around" the hotel his company is planning to use for its upcoming manager's conference. The guest rooms look attractive, the swimming pool inviting and the meeting rooms spacious. The catering facilities look professional, too. He jots a confirmation note on his PDA and presses the on-screen Send button with his pen to transmit the message to the hotel.

5:45 p.m. — Technology hasn't cured traffic jams, so Bill calls Jane's office on his cellular phone to tell her he'll be late. Unlike the cellular phones of a decade ago, Bill's unit is incorporated into his PDA, which fits into a shirt pocket. In a few weeks, Bill plans to buy a "wearable" Rolex PDA that will attach to his jacket with a Velcro strap. It's the latest fashion status symbol, right up there with the gold Waterman pen/stylus many high-powered executives now use to work their PDAs.

8:00 p.m. — Dinner's over. Time to watch some TV in the family room. There's nothing on the 1,000-channel optical fiber-based TV system the cable company installed a couple of years ago—only several hundred infomercials. Bill decides to order the pay-per-view Hofstra-Temple basketball game (one of hundreds of available games) off of his remote control. Jane works on an interactive CD-ROM German "class" to prepare for her upcoming business trip.

10:30 p.m. — Just as the final buzzer sounds and the Hofstra fans rise to their feet, CIM 12.0 pops up to alert Bill that he has CompuServe Mail waiting. Bill asks the software to display the message. It's from his boss. "The cuff links report is fantastic," says the note.

10:45 p.m. — And so to bed—at least until the sweet PDA-managed sounds of Mozart mark the start of another day in the 21st century.

bring virtual reality into homes and businesses in the years ahead." Among the members' creations are a PC-compatible control glove interface and software that allows GIF graphics to be used in virtual reality applications.

Eagan notes that the relatively modest capabilities of current-generation PCs and a lack of acceptable standards are impeding the members' work, but he thinks that development will pick up momentum in the months and years ahead. "We're sort of groping in the dark," he says. "But it's the very primitive state of the field that also makes it so exciting."

Autodesk Inc. also has recognized that standardization is necessary for the field to transform itself from a high-minded concept into a money-making endeavor. Earlier this year, the company linked up with Division Inc., a Redwood City, Calif.-based virtual reality systems developer, to create a platform- and peripheral-independent interface standard for virtual reality applications. The company's goal is to free developers from the need to assemble a unique computer system for each application that is developed.

"So far, virtual reality applications have been primarily limited to running on high-cost, specialized systems," says Jack Strange, marketing director for Autodesk's Multimedia Division.

"By working with a leading virtual reality systems supplier such as Division, we can provide a standard interface to virtual reality facilities. Our users will then be able to develop applications more easily and run them on a wide variety of computer platforms across the performance spectrum."

Jeffrey Pike, sysop of the Autodesk AutoCAD Forum (GO ACAD) and the Autodesk Software Forum (GO ASOFT), says that in addition to its fun and games aspects, virtual reality has some very down-to-earth business applications. "The marriage of a virtual interface to a computer-aided design program such as AutoCAD offers amazing potential in a variety of fields," he observes.

Pike notes that an architect will someday be able to use virtual reality software to "walk through" a building that exists only in computer memory. "He could open doors, ride elevators, arrange furniture inside a room and so on. If it turns out that an idea that looked good in planning fell short in execution, he could make changes without physically tearing things apart."

For investors, virtual reality could be used to quickly uncover undervalued stocks. In one possible system, the user would wander through a field of 3-D blocks, with blue blocks representing rising stocks and red ones falling issues. The view would allow the investor to instantly see how individual stocks are doing in comparison to their

competitors—an edge that can mean quick profits in today's fast-paced financial markets.

"Everything is pretty much up in the air now concerning virtual reality," says Pike. "People are still investigating the medium's potential. Part of the fun will be watching how developers use virtual reality to expand people's minds and solve everyday problems."

Pen Computers Kill the Keyboard

For people who hate the act of typing on a keyboard, the idea of a pen-oriented computer sounds like a dream come true. But Ron Luks, sysop of the Pen Technology Forum (GO PENFORUM), says most people have the wrong idea about pen computers. "Pen computing," he notes, "is far, far more than handwriting recognition."

Luks observes that many people come into the forum simply looking for a computer that can read their handwriting. "That's a great misconception," he says, noting that while most current pen computers can read users' block printing, the ability to handle cursive script may not become generally

Virtual reality is no longer a chapter out of a Ray Bradbury novel. It has left the academic environment and entered the business world.

available for many years. "If a pharmacist can't read a doctor's prescription, the smartest supercomputer in the world isn't going to be able to decipher those same scrawls," he says. "True handwriting recognition may not arrive before true speech recognition. The challenges are at least as formidable and complex."

Luks believes that pen technology's immediate future lies in its use as a pointing and alternate input device. "Just as a mouse is easier and more efficient than a keyboard for inputting commands, a pen is easier and more efficient than a mouse. If you've got a database or a checklist, it's easier to check boxes with a pen than to type 'yes, no, yes, no,' with a keyboard or to roll and click a mouse," he says.

Although pen computers are already used by insurance claims representatives, package deliverers, meter readers and other field workers, Luks also sees many potential pen applications in the home and office. "Imagine using CompuServe with pen software," he says. "You could select stories from a news menu, for example, merely by touching the story names with a pen. I think, in the years to come, we'll see programs of all types begin to accept pen input, just the way most now offer mouse support."

Pen Technology Forum regular Randy Parker, president of Notes Systems, a Boston-based pen computing consulting

firm, says prospective pen PC users should pay attention to the operating system battle currently going on between Microsoft Corp.'s Windows for Pen Computing and Go Corp.'s PenPoint. "One of these systems is going to come out on top," he says. "The winner is going to become the VHS of the industry; the loser will become the pen operating system equivalent of Beta. The forum is a good way to keep up-to-date on the OS battle as well as new applications and technologies."

Your Own Personal Digital Assistant

For decades, people have dreamed about owning and using the ultimate notepad—a device that would not only take down its user's scribbled thoughts, but also act as a personal assistant or companion, providing pertinent information on a variety of topics (such as phone numbers and appointment dates and times) and enabling users to exchange information with other people worldwide.

At first, the notebook computer seemed to fit the bill. But before long, many users found that lugging a computer—even one that measured a mere 8.5 by 11

inches and weighed only 6 or 7 pounds—far too cumbersome a task. On the other hand, palm-sized electronic organizers such as Casio's B.O.S.S. and Sharp's Wizard were the right size, but provided too little

computing and communications power.

The personal companion field remained an elusive dream until last May, when Apple Computer unveiled its Newton personal digital assistant (PDA), which it developed with the help of Japan's Sharp Corp. Like most pen computers, Newton has no keyboard and uses a pen for data input and pointing. But the palm-sized system is designed to be easier to carry and more affordable than a standard pen PC (it will sell in the \$500-\$700 range).

Unlike portable computers, PDAs such as Newton are designed as tightly focused, limited-purpose machines. For example, the first Newton model, which is slated to ship in early 1993, will primarily allow quick note taking; schematic sketching; simple letter writing; and performing basic personal-information-management functions such as keeping address-book, calendar and schedule databases. But as the field matures, most industry observers expect a wide range of additional capabilities will be added.

"We were one of the first places people could learn about Newton," says Neil Shapiro, chief sysop of CompuServe's Macintosh forums. "We've set up a special section in the Macintosh Systems Forum (GO MACSYS, Section 16, 'Newton and PDAs') that allows members to track the latest developments in the field."

Shapiro notes that the immediate future

of the personal companion field hinges on how people will react to Newton. "There are certainly a lot of people looking forward to it, and it would be a big letdown if the unit didn't live up to its advance billing," he says. Shapiro believes that a successful Newton could give the entire computer industry a shot in the arm. "I think it will widen the field. It will attract people who own computers as well as those who don't. It could become a very popular consumer-level device."

Randy Parker thinks PDA users will benefit from the use of a new technology called

"smart paper." "This is a way of making sense out of users' random scribbles," he says. For example, if a user is taking notes at a meeting, smart paper could automatically link highlighted topics to an index file. At a later date, the user could just point to the appropriate word in the index and automatically jump to the relevant part of the notes. Parker says such embedded intelligence could also be used to perform real-time spell-checking and instant mathematical calculations.

Because Apple assumes that PDA users will want to share their work or information,

Newton will offer several connectivity features, including an interface for connecting a modem. For transferring information among PDAs, Newton will provide infrared point-to-point communications, the same technology used by a TV's remote control.

But many industry experts feel that PDAs will finally come into their own once they are equipped with built-in radio transmitters and receivers. Such technology will enable users to swap data and voice messages from virtually any location without tying into a phone line. "This type of capability will probably appear at some point, but

Forums for the Technological Revolutionary

Here's a look at the key forums that will help you keep in touch with the ongoing technology revolution:

MULTIMEDIA

AMIGA ARTS FORUM (GO AMIGAARTS)

Section 10, "Multimedia," is where you can get information on Commodore's CDTV multimedia system.

CD-ROM FORUM (GO CDROM)

The media is the message in the CD-ROM Forum, where members discuss the technology behind those little rainbow-tinged discs that bring multimedia to life.

IBM HARDWARE FORUM (GO IBMHW)

The members in this forum will help you put together the highest quality PC-compatible multimedia system at the lowest price.

IBM SOFTWARE APPLICATIONS FORUM

(GO IBMAPP)

Use this forum to get recommendations on PC-compatible multimedia applications.

MACINTOSH APPLICATIONS FORUM

(GO MACAP)

Members in Section 8, "Multimedia," can help you find the Macintosh-compatible multimedia applications that fit your exact needs.

MIDI/MUSIC FORUM (GO MIDI)

This forum is devoted to the use of the Musical Instrument Digital Interface. MIDI Vendor Forums (GO MIDIAVEN and MIDIBVEN) provide support from vendors of MIDI technology.

MACINTOSH SYSTEMS FORUM (GO MACSYS)

If you're interested in the world of Macintosh multimedia, visit this forum.

MACROMEDIA FORUM (GO MACROMEDIA)

Software support for some of the industry's leading multimedia authoring and development tools is available here.

MULTIMEDIA FORUM (GO MULTIMEDIA)

Here multimedia developers and users exchange information about the new personal computers that use audio/visual information—sound, video, animation, music, hypertext and other integrated formats.

MULTIMEDIA VENDOR FORUM

(GO MULTIVEN)

Home to the industry's leading multimedia hardware and software vendors, this is a place to get key information about specific technologies and products.

PHOTOGRAPHY FORUM (GO PHOTOFORUM)

Learn all about Kodak's new Photo CD system and other home- and business-oriented imaging technologies in Section 14, "Digital Imaging."

VIRTUAL REALITY

AUTODESK SOFTWARE FORUM (GO ASOFT)

Autodesk Inc. is working on a virtual reality standard that will make the technology more accessible to users and developers. Visit the company's forum to learn about the latest developments in this area.

COMPUTER ART FORUM (GO COMART)

Section 13, "Virtual Reality," is where virtual reality experts and novices meet to discuss the field's latest developments. Expect to learn, exchange ideas and perhaps even work on a virtual reality project with other members.

ELECTRONIC FRONTIER FOUNDATION FORUM (GO EFFSIG)

Here is a forum full of visionaries who think the year 2000 is yesterday's news. Join its members for discussions about the social implications of virtual reality and other cutting-edge technologies.

GAMERS FORUM (GO GAMERS)

Game products are leading the way in virtual reality technology, and Gamers Forum members are working on systems that will truly live up to the old advertising slogan, "Puts you in the middle of the action."

PEN COMPUTERS

IBM THINKPAD FORUM (GO THINKPAD)

Visit this forum to learn all about IBM's first pen-based PC.

PEN TECHNOLOGY FORUM (GO PENFORUM)

You can use your mouse and keyboard to move around this forum, but expect the resident members to tell you that life is much easier with a pen. The forum is home to many of the pen computer industry's leading hardware and software companies, including Slate Corp., GRiD Systems Inc., Communication Intelligence Corp., *Pen Magazine* and GO Corp.

OTHER DEVELOPMENTS

CONSUMER ELECTRONIC FORUM

(GO CEFORUM)

Here the Television Age meets the Computer Age. It's the place to visit if you're interested in mobile offices, new-age telephones, PDAs and other futuristic consumer electronics products.

HAMNET FORUM (GO HAMNET)

This is a clearinghouse for new computer radio technologies that many commercial outfits haven't even yet begun investigating.

MACINTOSH SYSTEMS FORUM (GO MACSYS)

This is the place to get the latest news on Apple Computer's new Newton personal digital assistant. Check out Section 16, "Newton and PDAs."

TELECOMMUNICATIONS FORUM (GO TELECO)

You can get the latest word on a wide range of new radio systems here. Many of the forum's members work for telecommunications companies and have insights on new technologies.

just when is anybody's guess," says Shapiro.

Motorola Inc. and Ericsson Inc. have already introduced tiny radios that connect notebook PCs to electronic mail and phone systems. Although the radios are expensive (about \$1,800) and offer only limited connectivity capabilities, the companies say the initial response from users has been positive. Several other firms are working on similar projects.

Motorola also is developing a \$3.2 billion system called Iridium, which will connect any two mobile phones in the world. The system, which could be extended to accom-

modate PDAs, will use a network of 77 satellites circling the earth. Iridium is set to begin operation in 1997, around the time PDAs should be hitting their stride.

The world's largest computer company, IBM, is also working on PDA technology, although it has been much more reticent in discussing its future plans than Apple. IBM already sells a portable computer called PCradio that can transmit data and voice messages over wireless networks. The computer giant's first pen-based PC, the ThinkPad, has its own CompuServe forum (GO THINKPAD).

FEATURE

Just a Dream Away

At the 1964-65 World's Fair, the General Electric pavilion featured the "Carousel of Progress," with the recorded voice of Bing Crosby crooning, "Tomorrow's just a dream away." Of course, Bing could only dream—he wasn't able to visit a CompuServe forum to chat with the people working on tomorrow's technologies. You see, in addition to missing out on the personal computer, the mid-1960s futurists also failed to forecast the arrival of computer information services. Yes indeed, predicting the future is a tricky business. ◀

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See It Now: Multimedia, Virtual Reality and Pen-Based Uploads

MULTIMEDIA

PC Multimedia Demo—A self-extracting, two-minute demo of PC multimedia techniques. Multimedia Forum (GO MULTIMEDIA), Library 1, "General Information," MULTIM.EXE (488,448 bytes).

Multimedia News—A HyperCard stack containing more than 360 multimedia news items. Multimedia Forum, Library 1, NEWB24.SIT (291,132 bytes).

CD-I Titles—A text file of available Philips CD-I titles. Multimedia Forum, Library 1, CDITTL.TXT (3,971 bytes).

CD-ROM Questions—A summary of common questions about CD-ROMs. Multimedia Forum, Library 1, CDRMF.ZIP (14,189 bytes).

A Manual of Style—A style book for people who develop multimedia applications. It offers guidelines on structure, navigation, screen layout and other key software features. Macintosh Hypertext Forum (GO APPHYPER), Library 9, "HyperMagazines," STYLAC.SIT (18,944 bytes).

Multimedia Workshop—A program that lets you create your own disk-based catalogs, training material, technical presentations and other multimedia products. IBM Applications Forum (GO IBMAPP), Library 1, "Text Editors," MULTILZH (339,836 bytes).

Multimedia Valentine's Day Card—A card demo that you can customize and send. IBM New Users Forum (GO IBMNEW), Library 5, "Fun Graphics," VALEN.ZIP (110,848 bytes).

Spinning Globe—A self-extracting, self-running MacroMind Director file of a spinning globe. Macintosh Application Forum (GO MACAP), Library 8, "Multimedia," GLOBE.SEA (498,560 bytes).

Video Toaster Demo—Scripts for NewTek's Video Toaster demo. Amiga Arts Forum (GO AMIGAARTS), Library 16, "Multimedia," TOASTM.LZH (2,263 bytes).

Manufacturers List—A listing of MIDI-related instrument, software and hardware vendors. MIDI/Music Forum (GO MIDIFORUM), Library 2, "MIDI Product Guide," MFGRS.ZIP (10,880 bytes).

What Does MIDI Do?—An archived message thread that covers MIDI fundamentals. MIDI/Music Forum, Library 3, "MIDI Basics," NUMIDI.TXT (10,239 bytes).

MIDI Glossary—Introduction to many of the terms used in MIDI computing. MIDI/Music Forum, Library 3, GLOS21.ZIP (16,500 bytes).

CD-ROM Discussion—An archived message thread in which members discuss CD-ROM players and available discs. MIDI/Music Forum, Library 3, CD-ROM.TXT (3,952 bytes).

How to Open a Home Recording Studio—A look at the challenges involved in creating a home recording studio. MIDI/Music Forum, Library 16, "Recording/Audio," STUDIO.ZIP (28,160 bytes).

VIRTUAL REALITY

Rubber Room—A virtual reality environment in which cubes bounce off the walls and each other in 3-D space. IBM New Users Forum (GO IBMNEW), Library 5, "Fun Graphics," RUBROO.ZIP (35,382 bytes).

3-D House2—3-D model of a CompuServe member's home in Valley Center, Calif. IBM New Users Forum, Library 6, "Fun & Games," 3DHOUS.ZIP (48,615 bytes).

Virtual Reality Conference—Computer Art Forum members discuss the latest developments in virtual reality. Computer Art Forum (GO COMART), Library 13, "Virtual Reality," VRCO36.ZIP (19,955 bytes).

The Universe of M.C. Escher—Description of a virtual reality world modeled after M.C. Escher. Computer Art Forum, Library 13, ESCHER.TXT (2,884 bytes).

PowerGlove Serial Interface Messages—Computer Art Forum members discuss a technique for adapting a Nintendo PowerGlove to microcomputer use. Computer Art Forum, Library 13, PGSI02.TXT (48,027 bytes).

OverTime—Short story about virtual reality and its impact on an architectural firm. Autodesk AutoCAD Forum (GO ACAD), Library 14, "Autodesk/General," OVERTI.ZIP (40,090 bytes).

PEN COMPUTERS/PERSONAL TECHNOLOGY

Pen Article—Mobile Office magazine article on pen computers. Consumer Electronics Forum (GO CEFORUM), Library 14, "Mobile Office," PEN.TXT (9,117 bytes).

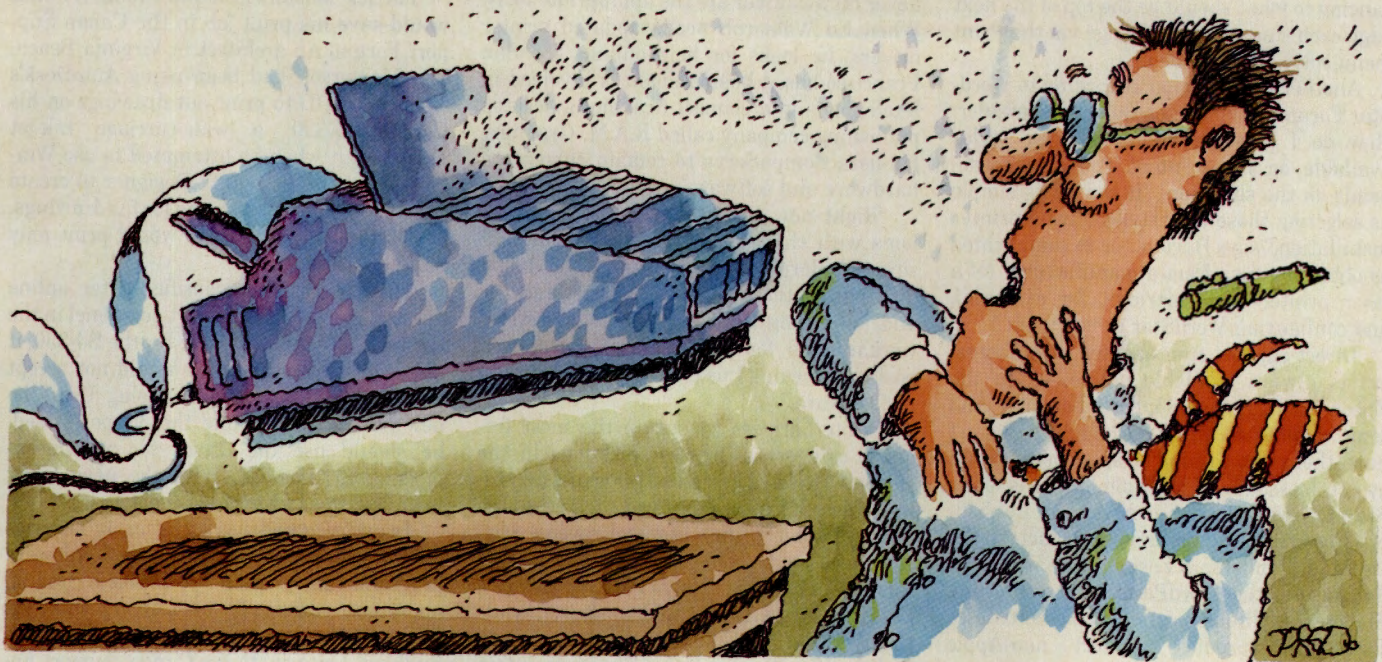
Newton Press Release—The Apple Computer press release announcing the company's first personal digital assistant (PDA). Macintosh Systems Forum (GO MACSYS), Library 12, "Other Hardware," NEWTON.TXT (7,967 bytes).

Newton Photo—GIF image of Newton from Apple's press kit. Pen Technology Forum (GO PENFORUM), Library 16, "News/Reviews/Shows," NEWT.GIF (113,369 bytes).

Ticket—A demo application for Windows that shows how a parking violations officer might use a pen-based device. Pen Technology Forum, Library 15, "Demo Programs," TICKET.ZIP (9,866 bytes).

Train—A demo application for Windows that shows how a train conductor might use a pen-based device. Pen Technology Forum, Library 15, TRAIN.ZIP (12,900 bytes).

Information Summary—A summary of information about sending computer data over a cellular phone system. Telecommunications Forum (GO TELECO), Library 9, "Cellular/Wireless," DATA.TXT (4,775 bytes).



JARED LEE

Printer of Our Discontent

COMPUTING SERVICES

CM's Computing Services Credo:

For those who call out for advice, answers, even mere companionship in a discomfiting computer world, we throw you the online rope that connects to the main. No man is an island unto himself. Herein the Control-G tolls for thee.

▼
New Tricks for an Older Printer

▼
Printer Vendors, p. 22

▼
In the Land of OzCIS, p. 24

▼
Computer Associates, p. 26

► **Is getting it on paper making you crazy? Online software solutions can leave the right impression.**

As we upgrade computers and move to more powerful systems software and support packages, our printers are often the constant, the peripheral we hang onto and use with our next system. As our needs change, our printers need to "learn" new tricks—from sideways printing to envelopes and labels to multiple fonts for laser typography.

What differentiates online support from any other is that it's open-ended. Call your printer manufacturer and you're talking to one company. But post a message in a CompuServe forum about a printing problem, and you may get answers from other users of the same printer, people having similar problems with their software, or third-party vendors who've seen the problem before and have a product to solve it. The complicated interplay between computer, software and printer makes such cross-pollination a necessity in fixing many glitches.

For new users, the forums provide a great place to learn the ropes. Rookie LaserJet jockies can find help in the Hewlett-Packard Peripherals Forum. A

common complaint heard there is, "I sent my document to the printer but nothing came out." Bob Milton, a regular forum contributor, says the answer is to send the printer a form feed, via software or from the front panel of the LaserJet printer.

A front panel fix also solves the problem of seemingly random characters generated by a Print Screen command. These appear because LaserJets are shipped configured to print international characters instead of the IBM screen set. It doesn't take long to make the necessary setup changes.

"These are probably the most common questions, and are simple to answer," says Milton. Others are tougher. For example, one user had created his own soft font for Hebrew characters. But, on his LaserJet II, one of the characters always printed as a blank space. The same font worked perfectly on a LaserJet III. Another forum regular tracked down the solution: An item in the font header that the LaserJet III ignores was set incorrectly for a LaserJet II.

Printer problems are complicated by the wide variety of hardware on the market, ranging from simple dot matrix machines to high-end PostScript-driven laser printers. Yet many problems turn out to be software snafus rather than equipment malfunctions. In the WordStar Forum, one common ques-

tion involves form feeds, as users try to print mailing labels only to find the printer advancing to what should be the top of the next page each time. A quick change via the Print menu solves that problem.

Another key question, according to WordStar Forum Sysop James Burton, is broader: How do I print in all of the type styles available on my printer? The answer depends on the situation. "It can be as simple as selecting those type styles during printer installation," says Burton, "or as complicated as obtaining files from a manufacturer (of a laser printer font cartridge, for example), and configuring WordStar to use them."

Direct support from printer manufacturers is always available online, as in the Epson and Canon Support Forums. And some commercial firms, although they don't have their own forums or sections, keep an eye on messages in multiple locations. Jake Star, for example, supports Atech's Publisher's PowerPak and FastFonts products in the Desktop Publishing Forum, the WordStar Forum and the WordPerfect Users Forum. Steven Gully helps users of GDT Softworks' PowerPrint product connect non-Apple printers to Macintoshes by monitoring a number of Macintosh forums.

With that range of support to draw from (see "Online Printing Vendors," p. 22), help is never far away, nor are the appropriate tools. When Ed Waldorff needs updated printer drivers, he looks for help online. The San Francisco-based businessman is involved in a telephone interconnect firm and a desktop publishing company called R.A.M. Graphics. He uses CompuServe to remain current on hardware and software.

"Right now I'm trying to sort out problems with the Windows PostScript driver," says Waldorff. "I downloaded the latest driver from the Microsoft Software Library and am trying to evaluate it now. Several workarounds for the problems have been posted in forums I use, with specific slant to my software."

Printer drivers constitute the most frequent category of printer questions in the Hewlett-Packard Peripherals Forum, according to Sysop Ted Dickens. And a scan through this and other forums' libraries reveals drivers for a wide collection of printers and software. The Amiga Users Forum provides a key driver resource for that computer, while the WordPerfect Customer Support Forum and the WordPerfect Users Forum maintain extensive driver collections. Similar bounty

is to be found in the Epson and Canon Support Forums.

Patrick Masterson found the driver that would save his print job in the Canon Support Forum. An architect in Virginia Beach, Va., Masterson had been using AutoDesk's Generic CADD to print out drawings on his Canon BJ-330, a wide-carriage ink-jet printer. But when he attempted to use Windows 3.1 and Micrografix Designer to create title blocks and cover sheets for his drawings, he found that the printer would print only half of each page.

The culprit was identified after online discussions with the support personnel in the forum. The Windows driver for the BJ-330, it seemed, had a glitch, and would not accept the page size Masterson was using. Until the new driver was available, the sysops advised, he should use the driver for a different model, the BJ-130E. With the new driver installed, the architect was back in business.

In addition to drivers, the forum libraries offer a wealth of shareware and freeware programs for printers. A problem finding appropriate drivers for his Canon printer led Paul A. Cote, a computer consultant in Sudbury, Ontario, to the Canon Support Forum's libraries, where he learned about Suc-

Help in Black and White: Printing Uploads

CompuServe's libraries are loaded with files that can help you and your printer get along. Here's a sampling:

Amiga Print Spooler—Use PSPOOL to direct all printer data to disk; once spooling is complete, the job goes out to the printer, and other jobs can begin spooling. Amiga Users Forum (GO AMIGAUSER), Library 8, "Printer Utilities," PSPOOL.LZH (21,434 bytes).

Control Your Canon—A memory-resident program that allows you to send commands to a Canon BJ-10E printer. Also works for HP LaserJets, DeskJets and Epson printers. Shareware. Canon Support Forum (GO CAN-10), Library 3, "Bubble Jet Printers," PRINTD.EXE (66,992 bytes).

Epson Printer Drivers—Contains LQ-570, LQ-870, LQ-1070 and LQ-1170 drivers for Microsoft Word 5.5, along with the WordStar printer database for the Epson LQ-570 and an LQ-570 driver for WordPerfect 5.1. Epson Forum (GO EPSON), Library 5, "Matrix Printers," LQ570D.EXE (52,096 bytes).

Print Envelopes from HP Printers—Allows you to print envelopes from any HP-compatible laser printer. Also can print Postnet bar codes. Shareware. Hewlett-Packard Peripherals Forum (GO HPPER),

Library 4, "LaserJet," ENVLJ.ZIP (94,014 bytes).

Windows and HPs—Answers to common questions about Microsoft Windows 3.1 and HP PostScript products. Hewlett-Packard Peripherals Forum (GO HPPER), Library 4, WIN31.PS (16,905 bytes).

IBM Printer Configuration—Printer-BUDDY is a utility that lets you configure any type of printer using its built-in commands and formatting codes. Customizable. Shareware. IBM Hardware Forum (GO IBMHW), Library 2, "Printer Utils," PB203.EXE (48,075 bytes).

IBM Print Spooler—Print spooler lets you print in the background while you use your computer for other things. Spools to disk, RAMdisk, expanded, extended or HMA memory. Shareware. IBM Systems/Utilities Forum (GO IBMSYS), Library 3, "General Utils," DMPLZH.EXE (60,683 bytes).

Font Management—The Printer's Apprentice allows for scalable font management, browsing and printing. Works with Windows 3.x and has been tested with more than 250 fonts. Shareware. LDC Word Processing Forum (GO LOTUSWP), Library 7, "Shareware/Utilities," PA50.ZIP (96,755 bytes).

Managing Errors—Utility prints out the relevant PostScript error message whenever a laser printer can't image a page. Mac Systems Forum (GO MACSYS), Library 10, "Printers/Output," EHANDL.SIT (1,920 bytes).

Windows 3.1 Drivers—List of all items in the Microsoft Windows Driver Library. Microsoft Software Library (GO MSL), WDL.TXT.

NeXT Drivers—Printer driver package includes support for numerous non-PostScript printers, including Epson, Canon and HP LaserJets. NeXT Forum (GO NEXT), Library 5, "Applications," DOTS-TAR (131,072 bytes).

PostScript Soft Font Downloader—PostScript soft font downloader is menu-driven and supports Type 1, Type 3 and Bitstream QEM fonts. Batch and command-line downloads are available. Ventura Forum (GO VENTURA), Library 8, "Printers/Monitors," PSX200.EXE (69,153 bytes).

LaserJet III Fonts—Package containing eight scalable display soft fonts for the HP LaserJet III line of printers, along with printer drivers for Microsoft Word 5.X and WordPerfect 5.1. WordPerfect Users Forum (GO WPUSER), Library 2, "Printers/Fonts DOS," LJ3FNT.ZIP (237,795 bytes).

cinct Systems Inc.'s SizeIt. The program, which Cote went on to buy, gave him new flexibility in using his Canon with a variety of programs and fonts.

In the DOS world, computers are supposed to be getting easier to use, thanks to such programs as Microsoft Windows. But drop into forums all over CompuServe and you'll find printing questions involving Windows. In the Silicon Beach/Aldus Forum, for example, Moe Rubenzahl and his fellow sysops are frequently asked why PostScript files come out upside down when printing in landscape mode under Windows 3.1. The answer involves how Microsoft rotates text when printing landscape pages, but what's important is the workaround, a simple one-line change to the WIN.INI file.

In fact, the Silicon Beach/Aldus Forum is a virtual clinic in smoothing out printer operations under Aldus PageMaker and Windows. According to John Cornicello, who is a sysop there as well as in the Desktop Publishing Forum, the traffic in printer questions is steady. "I spend a good amount of time every day providing help on how to get PostScript printers up and running in Windows," he says, "especially in the area of fonts and undocumented time-out settings."

Problems with printing over a network can be among the thorniest to solve. When Mike Katz, an environmental specialist for Blymyer Engineers in Alameda, Calif., tried to print from a workstation running AutoCAD through a Novell network to a Hewlett-Packard LaserJet III printer, he found his drawings were being split into two pages. Katz brought the situation to the attention of the Autodesk AutoCAD Forum. He was directed to a driver in the library that made his LaserJet act like a plotter. "It has worked like a charm," Katz says. "Our 8.5-by-11-inch drawings are much clearer than if they had been printed on our plotter, and we haven't had any problems to date."

Michael Gerard also tapped the libraries when he needed to print out a document in the Cyrillic alphabet. An independent manufacturer's representative in Cleveland, Ohio, Gerard had a Russian friend who needed a letter, in both English and Russian, stating that Gerard would be responsible for him financially while he was visiting the United States. Without the letter, he could not receive his exit visa from Russia, or his entry visa to the United States. The English part was easy, but what about Russian fonts for Gerard's Amiga computer?

First, Gerard checked the Desktop Publishing Forum, where he downloaded a PostScript font; a pass through the HP Peripherals Forum also netted a Cyrillic soft font. In the Amiga Users Forum, he found a program that allowed him to download the soft font from his Amiga to an HP LaserJet III printer. "The letter turned out looking better than the official form from the Rus-

sian government," says Gerard.

Of course, not all printer problems are so readily resolved. Finding solutions is a cooperative process. It's the nature of the online medium that a wide and talented community of users will go to work on printer support. Think of the forums as a knowledge bank,

there to be tapped when needed, a resource enriched by the experiences of like-minded users worldwide.

Paul A. Gilster is a computer columnist and technology writer based in Raleigh, N.C. He specializes in the application of new technologies to business.



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Online Printing Vendors

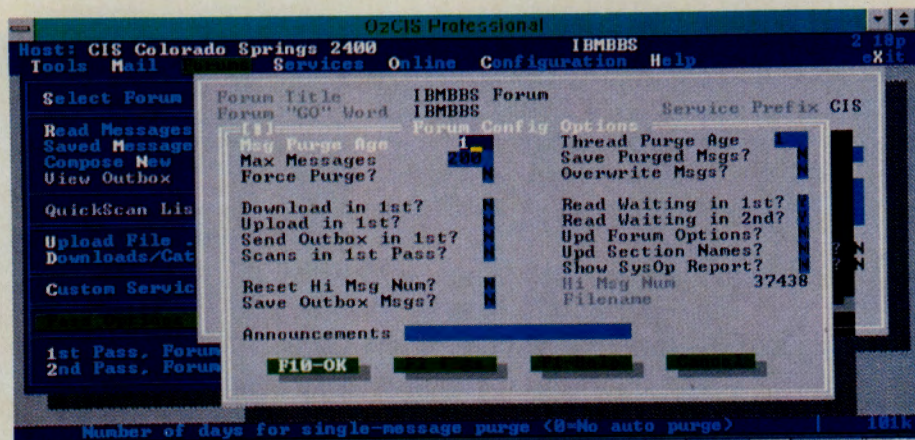
There's no one place to look for printer support; files abound throughout CompuServe's libraries. But here are some of the major sources for everything from printer drivers to desktop publishing fonts.

MANUFACTURER	PRODUCT	WHERE TO GET SUPPORT
Adobe Systems	PostScript, Illustrator, Adobe Type Manager, Adobe Type Set	Adobe Forum (GO ADOBE). See especially Sec. and Lib. 4, "PostScript," and Sec. and Lib. 9, "Printers/Typesetter"
Aldus Corp.	PageMaker, FreeHand, Persuasion	Silicon Beach/Aldus Forum (GO SBSALD), the CustomerFirst Online Product Support Forum (GO ALD-23 for information), also available by subscription, is used by Aldus technicians.
Apple Computer	ImageWriter II, LaserWriter IIF, LaserWriter IIG, Personal LaserWriter LS, Personal LaserWriter NT, Personal LaserWriter NTR	Macintosh System Software Forum (GO MACSYS), Sec. and Lib. 10, "Printers/Output"
Atari	1040STE, ABC286/30, ABC386DXII, ABCN-3865SX, ABCSXII, Stacy Laptop	Atari Productivity Forum (GO ATARIPRO), Sec. 6, "Hardware Specific," and Lib. 9, "Printer/Fonts/Icons"
Canon	Bubble-Jet Printer BJ-10ex, Bupple-Jet Printer BJ-300, Bubble-Jet Printer BJ-330, Color Bubble-Jet Printer BJC-800, Color Bupple-Jet Printer BJC-820, LBP-4 LITE, LBP-4 Plus, LBP-8 Mark III Plus	Canon Support Forum (GO CAN-10), Sec. 2, "Laser Printers"; Sec. and Lib. 3, "Bubble Jet Printers"; Sec. 6, "Other Printers"; Sec. 14, "Color Printers." Lib. 1, "LBPs"; Lib. 4, "Other Printers"; Lib. 8, "Printer Drivers"; and Lib. 13, "Color Printers"
Commodore Business Machines	Amiga 2000 and 3000 series computers	Amiga Users Forum (GO AMIGAUSER). Check Lib. 8, "Printer Utilities" and Lib. 10, "Printer Drivers" for utilities.
Corel Corp.	Corel ArtShow, CorelDRAW! 3.0, CorelDRAW! for Windows 3.0	Corel Forum (GO COREL)
Custom Applications	Freedom of Press Forum 3.01, Freedom of Press for Windows, Freedom of Press Light 3.0.3, Freedom of Press Professional 3.0.2A, Freedom of Press Professional for Windows	DTP Vendor Forum (GO DTPVENDOR), Sec. and Lib. 6, "Custom Applications"
Epson	EPL-7000 and EPL-7500 laser printers. DFX-8000, FX-1050, FX-850, LX-810, LQ-1010, LQ-1050, LQ-200, LQ-2550, LQ-510, LQ-850, LQ-860 dot matrix printers.	Epson Forum (GO EPSON), Sec. and Lib. 5, "Matrix Printers"; Sec. and Lib. 6, "Other Printers"
GCC Technologies	BLP II, BLP IIS, GLP Elite	Mac B Vendor Forum (GO MACBVEN), Sec. and Lib. 2, "GCC Technologies"

MANUFACTURER	PRODUCT
Hewlett-Packard	DeskJet 500, PaintJet, PaintJet XL, LaserJet IIP, LaserJet III, LaserJet IIID, LaserJet IIIP, LaserJet IIISi
Hyphen	Hyphen Software RIP (Raster Image Processor); Imaging equipment and integrated software systems for the international printing market
Infinite Technologies	Products include MhsQ!, a gateway interface to Novell Netware print queues
Korenthal Associates	4PRINT, a laser printer utility
LaserMaster Technologies Corp.	LaserMaster 1000 (TrueTech), LaserMaster 1000KX, LaserMaster 1200 (TrueTech), LaserMaster 1200KX, LaserMaster 400, LaserMaster 400XL, LaserMaster 800 TurboRes, LaserMaster 800/4
Lotus Development Corp.	Ami Pro for Windows, Lotus Symphony, Lotus Write for Windows, Lotus Manuscript, Samna Word
Microsoft Corp.	A searchable database of more than 20,000 documents about Microsoft products from Windows to Word Files on various Microsoft products covered in the Microsoft Knowledge Base Word for DOS, Word for Windows, Forum Word for the Macintosh, Word for OS/2, Microsoft Works
NeXT Computer	400 DPI Laser, NeXT Color Printer
Novell	NetWare, NetWare 3270, NetWare 386, NetWare 5250, NetWare for Macintosh, NetWare for Unix, NetWare for VMS

WHERE TO GET SUPPORT	MANUFACTURER	PRODUCT	WHERE TO GET SUPPORT
Hewlett-Packard Peripherals Forum (GO HPPER), Sec. and Lib. 4, "LaserJet." Also see Sec. and Lib. 3, "PCL Utilities"; Sec. and Lib. 5, "DeskJet"; Sec. and Lib. 6, "PaintJet"; and Sec. and Lib. 9, "HPs for Apples."	Pacific Data Products	PacificPage, PacificPage II, PacificPage II/XL, Complete Font Library, and other accessories for HP and IBM laser printers and compatibles	PC Vendor D Forum (GO PCVEND), Sec. and Lib. 14, "Pacific Data Products"
DTP Vendor Forum (GO DTPVENDOR), Sec. and Lib. 7, "Hyphen"	Practical Peripherals	Microbuffer P/Link, Microbuffer Universal 16, Microbuffer/Mini Series	Practical Peripherals Forum (GO PPIFORUM), Sec. 7, "Printer Buffers Q&A" and Lib. 4, "Print Buffer Files"
PC Vendor F Forum (GO PCVENF), Sec. and Lib. 13, "Infinite Tech"	QMS Inc.	QMS-PS410, QMS-PS810, QMS-PS815, QMS-PS820, QMS-PS825, QMS ColorScript 100 Model 30i, QMS ColorScript 100 Model 30si	DTP Vendor Forum (GO QMSPRINT), Sec. and Lib. 3, "QMS, Inc."
PC Vendor B Forum (GO PCVENB), Sec. and Lib. 3, "Korenthal Assoc."	Various	Various	Desktop Publishing Forum (GO DTPFORUM). See especially Sec. 12, "Type & Typography," and Sec. 13, "Printing & Prepress." The libraries contain numerous fonts and utilities.
DTP Vendor Forum (GO DTPVENDOR), Lib. 13, "Peripheral Vendors"		IBM PC and compatible equipment	IBM Hardware Forum (GO IBMHW), Sec. and Lib. 2, "Printers/Utils." Problems and solutions for printing from a wide range of equipment and software are discussed.
LDC Word Processing Forum (GO LOTUSWP)			PCMagNet Software and Utility Library (GO ZNT:SOFTLIB). Printer utilities, drivers and help files. Programs from <i>PC Magazine</i> , <i>PC/Computing</i> , <i>PC Week</i> , as well as shareware and freeware. Tips and Tricks from <i>PC/Computing</i> (GO ZNT:TNT). A wide variety of software and system tips are included here, collected from <i>PC/Computing</i> .
Microsoft Knowledge Base (GO MSKB). Numerous printer drivers are available, including the Windows Driver Library.	Ventura	Ventura Publisher	Ventura Software Forum (GO VENTURA), Sec. and Lib. 8, "Printers/ Monitors"
Microsoft Software Library (GO MSL)	WordPerfect Corp.	WordPerfect, WordPerfect for Windows, WordPerfect Office	WordPerfect Users Forum (GO WPUSER), Sec. and Lib. 2, "Printers/Fonts DOS"; and Sec. and Lib. 6, "Printers/Fonts WIN"
Microsoft Word Forum (GO MSWORD)			WordPerfect Customer Support Forum (GO WPCS) Sec. 5, "Wpdos Print-Laser"; Sec. 6, "Wpdos Print-Other"; and Sec. 11, "WPwin Print/Fonts." Lib. 12, "Printer Drivers 5.1," and Lib. 13, "Printer Drivers 5.0"
NeXT Users Forum (GO NEXT), Sec. and Lib. 6, "Hardware/Peripheral"	WordStar International Corp.	WordStar	WordStar Forum (GO WORDSTAR), Sec. and Lib. 4, "7/6 Laser Printers," and Sec. and Lib. 5, "7/6 Other Printers"
Novell B Forum (GO NOVB), Sec. 3, "Printing." Novell maintains six CompuServe forums; for further printer support, see the Novell Library Forum (GO NOVLIB), Novell Netware 2.X Forum (GO NETW2X) and Novell Netware 3.X Forum (GO NET3WX). Each includes a section on printing.			

The Wizard of OzCIS



Freeware front-end automates forum, mail functions and is supported by a volunteer 'Team Oz': OzCIS

► A behind-the-curtain visit with the upstart DOS program's creator.

OzCIS, a new powerful yet friendly automated access "front-end" program for DOS users on CompuServe, has attracted considerable attention since it arrived in the libraries of the IBM Communications Forum (GO IBMCOM) in March. Within five months, it had been downloaded nearly 10,000 times and had taken "Analyst's Choice" honors in *PC Week*. Word spread quickly in the forums



Mountain Man: Sneed

about the program's slick automated features for forum messages and CompuServe Mail—and about the fact that its creator, CompuServe member Steve Sneed, decided to offer OzCIS as freeware.

Despite its mystical name, OzCIS didn't have any ties to the Emerald City. Instead, it is named after the Ozark Mountains of north central Arkansas, where Sneed grew up. He wrote OzCIS about two years ago while an assistant sysop in IBMNET.

"One of my responsibilities was maintaining library catalogs," Sneed says. "The tools I had available at the time didn't suit me." Being a programmer, Sneed naturally started writing his own. Through the years, he added message management features, and other goodies when he thought of them. Like other auto-access programs, OzCIS allows users to specify forums and sections to scan messages, as well as CompuServe Mail, to retrieve for offline reading. Once the user has composed replies, the program sends them automatically to the proper places. (For more details, see "OzCIS Features," p. 25.)

Although Sneed originally wrote the program to streamline his own online time, friends and co-workers who glanced over his shoulder quickly wanted a copy for them-

selves. Soon they began clamoring for him to put the program into the hands of more CompuServe members.

"More and more people told me to cut it loose, release it to the public," he says. "So, finally, I figured, 'what the heck,' and I did."

Sneed gave away his program because, well, it was the easiest way. As a full-time software engineer for TurboPower Software, Sneed didn't have time to form a business or support a shareware program. Instead, he uploaded the program to the IBM Communications Forum, stood back and watched as members began to snap it up.

OzCIS is Sneed's second CompuServe-specific program. He began using the service about 10 years ago; a few years later, he wrote and released a B protocol module, allowing telecommunications programs to upload and download files using CompuServe's special B file-transfer protocol.

Being from the Ozark Mountains, Sneed called the module OzBXT, and released it under the name Ozarks West Software. Although Sneed currently hails from Colorado Springs, Colo., the "Oz" prefix has stuck. It's even gone international, Sneed says. "People in Germany and other European countries have gotten copies. A guy who lives in Australia provides copies to Australian users."

The increased number of users has led to an increased amount of work for Sneed. Even though he's giving the program away for free on an "as is" basis, he's still working to support it. The IBM Communications Forum recently devoted Section 12, "OzCIS," to the program, and Sneed rounded up a team of volunteers to help answer questions. Even with the volunteers, Sneed says he spends between two and three hours a day answering messages about OzCIS.

"We're averaging about 400 messages a week in the forum," says Sneed. "I support it along with a group of volunteers—users who like the program. We've formed a Team Oz. This is what makes it worthwhile to me: how

the users are coming in, spending their time, effort and connect dollars to help other users. That's really made CompuServe what it is today, that spirit of people helping people."

Several users have uploaded their own enhancements to the program. One person designed a Windows icon for the program, featuring a tornado whirling through the Emerald City. Others have written log-on scripts for networks outside the United States. (For more on available files, see "Which Way to OzCIS," p. 25.)

In fact, it's the scripts that set OzCIS apart from some of the other navigation programs, Sneed says. "Users can write their own scripts. For instance, it's easy to set up a script to go to the Executive News Service, hit the stock market or news wires, and grab messages. People don't have to get out of the program to read it all or do anything with it."

Sneed also keeps tabs on several other forums. In addition to being assistant sysop in IBMNET, he's an assistant in RockNet. Sneed worked his way through college playing guitar and singing in bars and clubs throughout Central Arkansas. Yet programming takes most of his time now.

Sneed wrote OzCIS in Turbo Pascal 6.0 using the Object Professional and Async Professional libraries from TurboPower Software. Since his program can view GIF files and download weather maps, he used tools from Cyborg Software Systems for the graphics viewers.

In addition to maintenance releases, Sneed plans three other versions for OzCIS: one for the upcoming Windows NT, a "Professional" version featuring support for more "nonforum" activities, and a scaled-down "lite" version.

Many people have been asking for a smaller version for laptops, Sneed says. The program uses '286-specific code, and requires EMS memory, so it's difficult to run on small laptops. "After I went on vacation and took a laptop with me, I realized there was defi-

Which Way to OzCIS?

OzCIS, along with many enhancement programs, can be downloaded from the IBM Communications Forum (GO IBMCOM), Section 12, "OzCIS." New users should first download OZCIS.REQ to make sure the program will run on their system. Then, download OZCIS1.EXE, OZCIS2.EXE, OZCIS3.EXE and OZCIS4.EXE. These four files are self-extracting archives.

OzCIS System Requirements

Minimum hardware and software requirements to run OzCIS. OZCIS.REQ (5,940 bytes).

OzCIS, Part 1

Main program file. OZCIS1.EXE (279,454 bytes).

OzCIS, Part 2

Online processor file. OZCIS2.EXE (167,057 bytes).

OzCIS, Part 3

Accessories file. OZCIS3.EXE (131,049 bytes).

OzCIS, Part 4

Documentation. OZCIS4.EXE (138,820 bytes).

OzCIS Brochure

Text file outlining capabilities and features of OzCIS. OZCIS.BRO (7,868 bytes).

Documentation Files

OzCIS documentation formatted for Word for Windows 2.0; includes table of contents and index. OZDOC.ZIP (189,097 bytes).

Billing Information

Scripts to automatically retrieve CompuServe billing information. OZBILL.SCR (786 bytes).

Canada Log-on

Script for logging onto Canada's Datapac. DATAPA.SCR (190 bytes).

CIM Converter

Copies entries from CIM's address book to OzCIS's address book. Not archived. CIM2-OZ.EXE (7,731 bytes).

England Log-on

Script for using the United Kingdom's PSS/GNS network. GNS.SCR (181 bytes).

News/Weather Scripts

Modifiable scripts to capture news and reports of business, weather and entertainment.

OZSCRI.ZIP (3,128 bytes).

OzCIS and Windows

Two threads describing how to "fine tune" OzCIS's performance under Windows. W31-THD.ZIP (26,126 bytes).

South Africa Log-on

Script for accessing CompuServe from South Africa. OZSAFR.SCR (1,678 bytes).

Stock Quotes

Modifiable scripts to retrieve stock quotes. QUOTES.SCR (1,600 bytes).

Swiss Log-on

Script to access CompuServe through Telepac, a Swiss public packet-switched network. SWISS.TXT (1,233 bytes).

Windows Icon

Icon of Emerald City being hit by a tornado. OZCIS.ICO (766 bytes).

ZiffNet Scripts

Scripts to download the ZIPped version of the current *PC Week News* and current ZiffNet Highlights. OZZNT1.ZIP (862 bytes).

nately a need for one."

The versions for Windows NT and the Professional version will probably be released as shareware, Sneed says, but the standard version will always be free. In fact, Sneed never wanted to make a business out

of OzCIS. It just happened that way.

"I didn't start out for this to be a new career for me," he says. "There's still a certain amount of shock that this thing has taken off like it has. I wrote it and released it because some friends said I ought to.

"I didn't push it or anything, and it's just developed its own life. I'm still somewhat amazed."

Andy Rathbone, co-author of PCs for Dummies, is a freelance writer based in San Diego. His CompuServe User ID number is 75300,1565.

OzCIS Features

OzCIS is designed to be easy enough for beginners, yet powerful enough to attract advanced users as well. It performs like the other navigators do, but in a friendly, easy-to-understand and intuitive way.

OzCIS can automate CompuServe sessions by doing as much work as possible while offline. You tell OzCIS where to go and what to do. It logs on, grabs the information and presents it to you for processing. After you respond to the messages, OzCIS logs back on and sends your responses. The following are some of its most popular features:

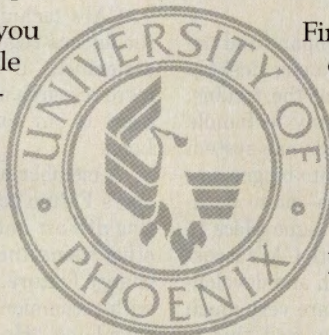
- ▶ Mouse support
- ▶ Graphic user interface
- ▶ Easy-to-use menus
- ▶ Self-contained—all message processing can be done within the program
- ▶ DOS shell—to other programs
- ▶ Built-in GIF viewer
- ▶ Supports Super VGA monitors
- ▶ Can examine weather maps online
- ▶ Supports Accu-Weather
- ▶ Script language to customize sessions
- ▶ Colors can be customized
- ▶ 157-page manual with money-saving tips
- ▶ Third-party support from members
- ▶ Supported in IBM Communications Forum (GO IBMCOM)

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The IBM of Software?

► Computer Associates International sails online with support forums.

Ask someone to list the biggest software companies in the world, and the names you're likely to hear are Microsoft, WordPerfect, Lotus and Borland. While Microsoft is the world's largest software producer, a lesser-known manufacturer now ranks second: Computer Associates International Inc.

The Islandia, N.Y.-based company, which started in 1976, has grown to 7,400 employees, with revenues of \$1.5 billion in fiscal 1992. And, like the other major software companies, it now offers direct support for its products through a group of CompuServe forums that opened a few months ago.

Although No. 2 in revenues, CAI describes itself as the world's leading software company for integrated systems, database management, business applications and applications development solutions. Since beginning with a data-sorting program for IBM mainframes, CAI has expanded to nearly 300 software programs for mainframe, mini and desktop computers. Customers include business, government, scientific and educational organizations.

"We're well known among corporate management information systems people," says Kevin Long, CAI's technical director. "That's where our strength has been. We're just starting to get our name out to people using desktop applications."

Some of CAI's products for desktop PCs have, in fact, become better known than the company itself—Clipper, a database management tool; SuperCalc, a spreadsheet; the Cricket graphics programs; and ACCPAC accounting packages. They're among more than 30 IBM, Macintosh, Windows, VAX and Unix products supported in CAI's forums. "We targeted the end-user rather than MIS-specialized products because these are the focus of our expansion efforts," says Long.

CAI's goal of making the company and the rest of its products known among desktop users prompted the opening of the forums. It's also a way for the company to handle users' needs as they switch from one system to another. "As people move into bigger machines and mid-range systems—or to desktops—they will still have the same place to go for support," says Kim Misi, CAI's assistant vice president for research and development. Adds Long, "Our users are very much into cross-platform computing, and this is where our forum strength is."

CAI forum support consists of a resource center (GO CAI) and four forums: CAI Clipper Forum (GO CLIPPER), CAI Productivity Solutions Forum (GO CAIPRO), CAI Application Developers Forum (GO CAIDEV) and

CAI VAX/Unix Forum (GO CAIMINI). A fifth forum, the Nantucket GmbH Forum (GO NANGMBH), is a German-language equivalent of the Clipper Forum. (For a description of specific products supported in the various CAI forums, see "CAI Forums and Software Products," p. 27.)

The resource center offers technical information and press releases on CAI products, along with tips on how CAI supports its products and how to get more information. It's a one-stop source that saves the time of searching individual forum libraries.

Long describes CAI's forum management as an online user group rather than a formal support mechanism, saying that the biggest value to forum members lies in the opportunity to discuss product issues among themselves and one-on-one with CAI support representatives.

CA Clipper Forum Files

Following are popular files from the CAI Clipper Forum (GO CLIPPER):

CAI Statement of Direction—Where Clipper goes from here. Library 0, "Browse Me First," files SOD.ZIP (Word for Windows 2.0 format with illustrations, 370,692 bytes), SODRTE.ZIP (RTF format, 37,264 bytes), SODTXT.ZIP (ASCII text format, 29,831 bytes), or SODW4W.ZIP (Word for Windows 2.0 without illustrations, 39,418 bytes).

Clipper User Groups—Worldwide listing of user groups. Library 0, "Browse Me First," UGLIST.TXT (24,636 bytes).

Toolkit—Public-domain library of Clipper 5 functions. Library 5, "Nan Forum Toolkit," NFLIB.ZIP (194,496 bytes). Source code in NFSRC.ZIP (342,677 bytes), also in Library 5.

Snap—Source code documentation system. Library 8, "3rd Party Utilities," SNP502.EXE (293,647 bytes).

CAI's technical support staffers monitor the forums regularly and supply on-the-spot assistance. "If it's a question that requires more research or information, we'll also refer users to our company support center," says Long.

A member of the CAI Application Developers Forum recently asked for help in getting dBFast and WordPerfect to talk to each other using the Windows dynamic data exchange feature. "The CAI technician came in with recommendations of techniques to try," says Long. "He also called WordPerfect support, and overnight, we had the issue resolved."

The forums have an international flavor consistent with CAI's worldwide base of users in 27 countries. CAI marketing and technical support representatives from the

United Kingdom and Germany are among those who participate.

The company also encourages users to contribute their own software tools and programs to the CAI libraries, which include everything from product demos and product information files to executable utilities and software patches.

Some of the supported CAI products were developed in-house; others were acquired and merged into the CAI management structure. CAI acquired Cricket Software in 1989, and Pansophic Corp. (Realia) and Access Technology (20/20, ForComment, ForWords) in 1991. The CAI Clipper Forum, the only pre-existing forum in CAI's online area, was renamed from the Nantucket Forum when CAI acquired Nantucket Corp. and its flagship product, Clipper, earlier this year. Clipper users in Germany continue to have CompuServe support through the Nantucket GmbH Forum.

As the most mature of the CAI forums, the CAI Clipper Forum hosts a wide range of high-level discussions about developing Clipper applications, LAN operations, use of other programming languages and Clipper add-on products. Only 5 percent of this forum's library files are from CAI; the rest are contributed by users.

"The world's largest Clipper users group and brain trust" is how Steve Silverwood, CAI Clipper Forum manager, describes the area, which has a large number of participants from outside the United States. Clipper has been used for "everything from managing stamp collections to creating a launch package for space vehicles," he says. "When you're dealing with a programming language, you receive lots of questions, such as 'How do I get such-and-such done?' Typically, there is more than one solution, and these spawn long message threads."

Silverwood, a CAI employee in Culver City, Calif., transferred from Nantucket Corp. and has almost 10 years of experience on CompuServe, including previous participation in the Ashton-Tate forums. What does he find most unique about the CAI forums? While many forums have technical support people online, "we've had CAI executives, including the executive vice president and the marketing vice president, active in the forums."

Long says CAI's current forum offerings will be refined depending on responses from users. "If people want to see a product supported that's not represented in our forums, we'll add support for it."

Michael Naver is a contributing editor of CompuServe Magazine and a free-lance writer. His CompuServe User ID number is 76004,2242.

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CAI Forums and Software Products

Following is a list of software programs supported in the Computer Associates International forums (GO CAI):

CAI CLIPPER FORUM (GO CLIPPER)

CA Clipper

A database language application development system for PC and PC-LAN business applications. Clipper has created thousands of data storage programs worldwide. Use Clipper to write the program, compile it and run it. Clipper is supported in all libraries/sections in the forum.

Nan Forum Toolkit

A library of Clipper code you can link into applications. Routines were contributed by forum members as public-domain software. Library/Section 5.

CAI APPLICATION DEVELOPERS FORUM (GO CAIDEV)

CA-dBFast

Brings Windows icons, menus, dialog boxes, buttons and pictures to dBase users. Use with dBase, CA Clipper or other dBase derivative languages. Library/Section 2.

CA-Realia

A comprehensive, mainframe-compatible COBOL development platform for the IBM PC. Used to downsize mainframe applications to produce PC/LAN-based applications. Library/Section 3.

CA-Realizer

A complete BASIC application development system for Windows. Lets you port DOS applications to Windows. Library/Section 4.

CAI PRODUCTIVITY SOLUTIONS FORUM (GO CAIPRO)

ACCPAC Simply Accounting

A basic accounting solution for small businesses that require a wide range of features in an integrated package. Includes general ledger, accounts receivable, accounts payable, payroll, inventory control and job costing. For DOS, Windows and Macintosh. Library/Sections 2, 3 and 4.

CA-Compete!

A spreadsheet modeling and viewing tool for Windows. Users create and analyze complex business scenarios. Library/Section 7.

CA-Cricket Draw

Object-oriented draw program for the Macintosh that supports 32-bit color and offers 11 Bezier-based drawing tools. Library/Section 5.

CA-Cricket Graph for Windows and Mac

Charting application for scientists, engineers and business people who need to create high-quality graphs and charts for reports and presentations. Library/Section 5.

CA-Cricket Image for Windows

Image-processing system that allows you to transform raster-based images. Library/Section 5.

Cricket Presents for Windows and Macintosh

Desktop presentation program. Includes an outline processor and drawing tools. Library/Section 5.

CA-Netman/PC

Designed as a total solution for managing end-user computing resources. Automates inventory management, warranties, maintenance, purchasing and receiving. Library/Section 6.

CA-SuperCalc

An integrated spreadsheet program providing Lotus compatibility, network support, macros and presentation graphics. Library/Section 7.

CA-SuperProject

Provides tools for managing work projects. Features include mouse support, pull-down menus, presentation graphics and charts. Library/Section 8.

CA-Textor for Windows

Word processor that runs in both WYSIWYG and draft modes. Includes a table editor and calculation facility that performs math functions. Library/Section 9.

CA-UpToDate for Windows

Personal and group information manager. Has scheduling and client management functions. Library/Section 10.

CAI VAX/UNIX FORUM (GO CAIMINI)

CA-VAX

Tape management system that protects against destruction of tape files on VMS systems. Library/Section 2.

CA-7 VAX

Production control process for the VMS environment. Includes simulation and forecasting tools. Library/Section 3.

CA-20/20 (VAX and Unix)

Integrated spreadsheet for stand-alone and networked systems. Library/Sections 4 (VAX) and 5 (Unix).

CA-ForComment-VAX

Allows members of Digital or Novell network groups to review documents online and add comments. Library/Section 6.

CA-Forwords-VAX

Text retrieval software that gives VAX/VMS and all-in-1 users quick access to online text information. Library/Section 7.

CA-Archiver VAX

File archival and retrieval system on tape and optical disk storage media. Library/Section 8.

CA-DB (VAX and Unix)

Database management systems for business. Library/Sections 9 (VAX) and 11 (Unix).

CA-DB/GEN (VAX and Unix)

Professional application development tools. Library/Sections 10 (VAX) and 12 (Unix).

CA-Netman VAX

System software to manage and support hardware and software components at VAX sites. Library/Section 13.

CA-PMA/Chargeback VAX

System to manage chargeback of computing resources. Performs rate specs, forecasting, budgeting, other functions. Library/Section 14.

CA-VISA VAX

Systems management toolkit that streamlines management of VMS systems. Library/Section 15.

CA-Unicenter Unix

Integrated systems management software for the Unix environment. Library/Section 16.

CA-SuperProject VAX

Project management tool for VAX systems. Library/Section 17.

—MN

Tint City

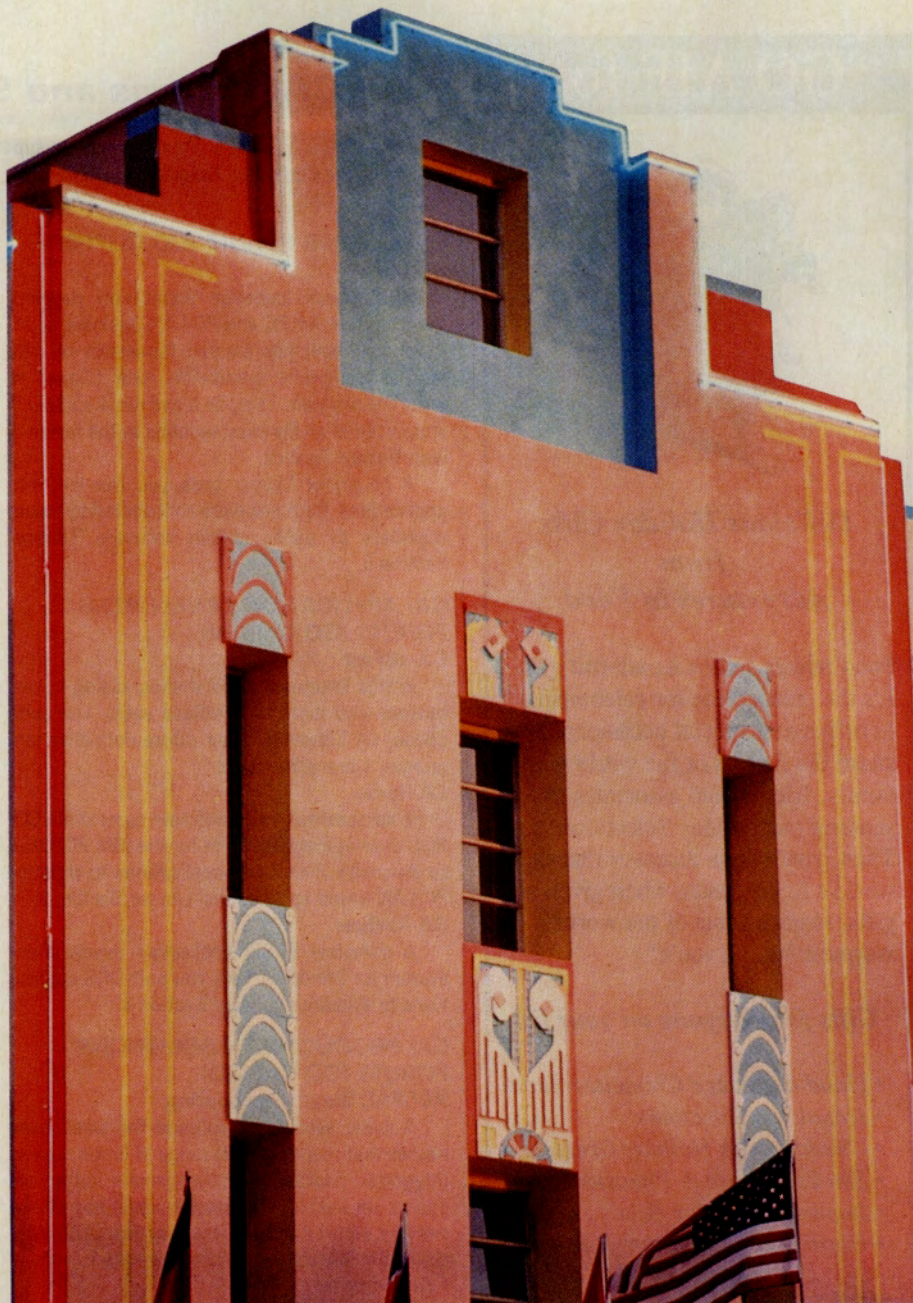
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▼
Beauty and the Beach

▼
Online Guide, p. 30



MARCIA GELBART WALKENSTEIN

Neon trim and hexagon-shaped windows highlight this 1937 Henry Hohauser creation: Carlton Hotel

► Machines and the future inspired the parade of pastel and neon in Miami Beach's Art Deco district.

Miami Beach's image as the "American Riviera," with its white, sandy beaches, trendy boutiques, sidewalk cafés and nonstop parade of beautiful people, obscures a historical treasure. Within the one-square-mile stretch of South Beach (SoBe to the locals) lies one of the world's foremost preserves of Art Deco architecture. The Art Deco District contains more than 800 noteworthy buildings constructed from 1926 through 1942. It is the largest historic section listed in the U.S. National Reg-

ister of Historic Places and has a concentration of historic Art Deco buildings unparalleled in the world, according to George Neary, administrative director of the Miami Beach Preservation League. This not-for-profit organization formed to protect the historical, environmental, architectural and cultural integrity of the Art Deco district.

The district's main drag, Ocean Drive, runs parallel to the near-turquoise Atlantic Ocean. Its lively heart is bounded by Sixth and 23rd Streets to the north and south, Ocean Drive to the east and Lennox Avenue to the west. A pastel pastiche of Art Deco, Art Moderne and Spanish Mediterranean Revival-style buildings has emerged from decades of decline. Proudly, they now sit side



MARCIA GELBART WALKENSTEIN

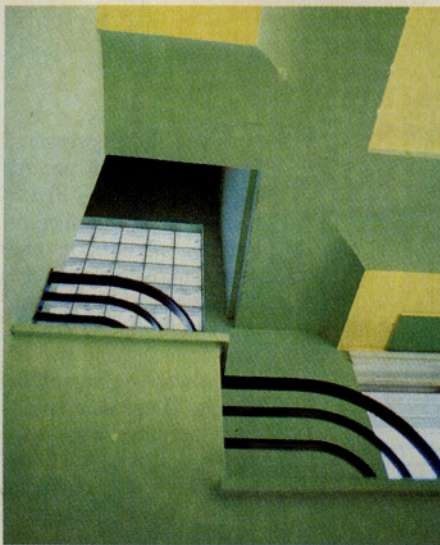
Big relief: Stylized capital

by side, a cohesive vision of the not-so-distant past. Even fast-food outlets such as Burger King and a few parking garages wear a Deco facade.

Classical Art Deco, the voluptuous decorative style from the 1920s and '30s with elaborate motifs of fountains, nudes and florals, was derived from an arts decoratifs exposition in Paris in 1925. Early Art Deco buildings have rich surface relief ornaments.

Influenced in the '20s by Art Nouveau, the Russian ballet, and Egyptian and Aztec styles, Art Deco emphasized grace, the exotic and elegant chic. A stunning SoBe Deco example is the Marlin Hotel, according to Dr. George Paul, a historian who leads tours through the Deco district. However, the Marlin has a twist: its Miami Beach tropical theme reinforces the resort image.

American designers, influenced by



MARCIA GELBART WALKENSTEIN

Banded banisters: Park Washington Hotel

Bauhaus and Cubism, developed Deco into a second, Moderne phase in the '30s, characterized by solid, rectilinear forms, sleek glass, chrome, plastic and lightning motifs. Art Moderne attempts to combine good design with new materials and mass produc-

tion to reflect the optimistic, speed-conscious machine age.

Paul describes Moderne as a parody and homage to the machine age, a style that seems to have come from the then-popular space adventurer Buck Rogers. "People wanted to get away from that horrible Depression dreariness," he says. "They looked to machines as the future, the devices that would literally and figuratively take them out of this period." The golden age of Moderne flourished from 1936 through 1941. The Miami variation was termed Tropical Moderne, Streamline Moderne or Nautical Moderne.

Moderne spurns frilly Deco touches and uses the little or no ornamentation "streamline" style. What little decoration is present is often in the form of banding, also called racing stripes. Buildings are trimmed in

Undamaged Deco



Round fluted columns and a cantilevered front terrace: Majestic Hotel



Streamline facade featured on TV's 'Golden Palace': Cardozo Hotel

When Hurricane Andrew ripped through southern Florida and Louisiana in late August, it left thousands homeless and billions of dollars in property damage in its wake.

But the Art Deco District and Miami itself fared well in the face of the disaster. "The Deco District is fortunate in light of the tragic damage suffered in Homestead and other south Florida areas where the eye of the hurricane passed," says George Neary, Miami Beach Preservation League administrative director. According to Neary, the historic buildings sustained minimal damage, mostly broken windows and minor roof damage. "These were built as strong buildings, not loose, flimsy things that easily come apart," he says, adding that the windows broken in the storm were the mod-

ern, large-pane type, not the old-style, louvered windows still prominent in many properties.

Also, be sure to see the stunning Amsterdam Palace, 1116 Ocean Dr., one of the most unusual examples of Mediterranean Revival style, and Beach Patrol Headquarters, 1001 Ocean Dr., a superb example of Nautical Moderne. The seaward-facing facade bears a resemblance to the Art Deco French oceanliner, the Normandie, as viewed from the stern.

The Miami Design Preservation League Welcome Center is in the Leslie Hotel, 1244 Ocean Dr., Miami Beach, FL 33119; mailing address: P.O. Box L, Miami Beach, FL 33119; 305/672-2014.

Neary recommends several "must-see" Art Deco and Streamline examples in the Deco District:

Art Deco

Cavalier Hotel, 1320 Ocean Dr.
Crescent Hotel, 1420 Ocean Dr.
Leslie Hotel, 1244 Ocean Dr.
Marlin Hotel, 1200 Collins Ave.
McAlpin Hotel, 1424 Ocean Dr. Park
Central Hotel, 640 Ocean Dr.

Streamline

Carlyle Hotel, 1250 Ocean Dr.
Cardozo Hotel, 1300 Ocean Dr.
Raleigh Hotel, 1775 Collins Ave.
Tiffany Hotel, 801 Collins Ave.
Sterling Building, 919 Lincoln Rd.

functional, cantilevered window shades (called "eyebrows") as shields from the tropical sun. Rounded corners, sleek horizontal rails and vertical lines make it an architecture of aerodynamics.

Modern industrial materials such as aluminum, chrome, neon lighting and glass block suggest speed and movement, molded in the form of planes, ships, trains and automobiles. Design elements include porthole windows or black circular disks called vitrol lights.

Signs take the form of asymmetrical parapets or needle-like tower finials that rise above roof lines, giving buildings a taller, futuristic look. Classic Streamline Moderne is suavely represented by the 1936 Collins Park Hotel by Henry Hohauser.

Because of the influence of Art Moderne, Miami Beach thrived during the latter



MARCIA GELBART WALKENSTEIN

Glass-blocked wall: Flamingo motif

stages of the Depression, from about 1936 on. At that time, Miami Beach had a larger number of building permits in one year than New York City. Middle-class tourists and retirees, temporary fugitives from the cold-racked north, were occupying or buying Depression-built Deco buildings. Paul estimates that it cost \$1,000 to \$2,000 per room to build these retreats. Their simple yet sophisticated, whimsical lines peddled glamour at a sensible price.

The first death-knell for South Beach, according to Neary, was the fall of Cuba to Castro in 1959. Previously, Miami had been a jumping-off point to Havana: Take the train to Miami and a quick oceanliner sail to Cuba, and you had two vacations in one. An emerging airline industry sounded the second death-knell. When air-

lines took a bite out of train travel, other vacation destinations became more attractive. Also, younger generations wanted to find new places in the sun—not the same vacation spots their parents visited.

By the mid-'80s, South Beach was nearly dead. More than 100,000 Cuban refugees, courtesy of Castro's Mariel boatlift, arrived in South Florida. Castro's housecleaning of the down-and-out and prison population resulted in less than desirable immigrants. A good number came to the then-cheap hotels and efficiencies of Miami Beach.

But a seed, blown from New York City in the form of transplanted SoBe residents, had started to germinate. Recognizing the potential of the area, in 1976, the late Barbara Baer Capitman and Leonard L. Horowitz co-founded the Miami Design Preservation League. To herald the uniqueness and importance of Art Deco in the South Beach area, they, along with many volunteers, secured the Miami Beach Art Deco Historic District designation in the National Register of Historic Places in 1979.

When Deco buildings were originally built, they were cream, beige, brown or orange. Horowitz, an interior designer and

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Online Travel Guide

Florida travel information can be found in the Florida and Travel Forums; for additional files, search the libraries using the keywords MIAMI or FLORIDA.

FLORIDA FORUM (GO FLORIDA)
Library 12, "Southeast"

Art Deco District—Description of the historic district, plus where to get tour information. ARTDCO.TXT (2,739 bytes).

Southeast Florida Information—Guide to attractions and where to find information about Miami, southeast Florida and the Florida Keys. SEAST.TXT (22,734 bytes).

Miami Festivals—Description of ethnic festivals, Art Deco weekend and other attractions in the Miami area. MIAMI.TXT (7,325 bytes).

TRAVEL FORUM (GO TRAVSIG)
Library 1, "United States"

Miami Entertainment Guide—Listing of restaurants and nightlife suggestions for the South Beach area of Miami Beach. MIAMI.FL (5,699 bytes).

colorist, may have seen visions of sugar plums and cotton candy. He introduced a new twist to the budding Deco district. To highlight design elements, he suggested painting one of the hotels, the Kenmore, in pastel colors. Popular sentiment said he was crazy. But he went ahead and the rest is history. People fell in love with the pastel, tropical, fantasy colors.

Through the hard work, and dreams of Capitman and Horowitz, the Art Deco district is alive and thriving. To spread the word, an Art Deco weekend was established and is now in its 16th year. Nearly 500,000 people are expected to visit during the next one (Jan. 8-10, 1993). In a bevy of festivals, street theatre, vendors and the grand "Moon Over Miami" ball, visitors will be introduced or reintroduced to the virtues of Art Deco architecture.

In keeping with its education mandate, the Miami Design Preservation League hosts Art Deco District historic walking tours every Saturday morning. Departing the League's Welcome Center at the Leslie Hotel, 1244 Ocean Dr., the 90-minute, \$6 tours are guided by local historians and preservationists. At the Welcome Center, the League sells



WILLIAM WALDRON/STOCK SOUTH

At First St. & Ocean outside of protected district, a turquoise-streaked classic: Century Hotel

Deco-inspired art, posters, jewelry and books, including an Art Deco Guide that lists six self-guided walking tours.

In the '90s, South Beach has come full circle. Tourists have returned and the district is a magnet for the hip, hot and well-heeled. According to Neary, almost 50 per-

cent are Europeans, attracted to the area's charming yet exciting atmosphere. Still, despite the district's obvious modern-day glamour, it's hard to shake the feeling that you've entered a different era. ◀

Nicki and Harold Chodnoff are free-lance writers based in Columbus, Ohio.

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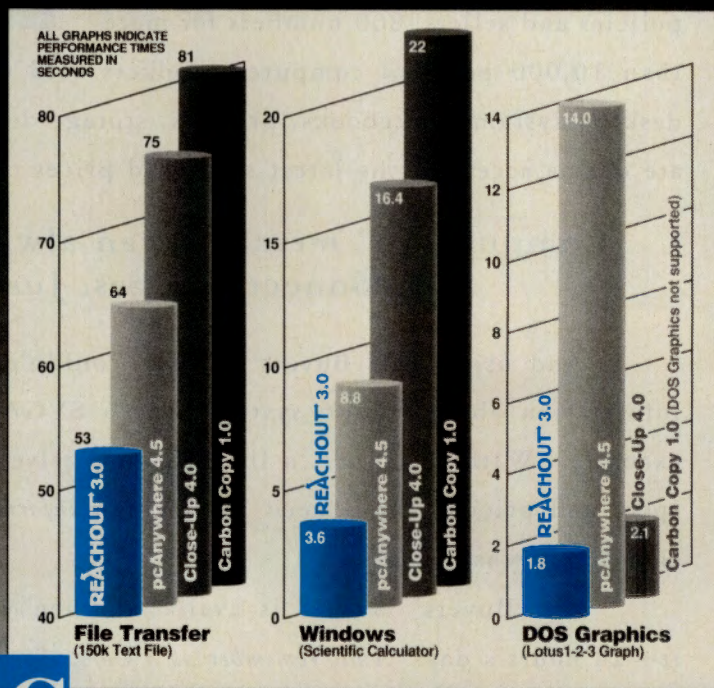
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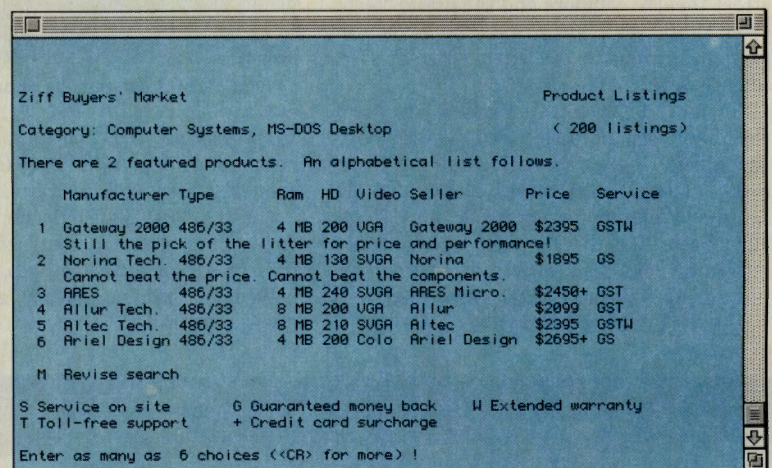
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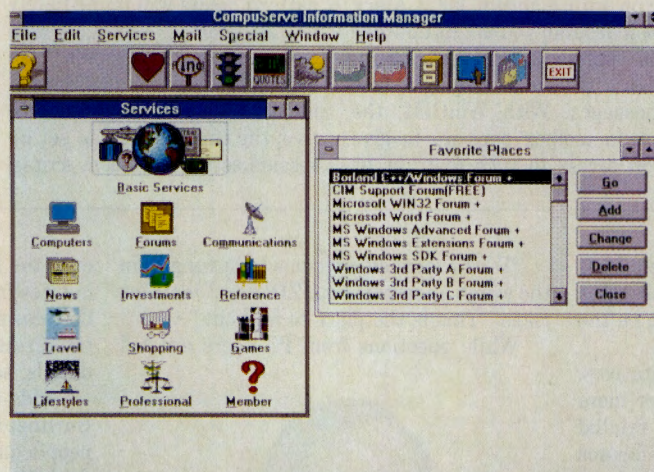
Online Access That's Easy on the Eyes

Newest CIM Looks Out Windows

by Harry Green

If you use CompuServe Information Manager for your online sessions, you're familiar with the advantages of using a semi-automated procedure to replace CompuServe's menus and command language. But until now, CIM was only a DOS application. The Windows version, to be released online in December, is an enlivened edition of CIM with the appropriate nickname of WinCIM(sm).

WinCIM isn't a radical departure for those who have used CIM, but if you've always accessed CompuServe in terminal emulation mode, you'll



Pull-down menus now include desktop-function Ribbon: Windows CIM

Porch Visits with the Forums' Denizens

IBMNET Members: 'Come on In'

by Robin Garr

Despite the name, which gives a quick nod to the International Business Machines Corp. for developing the PC, IBMNET—now a network of more than a dozen forums covering every major aspect of the DOS family of computers—is independent, not affiliated with IBM Corp. except as an authorized user group, says Don Watkins, IBMNET's chief sysop.

"We are just a group of personal computer users," says Watkins, of Santa Rosa, Calif. "When we started out about 10 years ago, IBM was the only computer on the DOS side. IBM came out with its PC, and we all gathered online."

As the PC world grew, so did the forum, and it soon became clear that the network had to grow

to meet the rising demand.

Based on calls from members, IBMNET eventually grew into a dozen forums, categorized by the various ways that people use IBM-type computers, with separate areas for novice users, programmers, communications, applications, hardware, systems and utilities, and bulletin-board operations.

IBMNET naturally attracts people who use IBM and compatible computers and like them, but since the forums are independent, Watkins says, there's no rule against criticizing IBM, or its competitors, when criticism is called for. "We want people to understand that they

Continued on page 2

This special editorial insert was created to help users of IBM PC and compatible computers get the most out of CompuServe's forums and services.

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Overview of Forums for PC Users

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A Look at File Compression Formats

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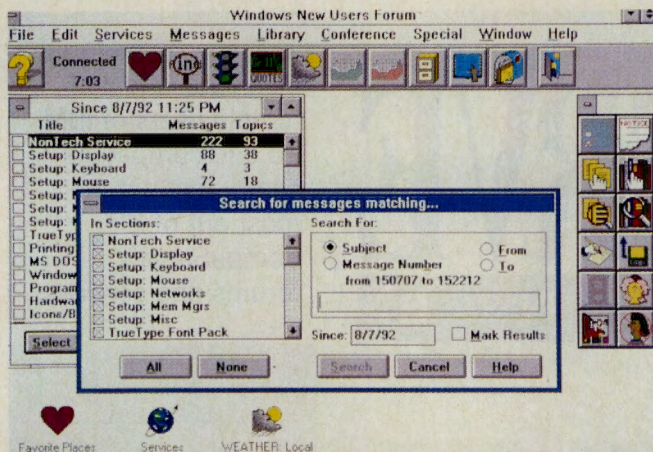
Guide to Automated Access Programs

12

Software Support Directory

File Finder Enhanced

Now you can use File Finder to locate multiple files from IBMNET and related forums and download them all at once. This new capability is available to members having DOS CIM version 2.1 or higher. For more details on File Finder, plus tips on file decompression and more, see page 6.



Forum functions made easy with dialog boxes, colorful icons: WinCIM

Windows continued from page 1

need to adjust your method of operation. WinCIM uses CompuServe's Host Micro Interface protocol, which includes data compression and B+ protocol's error correction.

HMI provides a different method of communicating across

the services. For example, if you drop into a forum for a quick look around, you might now use the command QSN (Quick Scan New) to scroll through new messages. With WinCIM, the forum toolbox pops up to give you access to such features as

Get Waiting Messages, Browse Messages and Browse Library.

A quick tour of WinCIM's working screens will introduce you to its features. Across the top are the familiar pull-down menus, and immediately below is the WinCIM Ribbon, which provides quick access to a variety of functions common to all desktops. The menus start with File and Edit on the left, and end with Window and Help on the right. Since nearly every Windows application fits this pattern, users will immediately feel at home.

Sandwiched between are Services, Mail and Special menus. The first two are intuitive; the third is used to set up session settings, modem scripts,

and to switch to terminal emulation. When you choose Session Settings from the Special menu, a dialog box opens to accept your User ID number, password, access telephone number and modem settings.

The Ribbon is a convenient shortcut to many functions available on all desktops. A large question mark on the left provides alternate access to the Help menu. Click on a button on the Ribbon and you'll receive a dialog box labeled Favorite Places, where you can enter the services you frequent, and navigate to them simply by clicking the title of the service. You can add services by clicking the Add button on the dialog box, which brings up a box for entering the

IBMNET continued from page 1

can say what they like, and dislike, about PCs," he says. "A new user has the same status as a member who happens to be the president of a software company."

Indeed, you'll find the representatives, and perhaps even the presidents, of more than 80 software, hardware and related firms in IBMNET's six PC vendor forums (PCVENA through PCVENF), part of the more than 350 companies that provide hardware and software support on CompuServe. Vendors range from the makers of popular computer peripherals (Advanced/Gravis, for instance) and professional software (Peachtree Software) to the major manufacturers of IBM "clones" (Northgate). Some firms that came online as members of PC vendor forums (Toshiba, Datastorm and Fox, among others) became so active that they spun off as independent forums.

Here's a look at the forums that make up IBMNET, along with comments from some of the people who know them best ... their members.

New Users/Fun Forum (GO IBMNEW)

As the name implies, this is the logical beginning place for people who've just started using a PC—whether you're having trouble making it work or simply looking for interesting programs.

Hard disk help is always available in IBMNEW: Clark

"I've never seen anyone who sprung from the womb knowing about ZIP files," Watkins jokes. "This is the place to find out."

While questions from PC users are "all

over the board," he says the most frequent queries from new users are generally, "How do I download files?" and "How do I un-ZIP (or un-ARC) compressed files?" (For more details, see "Squish! Crunch," on p. 6.)

Adds forum member Adrian J. Clark of Burlington, Ontario, "It seems as if tons of people out there are buying hard disks and don't know how to get them in their system. Someone in the forums can always provide them with the information they need."

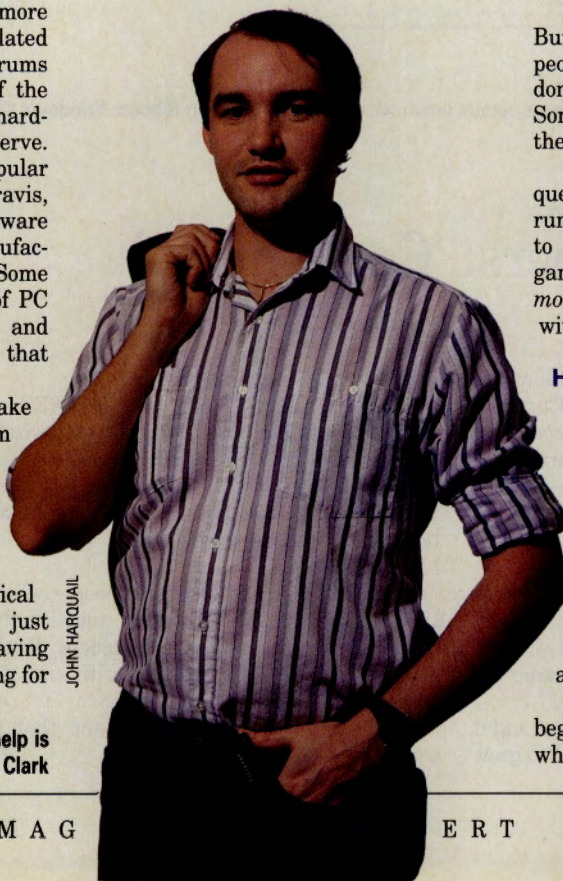
It's not only new users with technical questions who visit the New Users/Fun Forum. The forum libraries are the best place to browse for every imaginable computer game, from *Chinese Checkers* and *Backgammon* to an immensely popular *Mah Jongg*, with scores of downloadable graphic pieces.

Hardware Forum (GO IBMHW)

Users having difficulties with PC hardware, from motherboards to printers, turn here for advice, and people considering new equipment purchases can discuss the best bargains.

In addition to reviews and comments on hardware, this forum's libraries contain hardware diagnostic programs and hardware-specific utilities such as printer utilities, disk managers and special video programs.

"A while ago my IBM 8513 color display began to emit an annoying high-pitched whine," recalls forum member Don Devich,



JOHN HARQUAIL

Key Features of CompuServe's Windows CIM

Browsing allows you to browse through messages on a forum or files in a library.

Favorite Places records the services you access most frequently and takes you there with a mouse click.

File Retrieval lets you download files without knowing about the use of special protocols and procedures.

Forum Messages shows sections of the forum and number of messages and topics since you last logged on.

Bulk Retrieval lets you mark messages for downloading and filing. Afterwards, WinCIM automatically disconnects.

Local CompuServe Directory resides on your PC so you

can browse through the list of services available, and access any of them by clicking on the service name.

Mail lets you retrieve, file, create and send CompuServe Mail messages effortlessly.

Message Mapping shows all messages in a thread with the sequence of transmission and names of the participants.

Name Settings lets you list access numbers for different locations—handy for users who travel.

Point and Click access to CompuServe service areas: Clicking an icon on the Ribbon immediately takes you to that area. WinCIM dials the access number and logs you on if necessary.

forum title and GO command.

Next to Favorite Places, a magnifying glass icon activates CompuServe's Find command. In the center of the Ribbon, another icon opens the Browse window, which lists CompuServe's major service categories, such as Lifestyles, Computers, Travel and Forums. If you click any of these, WinCIM begins dialing, connects to Com-

puServe, brings up a menu of choices and switches you there on command.

Other icons on the Ribbon take you directly to stock quotes and the weather, and provide access to In and Out Baskets, a Filing Cabinet and an Address Book. An icon in the shape of a traffic signal with a green light opens a GO dialog box that takes you to any destination in

CompuServe.

When you enter CompuServe, the bottom of the screen indicates any waiting CompuServe Mail messages. When you click the "Get New Mail" menu choice, the program retrieves those messages. When you read mail, the program pops up a dialog box that shows the name of the sender and the subject. The text flows into the box,

where you have the usual choices plus the ability to save it to the Filing Cabinet or the In Basket.

To move between areas, WinCIM gives you three choices. You can pull down your Favorite Places menu, click an icon representing an area of the CompuServe Information Service, or click the GO icon and enter the destination.

of Santa Barbara, Calif. He posted a query in the Hardware Forum, and in less than a day got a detailed explanation from a member who services monitors: His "flyback transformer" was failing, a problem so common that IBM had a program to replace such monitors. "With that knowledge, I was able to work with my dealer to get a new monitor," Devich says.

Software Applications Forum (GO IBMAPP)

When you're finished playing games and are ready to put your PC to work, the IBM Applications Forum is where you'll find all the basics, from word processing and database applications to programs for business and personal accounting, business graphics, desktop publishing and educational software, as well as reviews and discussions of many commercial applications.

Says David R. Hamel, a Peterborough, N.H.-based software writer and author of the Boxer Text Editor: "Users of text editors are quite vocal about what they'd like to see in their dream product. By monitoring the Text Editor section in the Applications Forum, I get ideas for new features that will be appreciated by users."

Systems/Utilities Forum (GO IBMSYS)

In addition to game and serious business programs, another realm of interest to PC

users covers systems and utilities, ranging from operating systems and environments to handy tools or, as Watkins says, "all those small (and sometimes not so small) programs that make living with the PC easier."

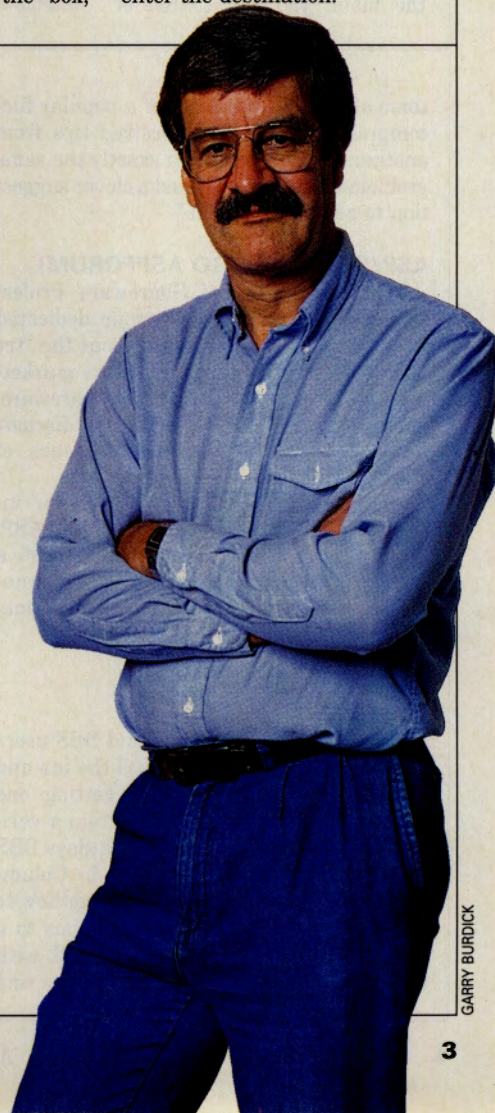
Systems/Utilities Forum member Julian Thomas, of Poughkeepsie, N.Y., listed a dozen of his favorite programs, ranging from ALIAS and TED (a command-line editor and a tiny full-screen editor) to DRAIN, "a great 'hoho' ... a program that puts up a phony DOS prompt. When you press any key, the machine starts gurgling and messages appear about how the disk has water in it. It then goes through a 'spin-dry' cycle with good sound effects. Totally innocuous and great fun!" (For files from this forum and others, see "Favored Files," p. 7.)

Programming Forum (GO IBMPRO)

Advanced programming material such as assemblers and source code is available in the Programming Forum, along with a group of skilled forum members who can discuss any programming issue. The forum is not just home to experts, though. Its files contain hints, tips and tutorials for people just starting out.

Hamel recalls, "When I was rewriting my installation program, I was stuck on

Finds many useful and 'hoho' utilities in IBMSYS: Thomas



GARRY BURDICK

WinCIM makes it easy to glance around a forum and see what is happening. When you browse, a box opens to show the last time you were on and a count of new messages by section since then. You can click on a section to get a count of the open threads, and by clicking a Map button, you get a graphical representation of the thread, showing the chain of replies and who composed the original message.

Newcomers will particularly appreciate WinCIM's ease of use. There are no commands to learn, and downloading is a snap. As any sysop will confirm, the most frequently asked question on CompuServe is "How do I download files?" WinCIM insulates the user from download procedures and transfer protocols. When you're in a forum, a Libraries menu appears. Inside the menu you can search or

browse any of the sections. When you browse, the program lists the files in the section. To download, you simply highlight the file, click the Retrieve button, and the download begins. A dialog box monitors progress by reporting characters received and percent completed.

When you retrieve messages, WinCIM opens a box that

lists sender and receiver, number of replies and other message details. The message text pours into the box where you can read it, scroll through it, store it in your In Basket or file it. The hard carriage returns at the end of the lines are eliminated, so you can easily copy and paste into your word processor.

With WinCIM, you can reduce the time you spend online by using some partially automated functions. For example, you can enter forums, mark the sections or messages you want to retrieve, and exit. WinCIM downloads the messages, stores them in the Filing Cabinet and disconnects. You can read messages offline, compose replies, and store them in the Out Basket for later transmission, or you could read a What's New article, jump to a forum, and cut and copy from the article into a forum message. With some of these capabilities and its data compression, WinCIM can quickly pay for itself by reducing your online time.

Harry Green is president of Pacific Netcom Inc., a Portland, Ore., telecommunications consulting firm. His latest book is The Business One-Irwin Handbook of Telecommunications. His CompuServe User ID number is 70007,431.

Watching for WinCIM

WinCIM is presently in beta-test and will be available to CompuServe members late this year, according to Tim Wheeland of CompuServe's Micro Software Management group. WinCIM will run on any PC that supports Windows. The program will be available for downloading at a nominal cost, similar to the pricing for DOS CIM and Mac CIM, according to Wheeland. Watch What's New for announcements of WinCIM's availability.

Wheeland says there also will be a WinCIM Forum to help users over rough spots. As with other CompuServe support forums, time spent in the forum will be free of normal connect-time charges.

some of the idiosyncracies of a popular file-compression package. I received tips from another who'd experienced exactly the same problems, and who provided a clever suggestion to get around them."

ASP/Shareware (GO ASPFORUM)

The Association of Shareware Professionals (ASP), a nonprofit group dedicated to educating computer users about the "try before you buy" concept of software marketing, provides information on shareware, joining the ASP, and a forum for discussing the technical and ethical issues of shareware.

Software author David Hamel, for instance, credits the members of the ASP/Shareware Forum with helping him locate a quality printing company to prepare manuals for his software and a shrink-wrap machine to package it.

Bulletin Board Forum (GO IBMBS)

Bulletin board operators and BBS users gather in this forum to discuss the ins and outs of running a board or getting one started. The forum libraries contain a variety of BBS programs and utilities. Says BBS operator Joe Balshone, located in Columbus, Ohio, "Not only can you discover how to connect a bulletin board in Columbus to a board in Turkey, but you can also talk with the major developers of IBM products and

services. One day there might be a discussion between the various software developers; while on another day, you will find the BBS operators (sysops) debating on whether 300- and 1200-bps modems are obsolete; and on a third day, you will find major hardware vendors directly responding to product questions and problems."

Communications Forum (GO IBMCOM)

Both hardware (modems) and software (communications programs) are grist for the Communications Forum, which covers every aspect of going online with your PC.

You can get expert advice on how best to use communications programs and put your modem through its paces, and download hundreds of public-domain and shareware communications programs, including two free "autopilot" programs for accessing CompuServe automatically: Autosig (Library 1) and OzCIS (Library 12).

Forum member Kevin W. Smith of Los Angeles says an exchange of messages in the Communications Forum saved him hassles and money. "I bought a modem and immediately had problems with it. I posted a message in the forum for ideas on what to do. Three people had the same modem and same problems, and a manufacturer's representative also replied with helpful information and the reasons behind the problems, all within 48 hours."

European Users Forum (GO IBMEUROPE)

Although nominally devoted to the topic of the European user of the PC and compatibles with an interest in sharing information and programs, the European Users Forum attracts an international audience using every imaginable computer. It is surely one of CompuServe's most worldwide forums, with discussions ranging from how to log on from Liechtenstein to global politics.

"This summer I spent my holidays in Italy and decided to take my portable and a modem with me," says forum member Juer-gen Wondzinski, a member who lives in Seebuck, Germany. "After asking in this forum how to connect in Italy, I was able to test and configure my equipment at home (doing an international call for testing) and then had absolutely no problems."

Whether they need help with international access or simply advice on installing a new program, members will find a wealth of technical knowhow in IBMNET. "After 12 years and five PCs," says member Monte Davis, "I'd say at least half of what I know about these beasts can be traced to IBMNET."

Robin Garr is the associate sysop of the CompuServe Wine Forum. His CompuServe User ID number is 76702,764.

An Overview of CompuServe's PC Forums

Users and developers of IBM products have many forums to turn to when they need help or want to share information. IBMNET forums are run by independent operators, not affiliated with IBM Corpora-

tion, while the IBM Corporate forums are those sponsored and maintained specifically by the company. Here is a guide to both categories of forums.

IBMNET Forums

ASP/Shareware Forum (GO ASPFORUM)

This forum is devoted to discussion of shareware and is a meeting place for the Association of Shareware Professionals.

Bulletin Board Forum (GO IBM BBS)

The theme in this forum is bulletin board systems and the management issues surrounding them.

Communications Forum (GO IBMCOM)

This forum covers every aspect of PC communications from modems to fax protocols.

European Users Forum (GO IBMEUROPE)

The growing body of CompuServe's European members meet in this forum to discuss issues relating to use of IBM and compatible computers in Europe.

Hardware Forum (GO IBMHW)

This forum discusses hardware and peripherals available for IBM PC and compatible computers.

New Users/Fun Forum (GO IBMNEW)

You'll find helpful hints and tips here as well as the basic tools to get started. Library files answer newcomers' questions.

Programming Forum (GO IBMPRO)

Devoted to programming the IBM PC and compatible computers, this forum is a resource of information and files that ease program development.

Software Applications Forum (GO IBMAPP)

This forum addresses applications including word processing, database, spreadsheet or any of the thousands of programs available for IBM PCs and compatibles.

Special Needs Forum (GO IBMSPECIAL)

Not affiliated with IBMNET or IBM Corp., this forum is a place where IBM users with special equipment needs or disabilities can converse with others of like interests.

Systems/Utilities Forum (GO IBMSYS)

For discussions and the latest information on IBM PC and compatible utilities, operating systems and system configuration, visit this forum.

PC Vendor Forums (GO PCVENA, PCVENB, PCVENC, PCVEND, PCVENE and PCVENF)

Six vendor forums in IBMNET support numerous companies; each company hosts a message section, library and conference room for its products. You can locate vendors by typing FIND at any ! prompt. For example, FIND NORTHGATE leads you to the PC Vendor A Forum where Northgate Computer Systems is located.

IBM Corporate Forums

APPC Forum (GO APPCFO)

Topics related to the design and implementation of the Advanced Program-to-Program Communications system are discussed in this forum.

Desktop Software Forum (GO IBMDESK)

Users of IBM PRGS/PS products, including DisplayWrite, Storyboard, Current and Personal AS gather in this forum to share information.

LMU/2 Forum (GO LMU2FORUM)

Members discuss systems management topics related to the use of LAN Management Utilities/2 (LMU2).

OS/2 Users Forum (GO OS2USER)

This forum is for all levels of users to discuss topics related to OS/2, ranging from questions for IBM Corp. to OS/2 games, and includes a section for new users.

OS/2 Support Forum (GO OS2SUPPORT)

General support questions about OS/2 are welcome in this forum, which includes a special library of files from IBM Corp.

OS/2 Developers Forum (GO OS2DF1)

OS/2 developers discuss object technology, development tools, OS migration, multimedia and more.

OS/2 Developers 2 Forum (GO OS2DF2)

Topics for developers in this forum include Database Manager, LAN server, PEN software, developer CD-ROM, OS/2 developer magazine and more.

ThinkPad Forum (GO THINKPAD)

Those developing software applications for IBM ThinkPad products can meet here to speak with IBM personnel, or to share information with other developers.

A Look at Download Compression Formats

Squish! Crunch! Tighter-fitting Files!

by Charles Bowen

In an increasingly complex computing world, one of the things that has gotten easier is file retrieval. That's because these days many files in forum libraries are compressed. Archived. Zipped. Squeezed. There may be several different terms for the process, but they all mean the same thing: You now can retrieve files faster and at less cost.

That's good news, because downloadable programs are longer and more sophisticated than ever before, written to take advantage of the larger memories in our machines. In fact, often they aren't single programs at all, but rather integrated software systems that require several linked programs and data files to interact on the same task. For a while, this rapidly evolving software sophistication caused big headaches for all of us online, because a single system suddenly required users to retrieve and install perhaps a half-dozen different files, each with a different name. If just one file was overlooked, the system wouldn't run properly, meaning another trip online to find and retrieve the missing files.

To solve this problem, a few years ago the telecomputing community started using programming utilities that have two main functions: (1) To pack and unpack a number of related program and

text files—installation, documentation, configuration, data—into a single file, which is helpful because it is easier to download one large file than four or five small ones; and (2) To squeeze and unsqueeze files, which is good because a compressed file takes up to 50 percent less space in the library and requires less time to download.

Nowadays, the majority of files in the libraries of the PC-compatible forums are compressed. A file uploaded in a compressed

format appears in the library with a special extension (such as ZIP, ARC, LZH and so on). The extension tells you that, after you retrieve it, you may need to have available the software tools to unpack or unsqueeze the file offline. Several popular packer-unpacker or squeezer-unsqueezer formats are used.

ARC format. The oldest still in regular use is the ARC format. In fact, the majority of the older files in the IBMNET forum

libraries probably have the ARC extension. The utility for extracting these files is ARC-E.COM (with instructions in ARC-E.DOC), which can be retrieved in Library 2, "Library Tools," of the IBM New Users/Fun Forum (GO IBMNEW).

Once you have downloaded the utility, here's how you use it when you retrieve a file with the ARC extension: place the ARC file on the same directory with the ARC-E.EXE utility, then enter ARC-E [filename] at the DOS prompt. This causes the ARC-E utility to create executable files from the ARCHived package on the same directory. (The original ARCEd file also remains on the directory.)

While the ARC format still has its followers, two other utilities have gained rapid acceptance in the DOS community, both also available for retrieval in Library 2 of the IBM

A New and Improved File Finder

For many CompuServe Information Manager users, IBM File Finder has been a time-saver. Now, with the ability to download multiple files at once from within File Finder itself and without having to enter a specific forum, it's even better.

Those using version 2.1 or higher of DOS CIM can take full advantage of the revamped File Finder, saving time that was previously spent locating and downloading one file at a time.

After a search has taken place, a list of files is displayed. Any number of these files can be "marked" for downloading, using the new Mark button on the File Finder display.

After marking, choose the "Retrieve Mark" command from the Services pull-down menu to download all of the files that you have marked. After each file is downloaded, you are asked to provide a file name and a destination for the file to be placed.

IBM File Finder offers a complete online database of file descriptions for more than 36,000 PC-related files. File Finder was originally developed to give users a quick, easy way to search for these files across the PC forums.

Prior updates had allowed those using DOS 2.0 or higher to download one file at a time from the Finder without entering a forum. File Finder in CIM has also adopted dialog boxes, along with other CIM desktop features, instead of defaulting to the terminal emulation mode.

File Finder can be accessed by typing IBMFF in the GO option under the Services pull-down menu. The search session is defined with a click of the mouse on one of the seven search criteria: keyword, submission date, forum name, file type, file extension, file name or submitter's User ID number.

The easiest method to search for files is by name. For example, if you're looking for files related to desktop publishing, type DESKTOP or PUBLISHING after clicking on the "keyword" box. Typing the keyword DTP yields even more files.

To get a more detailed synopsis of the files you have located in your search, simply select the file by double-clicking on the file name. You will get information ranging from the size of the file to the number of times it has been downloaded, along with a brief description of what the file contains.

To take advantage of the multiple downloading File Finder feature, GO CIMSOF and upgrade your version of DOS CIM to 2.1.

—Tony Jaros

Favored Files from the Residents of IBMNET

The ultimate test of a file's worth is the user. We asked IBMNET forum members to tell us their favorite files. Here's a list of those files, as well as information on how you can access them yourself.

SYSTEMS/UTILITIES FORUM (GO IBMSYS)

Full Toolkit—This Toolkit improves on DOS programs and adds a few of its own, including environment editor, directory lister, command finder and file finder. Library 1, "DOS Utilities," OBSKIT.ZIP (224,478 bytes).

Add Upper Memory—Uses chipset shadow to provide upper memory to DOS5. Can supply up to 224K upper memory, 96K DOS base expansion. Library 1, UMBDVR.EXE (40,389 bytes).

Macro Program—Originally issued in 1985, this command-line editing and keyboard macro program is still a favorite, inexpensive utility. Library 1, CED.ZIP (31,891 bytes).

Fast Searcher—Multithreaded OS/2 version of DOS text search utility. Similar to FIND, but faster. Intended to find literal strings, not regular expressions. Library 2, "OS/2 Utilities," FGREP.ZIP (15,661 bytes).

Printer Redirection—Allows printer output to a COM or LPT port to be redirected to any other port, disk file, named device or the console. Version 8.02 fixes tiny bug in version 8.01. Library 3, "General Utilities," PRINDL.ZIP (35,640 bytes).

Package Your Utilities—Like a second COMMAND.COM, this program allows small COM utilities to be packaged inside of it. Saves disk space and permits many utilities to be transferred with one copy command. Library 3, XEQ.ZIP (10,112 bytes).

Shell Room Utility—Frees up applications' memory when they shell out. All but 6K is then available to DOS shell. Noncrippled shareware. Library 3, SHROOM.ZIP (20,974 bytes).

File Manager—Disk and file manager with side-by-side file lists or directory trees. Has internal file editor/viewer, notepad for directory and application launcher. Lightning quick. Library 5, "DOS Shells/Mgrs," CMFILE.ZIP (141,233 bytes).

Compact Archiver—Creates LZH files. Makes tight compressions, features fast decompression. New switches to shut off skip messages. Revisions in this version are for batch mode executions. Free. Library 6, "File Utilities," LHA213.EXE (44,381 bytes).

File Utility—LIST Plus is a file browsing and viewing utility. Features telephone dialer, scrollable windows and more. Version 7.6a improves performance, fixes minor glitches. Library 6, LIST76.EXE (104,125 bytes).

File Compressor—PKLITE 1.15 compresses EXE and COM files smaller, but still leaves them in an executable state. MS-DOS 5 and DR-DOS 6 compatible. Not for Windows, OS/2 executables. Library 6, PKLITE.ZIP (41,187 bytes).

Archive with Power—DOS file archiver with more than 30 new features, including improved compression speed, better file sharing and extract to unique names feature. Library 6, ARJ230.EXE (200,363 bytes).

Save Disk Space—Another recommended program for compressing COM and EXE files. If loaded as a TSR, will also compress data files. Library 6, DIET-14.EXE (40,925 bytes).

Browse ZIP Files—Sorts files inside the archive and gives all relevant data, including compressed size, uncompressed size and method used to compress. Library 6, ZR124.ZIP (18,987 bytes).

Utilities Abound—Program offers a vast array of utilities, including box drawing, printer control, cut and paste between text mode applications and color tables, to name a few. Library 7, "Desktop Utilities," CTLALT.ARC (67,061 bytes).

APPLICATIONS FORUM (GO IBMAPP)

General Editing—Bingo is a powerful text editor designed especially for source code editing. Virtual memory scheme allows for editing of files larger than 200 MB in size. More than 200 functions in all. Library 1, "Text Editors," BE211A.ZIP (197,482 bytes).

Plots on Screen—Makes 2-D and 3-D plots on screen or HP plotter. This version adds commands and temporary variables. Screen dump utility supports 24-pin Epson printers. Still solves differential equations and transcendental equations. Library 13, "Tech/Engr/Sci," SPLOT.ZIP (286,336 bytes).

NEW USERS FORUM (GO IBMNEW)

Commander Keen—Join the popular adventurer in *Goodbye Galaxy*, his new quest. Full screen scrolling levels with action-packed animation. Known for hilarious cinematic sequences. Library 6, "Gen. Fun and Games," A1KEEN.ZIP (183,808 bytes).

—Tony Jaros

New Users Forum:

ZIP format. Files with a ZIP extension are created with a utility called PKZIP. Note the exact file name of the program in the IBM New Users Forum library has a version number in it so the name may change; to find the latest version for you, just browse with a keyword of PKZ*.*. The utility also is available in Library 11, "PKWare," of the PC Vendor C Forum (GO PKWARE). At this writing, the current version is PKZ110.EXE.

LZH format. Files having an LZH extension are created with a utility called LHA. As with PKZIP, the exact file name contains a version number, so it may

change. To find the latest version, browse with a search term of LHA*.* in the IBM New Users Forum library.

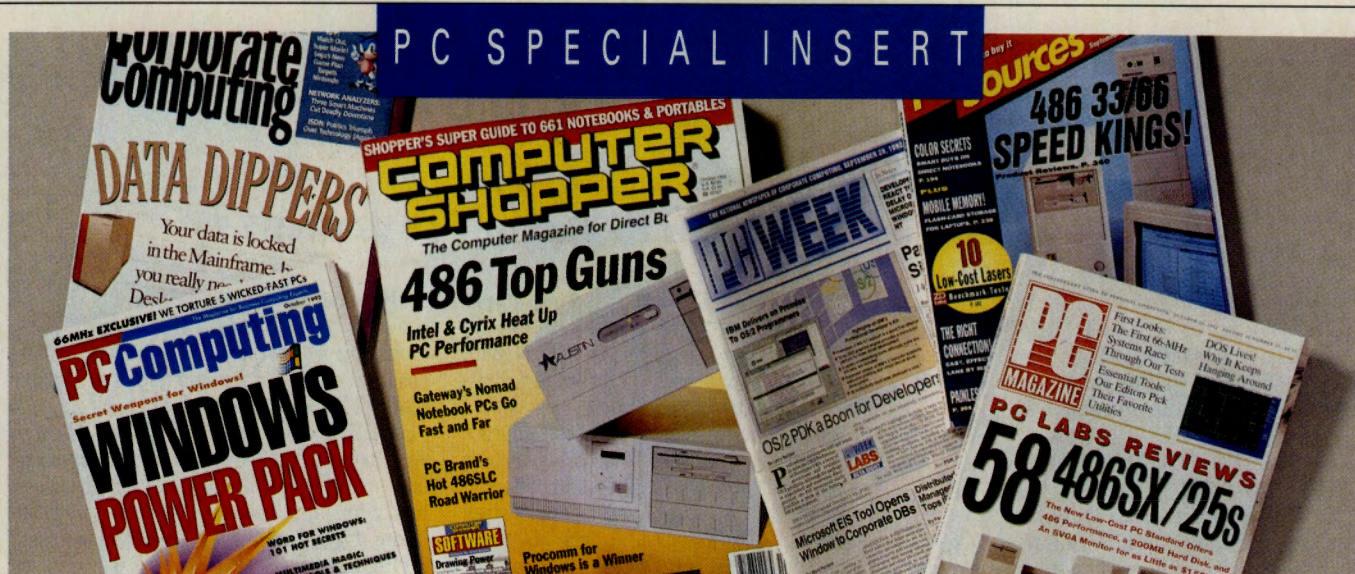
Unlike files in the ARC format, ZIP and LZH files are usually "self-extracting" (sometimes referred to online as "sfx") files. This means you do not need the decompression utility for this type of compressed file. Just download the file and then execute the file from the DOS prompt; it will decompress itself. However, you will need the utilities to create your own compressed files in these formats.

Other formats. Finally, you may come across files in the ZOO format and the

SIT format. For help with these, see ZOO210.EXE and UNST30.ZIP in Library 6, "File Utilities," of the IBM Systems/Utilities Forum (GO IBMSYS).

And, yes, you do need a different file compression/decompression utility for each different archiving format. For an overview and the latest list of utilities in use around the system, see the file called COMPRES.DOC in Library 1, "Forum Help," in the free Practice Forum (GO PRACTICE).

Charles Bowen is a contributing editor of CompuServe Magazine. His CompuServe User ID number is 70007,411.



THOS. HOGAN

New Services Boost Magazine-based Network

What to Buy, What to Try? ZiffNet's a Help

by Cathryn Conroy

Dedicated to providing everything from downloadable software to technical support to news and reference information, ZiffNet is a comprehensive computer information network that is the online companion to its print publications *PC Magazine*, *PC/Computing*, *PC Sources*, *PC WEEK* and *Computer Shopper*. "When we launched ZiffNet in 1991, we wanted to make it the first place computer magazine readers would turn for support information," says Craig Kerwien, ZiffNet's manager of online services.

Drawing on the resources of its magazines, ZiffNet's online buying services have become the premier source for consumers who want to cut through marketing hype and learn which hardware or software package is best suited for their needs. Recently added services have made ZiffNet an even more valuable resource.

Buying Advice

Ziff Buyers' Market (GO ZBM-1) allows you to compare some 10,000 products, including hardware, peripherals, accessories,

components and software, from more than 130 companies. Product specifications, which include features, pricing and ordering information, are updated monthly.

The database is indexed, allowing you to conduct sophisticated searches that are as broad-based or as focused as you specify. Interested in a 9600-bps fax modem? Use Ziff Buyers' Market to track down all modems that fit your specifications and the companies that sell them. Compare the brands, prices and warranties, and in a matter of minutes, you'll know you have the

An Overview of Valuable ZiffNet Services

ZiffNet offers an abundance of resources, databases and forums for PC users. Products listed with an asterisk (*) are free with the monthly ZiffNet membership of \$2.50. To access these areas, GO ZIFFNET or within ZiffNet, the specific GO command listed below.

ZIFF MAGAZINES ONLINE

PC MagNet from *PC Magazine* (GO PCMAGNET)
 PC/Contact Forum from *PC/Computing* (GO PCCOMPUTING)
 PC Week Extra! (GO PCWEEK)
 Computer Shopper Forum (GO COMPSHOPPER)
 PC Sources Forum (GO SOURCES)
 Executives Online Forum (GO EXECUTIVES)
 Corporate Computing Forum (GO CORPORATE)
 ZEUS: *PC Magazine*/UK (GO ZEUS)

SOFTWARE UTILITY LIBRARY

Search and download the latest files and PC utilities from this area. (GO SOFTLIB)
 Essential Software Kits (GO KITS)
 Public Brand Software Forum (GO PBS)

BUYER RESOURCES

*Ziff Buyers' Market (GO BUYMARKET)
 Ziff Buyers' Digests (GO DIGESTS)
 Demos Showcase (GO DEMOS)
 PC Magazine Editors' Choices and Product Awards (GO EDCHOICE)
 Buyer's Advisor from *PC Sources* and *PC/Computing* (GO BUYADVICE)
 *ZiffNet Product Reviews Index (GO INDEX)
 ZD BookNet (GO BOOKNET)

TECHNICAL SUPPORT

Support On Site (GO ONSITE)
 The Cobb Group Online (GO COBB)
 Tips and Tricks from *PC/Computing* (GO TNT)
 PC Magazine Utilities and Tips Forum (GO TIPS)
 ZiffNet Support Forum (GO SUPPORT)
 PC News and Reference, *PC WEEK* News in Brief (GO PCWNEWS)
 NewsBytes (GO NEWSBYTES)
 Computer Library (GO COMPLIB)
 Seybold Newsletters and Seminars (GO SEYBOLD)

NOT JUST COMPUTERS

After Hours Forum (GO AFTERHOURS)
 Magazine Database Plus (GO MAGDB)
 Business Database Plus (GO BUSDB)
 Health Database Plus (GO HEALTHDB)

Some Popular ZiffNet Files

ZiffNet is packed with hundreds of utilities and text files to make computing easier. Here are some of the hottest files in the ZiffNet collection.

Software and Utilities Library (GO SOFTLIB)—Search for files in SOFTLIB by file name, following the menu prompts online.

PC Magazine Utilities—Index of all *PC Magazine* utilities on ZiffNet, including TSRs for appointments and clocks, educational tools, printer control and more. PCMCAT.ZIP.

DOS 5 Memory Management Kit—Collection of ZiffNet's best memory management shareware and freeware bundled into one kit. MENTUN.ZIP.

Windows Tune-Up Kits—Three Windows shareware and freeware kits that offer total mastery over Windows. WINTN1.ZIP, WINTN2.ZIP, WINTN3.ZIP.

HP LaserJet Utilities—*PC Magazine* utilities for the HP LaserJet. HPLSJ.T.ZIP.

Command Line Utility Kit—Quick-to-use DOS command facility. CMDLIN.ZIP.

Laptop Utilities—Twelve *PC Magazine* utilities to make portable computing easier. LAPTOP.ZIP.

PC/Contact Forum (GO PCC)

PC/Computing Utilities—Index of all *PC/Computing* utilities on ZiffNet, including command line and file modification macros and system back-ups. Library 0, "General/Forum Info," PCCCAT.ZIP.

Getting Around ZiffNet—ZVIEW, a viewer utility for offline display of specially structured files, plus the ZiffNet road map. Library 0, ZVW.EXE.

Memory Setup Viewer File—Text file that accompanies ZVIEW. Library 0, MEMCFG.ZDG.

DOS 5 Set-up—Collection of DOS 5 macros as well as hints and suggestions for novices on using the operating system. Library 1, "Hot Tips/Secrets," DOS5.ZIP.

Best Tips—Compiled from *PC/Computing*, 1001 tips on using computers. Library 1, T1001A.ZIP and T1001B.ZIP.

best deal possible.

Another new Ziff service, Buyers' Digests (GO ZNT:DIGESTS) offers buying advice from Ziff's magazine forums, product reviews, articles, award listings and more. Organized into product categories, such as '386SX notebook computers, high-speed modems or DOS word processors, Buyers' Digests is a compendium of Ziff reviews, features, recommendations and product specifications. Each Digest features one product so, in one easy-to-download source, you'll learn why or why not to buy a specific product, information on its strengths and weaknesses, and even tutorials on how to use it.

ZiffNet has created a special text-viewing utility called ZVIEW, which allows you to display, read and search information in Buyers' Digests. Available for downloading from Buyers' Digests menu Option 5, ZVIEW has allowed Ziff Communications "to extend the electronic publishing environment," says Kerwien. Special articles published in Ziff Communications magazines, such as the recent *PC Magazine* laptop buyers' guide, are available online for downloading in this area.

Buyers' Digests is a premium product and carries a surcharge of \$14.95 per Digest (plus standard connect-time rates for the download), but could save you hundreds of dollars in the long run.

Sometimes the best deal isn't found by just getting the lowest price; you also have to find a product that's right for your needs. If you're in the market for software, take a few minutes before ordering that new spreadsheet or desktop publisher and down-

load a demonstration version of the program from ZiffNet's Demos Showcase (GO ZNT:DEMOS). Demos of hundreds of the hottest commercial programs are online for the taking, including Ami Pro, cc:Mail, Current, dBase IV, Excel for Windows, PageMaker, PowerPoint, QuattroPro, WordPerfect 5.1 and many more. In addition to being able to sample a variety of products, you can become familiar with the "look and feel" of the software. A complete catalog of demos is available online.

Although such database searching is the backbone of educated computer shopping, there is nothing quite like being able to ask questions of real users. How does a program *really* work? Joining the other forums where such questions can be asked are the *PC Sources* Forum (GO ZNT:SOURCES), the online companion to the magazine of the same name, the *Corporate Computing* Forum (GO ZNT:CORPORATE) and the Executives Online Forum (GO ZNT:EXECUTIVES).

Not only can you talk to *PC Sources'* editors, columnists and writers, plus industry experts and company representatives, but you also can chat with other readers. Special message board sections are devoted to service and support and mail-order buying, and the libraries feature hardware and software buyers' guides, current articles, product reviews and shareware.

Those who make buying decisions and help guide the management of computing in corporations will find advice, tutorials and a sharing of viewpoints in the *Corporate Computing* Forum through vendor profiles, tips on management science, special events and

even an electronic water cooler.

Meet and greet top computer executives in the Executives Online Forum, where visiting high-tech dignitaries exchange information, answer your questions and offer feedback about their products. The forum gives consumers a unique direct connection with industry insiders. Leading members of IBM Corp.'s technical staff were the forum's first guests last July. Message threads for all guests are archived in the forum's libraries. "This is a great opportunity for corporations to get feedback from real users," says Susan Wylie, CompuServe's manager of electronic publishing. "This kind of communication is something that will help the industry as a whole."

Technical Support

ZiffNet has enhanced its online technical support section. SOS—short for Support On Site—is a searchable database of technical support information on more than two dozen leading software products from Aldus Corp., Borland International Inc., Lotus Development Corp., Microsoft Corp., Quarterdeck Office Systems, Symantec Corp., WordPerfect Corp. and WordStar International Inc. Ideal for PC support professionals who need complete answers to complex questions fast, SOS incorporates technical notes; ancillary software, including drivers, macros and patches; published sources, including user manuals and product documentation; and newsletters and books from The Cobb Group, Que Corp. and Ziff-Davis Press. In addition, it includes the Interactive Tech Notes database from Corporate Software Inc., including several thousand

Automated Access Programs Do It for You

The Meter's Not Running (As Long)

by Charles Bowen

custom workarounds, fixes and solutions.

Additional technical support can be found in The Cobb Group's (GO ZNT:COBB) two new forums, the Cobb Group Applications Forum (GO ZNT:COB-4) and the Cobb Group Programming Forum (GO ZNT:COBBPROG). The former is a source of technical support and software for selected applications, including Lotus 1-2-3. The Cobb Group Programming Forum provides members with access to all of the code listings that appear in Cobb programming journals, as well as a chance to communicate and share ideas with fellow programmers.

The Seybold/ZiffNet Information Connection (GO ZNT:SEYBOLD) offers an easy way to order Seybold newsletters and receive timely information on the company's six conferences, events and consulting services. Led by Jonathan Seybold, this organization is well known for its impartial and insightful comment and analysis about new technologies, trends and developments.

A new area of interest to European members is ZEUS, short for ZiffNet European Services (GO ZEUS), a forum launched less than a year ago in the United Kingdom as a companion to Ziff Communications' U.K. version of *PC Magazine*. In addition to discussion of the editorial content of the magazine, the forum offers utilities, reports, daily and weekly news items, and more.

Membership Information

ZiffNet's monthly membership fee of \$2.50 offers you unlimited access, free of connect-time charges, to a number of choice ZiffNet databases, including Ziff Buyers' Market, *PC Magazine's* Utilities, ZiffNet Product Reviews Index and Product Awards Listings, weekly computer industry news from *PC WEEK* and *MacWEEK*, ZiffNet Support Forum, ZiffNet/Mac Buyers' Guide, ZiffNet/Mac's Technical Support Database, *MacUser/MacWEEK* Index and all member support databases, such as Help, ZiffNet Highlights and others. In addition, you will get a connect-free download of the featured utility each month in *PC Magazine* and receive in the mail *ZiffNet Threads*, a printed newsletter packed with hints, tips and other valuable information for using ZiffNet, ZEUS and ZiffNet/Mac. All other ZiffNet services are charged at regular hourly rates.

Cathryn Conroy is senior writer for CompuServe Magazine. Her CompuServe User ID number is 70007,417.

Automated access programs represent a whole new generation of savvy software for telecomputerists. Working intimately with major features of CompuServe, such as forums and electronic mail, they fully automate many tasks, saving time and money.

Users of such software generally start offline making selections from a menu to tell the program which tasks to perform, such as checking new messages in specific forums and retrieving and filing CompuServe Mail and so forth. After the tasks are chosen, the program automatically logs on and carries out the assignments, quickly saving new messages to disk files as it goes. Later, the user can read the saved files at leisure, composing replies offline and instructing the program to log on again and post them.

Unlike programs that require you to stay at the keyboard to issue navigation commands, this style of software functions as an autopilot, taking you online with a keystroke or two. Usually, you don't have to press another key until the software has sent your messages, received your new ones, downloaded your files and logged off the system.

Being offline and away from the connect-time meter, you can spend all the time you want reading captured messages and thinking about what people have said to you, and about what you want to say back. When you are finished, the programs do the rest.

The newest of four major automated access programs for IBM and compatible machines is OzCIS, a free program created for higher-end machines (80286 and above) by software author Steve Sneed of Ozarks West Software. The software offers mouse support, powerful message-review and editing features and support for file transfers in all areas of CompuServe. It also supports online graphics and has a flexible manual terminal with split-screen for conferencing.

OzCIS is a windowed interface, with everything on menus, lists and entry screens. You choose either "dialog box" or traditional style inputs, file selectors or alerts. It also has a context-sensitive hypertext-style online help system, support for numerous modems, a script language and so on.

The program's forum features include assorted message-reading services, such as threading, and composition tools for both replies and new messages. The software

manages "QuickScan headers" and retrieval of tagged messages. Joining new forums and forum configuration are automated. Message reading includes a split-screen reply editing service, so you can see the message you are replying to.

It also has features outside the forums, such as automated management of CompuServe Mail, including uploads, auto-downloading and so on. Lost message retrieval allows you to "undelete" mail received and discarded in the last 48 hours. It also provides support for alternate routing from CompuServe Mail, including fax, Internet, postal options and so on.

OzCIS is distributed in Library 12, "OzCIS," of the IBM Communications Forum (GO IBMCOM). Note, though, that OzCIS will not run on PC XT-compatibles, requiring the features of the higher-end systems.

However, TAPCIS will. In fact, the older, more accommodating TAPCIS, a \$79 shareware program, runs on virtually any IBM PC, XT, AT, PS/2 or close compatible with at least 384K of RAM.

TAPCIS was created by the late Howard Benner, considered by many to be the father of this style of terminal software. It is the program that sets the standard for this new kind of communicating.

The program, published by Support Group Inc. of McHenry, Md., and distributed and supported in the TAPCIS Forum (GO TAPCIS), offers a split-screen text editor for preparing messages offline. It uses a WordPerfect-like cursor and editing and has true word-wrap. It provides an address book that you can compile as you read messages, allowing you to send messages to other users based on their names without having to remember User ID numbers. You can search by name, User ID number, user name or comments.

TAPCIS's message-reading feature allows you to skip forward and backward by message or thread, jump to a message, read messages that contain a search string, skip through the messages by online session, or view messages previously saved. The software also supports CompuServe Mail options, including postal, fax, Internet and other delivery.

The program offers a powerful forum library management system that lets you do keyword searches of the files in a forum's libraries, browse them offline, and subse-

quently do batch, unattended B+ protocol downloads online (including the ability to restart a transfer if aborted by you or by the system). A transfer log is kept on disk to allow tracking of download times and performance.

Those new to CompuServe especially like the ease with which TAPCIS can be configured. An automatic online setup of CompuServe default parameters is activated with a single menu command. Similarly, joining forums is handled with one menu item.

The software contains a script language, context-sensitive help, universal shelling to DOS and DOS command execution, optional capture of an "online log," and a review of up to the last 350 lines when online. Macros save time for repeated keystrokes and front-end scripts can capture stock quotes, news, weather and other user-selected information for reading offline as a CompuServe Mail "message."

In the IBM world, Autosig (or ATO), a public-domain program supported in the IBM Communications Forum, is the granddaddy of automated access software. It made history in the mid-1980s as a "community hack," that is, a cooperative project by online programmers. The software was developed primarily by Vernon Buerg, Jim

McKeown, Frank Lipschutz, Don Watkins and others.

For those wanting to see what this automated access business is all about, Autosig may be a good first choice. It's free and it's small (not requiring the enormous resources of OzCIS). Autosig will run on IBM PC, XT, AT, PS/2 or close compatible computers with at least 256K of memory available.

Like others in the field, Autosig promises speedy offline processing of forum tasks by grouping (or "batching") in selected forums (and replies to them) for transmission to and from CompuServe in a burst.

Fans point out that since ATO's gurus include some of the system's top forum administrators, such as IBMNET Chief Sysop Don Watkins, the software is especially in tune with CompuServe.

"The key to the economy is Autosig's frugal use of online connect time," Watkins says. "We've fine-tuned this science/art to the point where your connect time to CompuServe will be the absolute minimum necessary to get the job done. You may find your bills drop by 10 times what you pay if you use the system through the manual menus. Or you may find that your bills don't drop at all, and that you get 10 times the productivity out of CompuServe."

All Autosig files are located in Library 1,

"Autosig," of the IBM Communications Forum (GO IBMCOM).

Finally, the growing international flavor of CompuServe has sparked creation of the first automated access program intended for use by those logging on from the United Kingdom. It's TeePee by Ashmount Research Ltd. The software enables users offline to read and reply to messages, create mail and request file downloads; it works on any IBM PC or compatible with a hard disk, 460K of free RAM.

TeePee promises a "browse mode" that allows users to see (and contribute) to forum messages in their actual conversational order, library lists with file downloads available from pick-lists, header-marking features for tagging the header to download the rest of the thread.

The software also has comprehensive help facilities and works under Windows 3.0 and 3.1, DESQview, Unix DOS Emulators and certain Apple DOS Emulators such as Soft-PC.

TeePee is distributed and supported in the U.K. Computing Forum (GO UKCOMP) in Section and Library 10, "Ashmount."

Charles Bowen, author of CompuServe A to Z, is a contributing editor of CompuServe Magazine. His CompuServe User ID number is 70007,411.

Automated Access Programs for IBM PCs and Compatibles

A number of public-domain and shareware terminal programs are custom-built to communicate with CompuServe. Many of them automate operations such as receiving and sending CompuServe Mail, reading and writing messages in the forums and so on. Here are four popular automated programs for IBM and compatible systems.

Autosig

Authors: Jim McKeown, Vernon Buerg, Frank Lipschutz and others.

Forum: IBM Communications Forum (GO IBM-COM), Library 1, "Autosig (ATO)."

Access: BROWSE for ATO*.*

Comments: ATO is a public-domain program and was the first of the genre in the IBM community. It runs on virtually any IBM or compatible.

OzCIS

Author: Steve Sneed

Forum: IBM Communications Forum (GO IBM-COM), Library 12, "OzCIS."

Access: Four files, OZCIS1.EXE through OZCIS4.EXE.

Comments: The newest auto-term on the block, this free program offers windows, mouse-support, lots of flash and color. It does, however, require upper-end machines; it won't run on XT systems or earlier.

TAPCIS

Author: Howard Benner

Forum: TAPCIS Forum (GO TAPCIS), Library 1, "TAPCIS."

Access: Download TAP.EXE (program), TAP-CIS.INF (overview) and TAPDOC.EXE (documentation).

Comments: This is a \$79 shareware program, the masterpiece of the late Howard Benner, considered the father of this kind of software. To many, it sets the standard for auto-terms.

TeePee

Author: Ashmount Research Ltd.

Forum: U.K. Computing Forum (GO UKCOMP), Library 10, "Ashmount."

Access: TPEVAL.ZIP and TPMAN.ZIP.

Comments: This is the first automated terminal program designed with the British/European community in mind.

New PC Software Support

Hundreds of PC software manufacturers are represented online, and all it takes is a GO command to reach them. Because of the amount of PC software supported on CompuServe, only the new manufacturers appearing online are included here, along with any changes (in products or GO commands). Keep this table as a handy reference—and add future PC Insert guides to it for your complete list of PC software support online. Or, to find a specific company, use the FIND command along with the company name.

MANUFACTURER AND SOFTWARE	FORUM AND GO COMMAND
3-D VISIONS Stanford Graphics	Windows 3rd Party A GO STANFORD
ABACUS SOFTWARE Becker Tools; Virus Secure	Windows 3rd Party C GO ABACUS
AIMTECH CORP. IconAnimate; IconAuthor; RezSolution	Multimedia Vendor GO MULTIVEN
ALPHA SOFTWARE Alpha Four	PC Vendor E GO PCVENE
AMAZE Far Side Calendar	Windows 3rd Party D GO AMAZE
AMERICAN POWER CONVERSION Uninterruptable Power Supplies	PC Vendor E GO APCSUPPORT
ARISTOSOFT Wired for Sound	Windows 3rd Party C GO ARISTOSOFT
ARTISOFT LANtastic	Artisoft GO ARTISOFT
ASYMETRIX ToolBook	Windows 3rd Party A GO ASYMETRIX
Daybook+; Instant Database; Make Your Point; Multimedia ToolBook; ToolBook Author's Resource Kit; ToolBook for Windows; ToolBook Multimedia Resource Kit	Multimedia Vendor GO MULTIVEN
ATTITASH WideAngle; AttiTools; Dragnet	Windows 3rd Party A GO ATTITASH
AUTHORWARE Authorware Professional; Authorware Professional for Windows	Macromedia GO MACROMEDIA
AUTOMATED DESIGN SYSTEMS Windows Workstation	Windows 3rd Party D GO WINAPD
BASELINE PUBLISHING D Virtual Monitors	Windows 3rd Party GO WINAPD
BELL ATLANTIC ThinX	Windows 3rd Party C GO THINX
BENTLEY SYSTEMS INC. MicroStation	CADD/CAM/CAE Vendor GO MSTATION
BEYOND INC. BeyondMail	PC Vendor C GO BEYOND

MANUFACTURER AND SOFTWARE	FORUM AND GO COMMAND
BIG NOISE Cadenza; Cadenza for Windows	MIDI Vendor GO MIDIVEN
BLOC PUBLISHING FormTool; FormFiller; Personal Law Firm	PC Vendor D GO BLOCPUB
BORLAND CORP. Object Vision; Paradox Engine; Interbase; Brief	GO BORLAND Borland Development Tools GO BDEVTOOLS
Borland C++; Turbo C++; Turbo C; Turbo Debugger & Tools	Borland C++/DOS GO BCPPDOS
C; C++; Windows Programming	Borland C++/ Windows GO BCPPWIN
Borland dBase	Borland dBase GO DBASE
CADKEY INC. CADKEY 5; CADKEY Light; CADKEY Surfaces; Cutting Edge; DataCAD; DataCAD Velocity	CADD/CAM/CAE Vendor GO CADKEY
CAMPBELL SERVICES On Time for Windows	Windows 3rd Party C GO ONTIME
CASEWORKS CASE:W	Windows 3rd Party B GO CASEW
CIRCA INDUSTRIES Orpheus	MIDI/Music GO MIDIFORUM
CLARION TECH JOURNAL Publication for users of Clarion Professional Developer	PC Vendor D GO PCVEND
CODA Finale; Music Prose	MIDI B Vendor GO MIDIBVEN
COGNETICS Hyperties	Multimedia Vendor GO MULTIVEN
COMMAND SOFTWARE SYSTEMS The EMCEE; F-PROT; FREEZE!; Security Guardian	PC Vendor F GO PCVENF
COMPUTER ASSOCIATES Clipper; Cricket series	Computer Associates GO CAI
CONTACT SOFTWARE INT'L ACT!	PC Vendor E GO CONTACT
COREL SYSTEMS CORP. Corel Draw!	Corel GO COREL
DA VINCI SYSTEMS eMAIL	Windows 3rd Party A GO DAVINCI
DAN MCKEE Winjammer	MIDI/Music GO MIDIFORUM
DELRINA TECHNOLOGIES PerformPRO; WinFAX	Windows 3rd Party B GO DELRINA

MANUFACTURER AND SOFTWARE	FORUM AND GO COMMAND	MANUFACTURER AND SOFTWARE	FORUM AND GO COMMAND
DISK-COUNT SOFTWARE BCM; Portfolio Manager Plus; EIGHT/20	PC Vendor E GO PCVENE	HSC SOFTWARE Graphics Link Plus; HSC Audio Tracks; HSC Image Tools; HSC Interactive; HSC SunScan; QuickShow! for Windows; SantaFe Media Manager	Multimedia Vendor GO MULTIVEN
DVORAK DEVELOPMENT FORCE	PC Vendor F GO FORCE	IBM CORP.	GO IBMCORP
DYNWARE Ballade; Dyna Duet	MIDI/Music GO MIDIFORUM	Advanced Program-to-Program Communi- cations	IBM APPC Info Exchange GO APPCFORUM
EVOLUTION COMPUTING EasyCAD; FastCAD	CADD/CAM/CAE Vendor GO EVOLUTION	Storyboard Live, DisplayWrite	IBM Desktop Software GO IBMDESK
FARALLON PhoneNET Talk Software; PhoneNET; Card PC for LocalTalk	PC Vendor E GO FARAPC	Lan Management Utilities/2	LMU/2 GO LMU2FORUM
FIFTH GENERATION SYSTEMS Fastback Plus; The Logical Connection; The Brooklyn Bridge; Paul Mace Utilities	Fifth Generation GO FIFTH	OS/2	OS/2 Users GO OS2USER OS/2 Support GO OS2SUPPORT OS/2 Developers GO OS2DF1, GO OS2DF2
FINALSOFT Finalsoft Executive	Windows 3rd Party D GO FINALSOFT	ThinkPad	IBM ThinkPad GO THINKPAD
FUNK SOFTWARE Sideways; Worksheet Utilities; P.D. Queue	PC Vendor F GO FUNK	ICOM SIMULATIONS Intermission; On Cue II	Windows 3rd Party A GO ICOM
FUTURESOFT ENGINEERING DynaComm	Windows 3rd Party A GO DYNACOMM	IMAGE-IN INC. Image-In-Color; Image-In-Color Profes- sional	Graphics Vendor GO IMAGEIN
GENUS MICROPROGRAMMING INC. GX Effects; GX Graphics; GX Text; PCX Programmer's Toolkit; PCX Programmer's Toolkit for Windows; Proteus	Graphics Vendor GO GENUS	INFINITE TECHNOLOGIES ExpressIT!; PageIT!; ForwardIT!	PC Vendor F GO PCVENF
GFA GFA-BASIC	Windows 3rd Party C GO WINAPC	INSET SYSTEMS INC. HiJaak; HiJaak PS; HiJaak for Windows; HiJaak ColorSep; InSet	Graphics Vendor GO INSET
GILBERT & ASSOCIATES Viewz	Windows 3rd Party C GO VIEWZ	IOMEGA CORP. Bernoulli Box	PC Vendor E GO PCVENE
GLOBAL SOFTWARES GeoClips Variety Packs I and II	Graphics Vendor GO GSOF	ISICAD INC. CADVANCE	CADD/CAM/CAE Vendor GO ISICAD
GLOCKENSPIEL LTD. Commonview; C++	Windows 3rd Party C GO GLOCK	JENSEN-JONES Commence	Windows 3rd Party A GO JJSUPPORT
GO CORP. PenPoint	Pen Technology GO GOCORP	J.P. SOFTWARE 4DOS	PC Vendor B GO JPSOFTWARE
GOLD DISK Animation Works Interactive; ScreenCraze; Professional Draw	Windows 3rd Party C GO WINAPC	KIDASA SOFTWARE Milestones, Etc.	Windows 3rd Party B GO KIDASA
GOLD HILL GCLISP; GoldWorks	Windows 3rd Party C GO WINAPC	KNOWLEDGE GARDEN INC. KnowledgePro	Windows 3rd Party B GO KNOWLEDGE
GRAPHICS SOFTWARE INC. BIG-D	Graphics Vendor GO BIGD	LEGATO SYSTEMS INC. NetWorker	PC Vendor D GO LEGATO
GRID SYSTEMS CORP. PenRight!	Pen Technology GO GRID	LTA PRODUCTIONS Forte II	MIDI/Music GO MIDIFORUM
HILGRAEVE HyperACCESS/5	PC Vendor F GO HILGRAEVE		

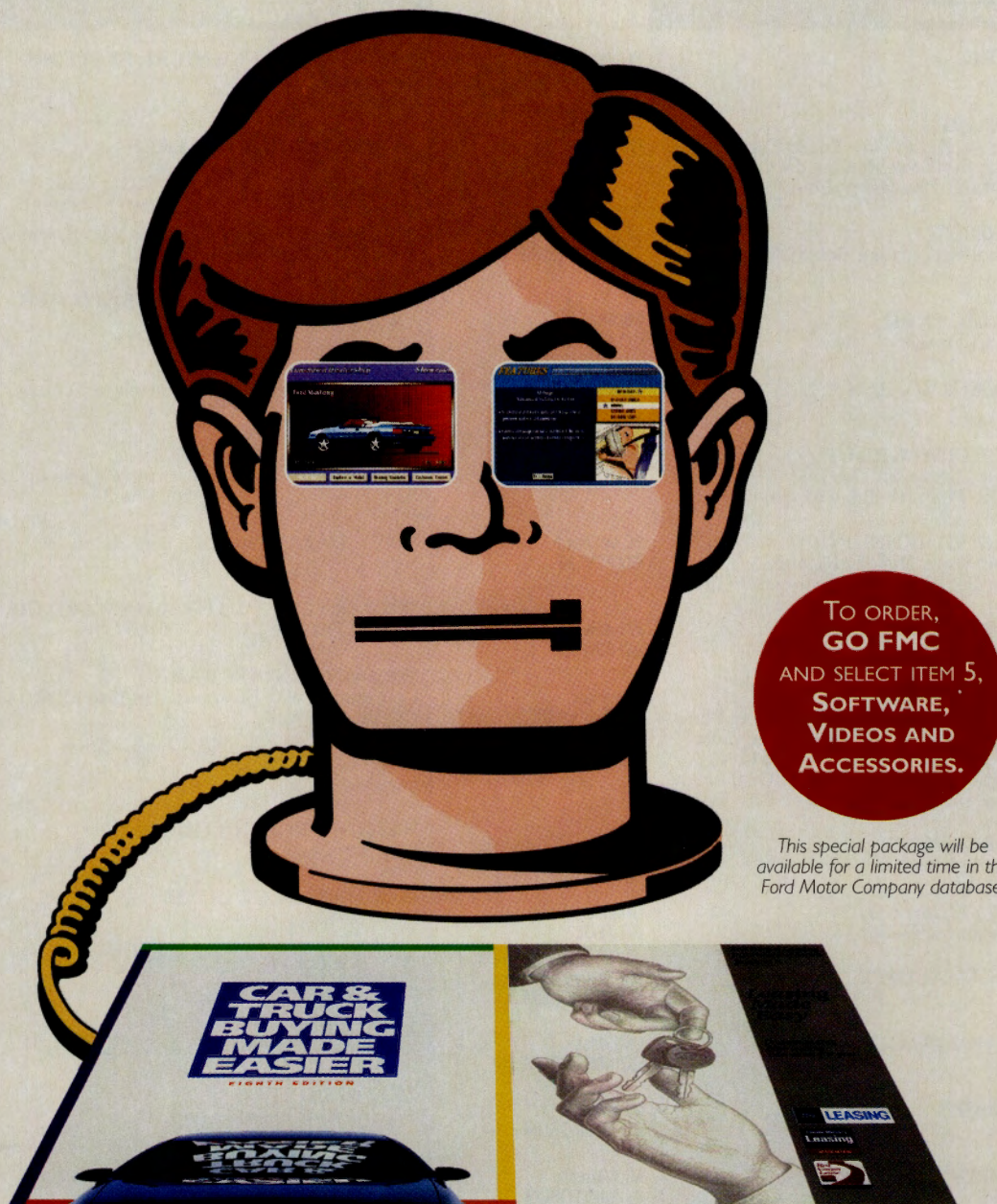
PC SPECIAL INSERT

MANUFACTURER AND SOFTWARE	FORUM AND GO COMMAND	MANUFACTURER AND SOFTWARE	FORUM AND GO COMMAND
MAGNETIC MUSIC Prism; Texture	MIDI Vendor GO MIDIVEN	NBI Inc. Legacy	Windows 3rd Party B GO LEGACY
MATESYS Object Script; Object View; Simple Win	Windows 3rd Party C GO MATESYS	NEW MEDIA GRAPHICS GROUP Data Television Network (DTV); PC/ GraphicOver II	Multimedia Vendor GO MULTIVEN
MATHEMATICA INC. Tempra; Tempra GIF; Tempra Pro; Tempra Show	Graphics Vendor GO TEMPRA	NORTHGATE COMPUTER SYSTEMS Microstation; Slimline; Elegance; Omni; OmniKey Keyboard	PC Vendor A GO NORTHGATE
MECA SOFTWARE INC. Andrew Tobias' Managing Your Money; One-Write Plus; TaxCut	MECA GO MECA	OPTRONICS Songwright V	MIDI/Music GO MIDIFORUM
MEGAHERTZ LAN adapter cards; modems; 3270/5250 terminal emulation; memory upgrades	Modem Vendor GO MEGAHERTZ	PACIFIC DATA PRODUCTS Enhancements accessories for HP and IBM laser printers and compatibles	PC Vendor D GO PACDATA
METAGRAPHICS SOFTWARE CORP. FontWindow; MetaWindow; TurboWindow	Graphics Vendor GO METAGRAPHICS	PASSPORT Master Tracks Pro; Encore; Encore for Win- dows; Trax; MusicTime; Score	MIDI/Music GO MIDIFORUM
MICRO ENGINEERING SOLUTIONS Solution 3000	CADD/CAM/CAE Vendor GO MESOLUTIONS	PAUL MACE SOFTWARE INC. GRASP; WinGrasp	Graphics Vendor GO GRASP
MICROGRAFX Designer; Charisma; XPort; Picture Pub- lisher; Draw	Windows 3rd Party A GO MICROGRAFX	PEACHTREE SOFTWARE Peachtree Basic Accounting; Peach Pay	PC Vendor F GO PEACHTREE
MICROSOFT CORP. Microsoft Works; Project; Powerpoint; Paintbrush; Publisher; Money; Flight Simu- lator and more	Microsoft Applications GO MSAPP	PLAYROOM SOFTWARE Button Maker; Make Over; OSFrame	Windows 3rd Party A GO PLAYROOM
Microsoft C; Quick C; Assembler; MASM	Microsoft C and Other GO MSLANG	POLARIS SOFTWARE PackRat	Windows 3rd Party A GO POLARIS
Microsoft LAN Manager; SQL Server	Microsoft Client- Server Computing GO MSNET	PRESIDIO SOFTWARE INC. PC Animate Plus	Graphics Vendor GO PRES
Microsoft Windows NT; Microsoft Mh32	Microsoft WinNT Prerelease GO WINNT Microsoft Win32 SDK GO MSWIN32	PROCOM TECHNOLOGY Storage Devices	PC Vendor D GO PTINC
Pen SDK; Ole	Windows Extensions GO WINEXT	PROTOVIEW DEVELOPMENT ProtoView; ProtoGen; DataTable	Windows 3rd Party C GO PROTOVIEW
Microsoft Word	MS Word GO MSWORD	PUBLISHING TECHNOLOGIES File Organizer; MultiTack; Batchworks; TextEdit	Windows 3rd Party A GO PUBTEC
MIDISOFT MIDIsoft Studio/Standard; MIDIsoft Studio/Advanced	MIDI/Music GO MIDIFORUM	PURE DATA LTD. Interface cards; MAUS; fax/modem servers	PC Vendor F GO PUREDATA
MIP FUND ACCOUNTING MIP Fund Accounting System	PC Vendor F GO PCVENF	QUARTERDECK OFFICE SYSTEMS DESQview 386; QEMM-386; QRAM; Mani- fest; DESQview; QEMM 50/60; DESQview API Libraries	Quarterdeck GO QUARTERDECK
M-USA BUSINESS SYSTEMS Pacioli 2000 Accounting; Pacioli 2000 Pay- roll; CashBiz; M-USA Video	PC Vendor C GO PCVENC	QUERCUS SYSTEMS Personal REXX; REXXTERM	PC Vendor A GO QUERCUS
MUSICWARE PC-Lyra	MIDI/Music GO MIDIFORUM	QUESTAR TECHNOLOGY Questar	MIDI/Music GO MIDIFORUM
		RIX SOFTWARES INC. ColoRIX; WinRIX	Graphics Vendor GO RIXSOFT
		SAROS CORP. Mezzanine	Windows 3rd Party C GO SAROS

PC SPECIAL INSERT

MANUFACTURER AND SOFTWARE	FORUM AND GO COMMAND	MANUFACTURER AND SOFTWARE	FORUM AND GO COMMAND
SEMWARE QEdit	PC Vendor E GO SEMWARE	UNIVERSAL TECHNICAL SYSTEMS TK Solver	CADD/CAM/CAE Vendor GO UTSSUPPORT
SLATE CORP. PenApps; At-Hand; Day-Timer Pen Scheduler; PenBook Reader; PenBook Au- thor; LapLink Pro; SafetyPen	Pen Technology GO SLATE	VIDEO ASSOCIATES LABS Splice	Multimedia Vendor GO MULTIVEN
SOFTBRIDGE Bridge Tool Kit; Bridge Batch; Auto Test Facility	Windows 3rd Party B GO SOFTBRIDGE	VIDEOLOGIC MIC System Monitor; MASK; MIC Systems I & II; ToolBox Plus	Multimedia Vendor GO MULTIVEN
SOFTTELLIGENCE Personal Composer	MIDI/Music GO MIDIFORUM	VIRTUAL REALITY LABORATORIES Vistapro	Graphics Vendor GO VRLI
STAC ELECTRONICS Stacker	STAC Electronics GO STACKER	VOYAGER Voyager CD Audio Toolkit; Voyager Video- disc Toolkit	Multimedia Vendor GO MULTIVEN
THE STIRLING GROUP Dbx Shield; Demo Shield; Install Shield; Log Shield; Mem Shield; Tbx Shield	Windows 3rd Party C GO STIRLING	VOYETRA Sequencer Plus Jr.; Sequencer Plus v3.0; Sequencer v2.0; Sequencer Plus Gold	MIDI/Music GO MIDIFORUM
STORAGE DIMENSIONS LANSTOR Hard Disk Subsystems; SpeedStor/2; Optical Subsystems; WORM	PC Vendor F GO PCVENF	WALL DATA Rumba	Windows 3rd Party C GO WALLDATA
SWFTE INTERNATIONAL TypeCase	Windows 3rd Party D GO SWFTE	WILLIES COMPUTER SOFTWARE CO. COMM-DRV; MTASK; COMM-LOG	PC Vendor F GO WILLIES
SYMANTEC CORP. Q&A; TimeLine; GrandView; Note-it Plus; SQZ! Plus; Norton Utilities; Commander; Back-up; Editor; Vivid; ThinkC; PC Any- where; Actor; Wintrieve; Object Graphics; Actor Professional; Whitewater Res Tool	Symantec GO SYMANTEC GO NORUTL GO SYMFORUMS	WILSON WINDOWWARE Command Post; Browser; Win Batch; Win Check; Win Edit	Windows 3rd Party C GO WILSON
TEACH SERVICES Laser Music Processor	MIDI/Music GO MIDIFORUM	WINDOWCRAFT WindowCraft	Windows 3rd Party B GO WINAPB
TEGL SYSTEMS CORP. TEGL Windows Toolkit II	Graphics Vendor GO TEGL	WITHIN TECHNOLOGIES Realizer	Windows 3rd Party C GO WITHIN
TEMPORAL ACUITY Music Printer Plus	MIDI/Music GO MIDIFORUM	WORDPERFECT CORP. WordPerfect	WPCS GO WORDPERFECT
THEME SOFTWARE Theme	MIDI/Music GO MIDIFORUM	WUGNET WUGNET Journal	Windows 3rd Party B GO WUGNET
THINKWARE Musicator	MIDI/Music GO MIDIFORUM	XTREE CO. XTree series of files and disk managers	PC Vendor E GO XTREE
THOUGHTPROCESSORS The Note Processor	MIDI/Music GO MIDIFORUM	ZENOGRAPHICS Super Print; Pixie; Import	Windows 3rd Party B GO ZENO
TRAVELING SOFTWARE INC. Battery WatchPro; CasioLink/PCLink; LapLink; WinConnect	Palmtop GO PALMTOP	ZSOFT CORP. PC Paintbrush+; Publishers Paintbrush; Publishers Type Foundry; SoftType	Windows 3rd Party B GO ZSOFT
TRUEVISION ATVista CAD Driver; Image Processing Software; Slide Presentation Software; TGA File Format; TIPS; Targa Software Tools	Multimedia Vendor GO MULTIVEN		
TWELVE TONE SYSTEMS Cakewalk; Cakewalk Pro; Cakewalk Pro for Windows	MIDI Vendor GO MIDIVEN		
UNIVERSAL DATA COMMUNICATIONS Network Management	PC Vendor F GO UDCINC		

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by Patricia Harris
and David Lyon

The Garden Goes to Pots



JUDYWHITE

Brilliance amidst a sea of concrete: Geraniums on the rooftop of New York's Rockefeller Center

PERSONAL BUSINESS

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your personal best. Wise consumer.
Time watcher. Intricate researcher.
Savvy politico. Grown-up kid.
You've got the need, we've got the
gear; it's all right here.

▼
No Place to Grow

▼
Gardening Uploads, p. 36

▼
Taking a Hike? Take a
Number, p. 38

▼
Singles Mingle, p. 42

► **Green-thumbers lacking in space or good soil are trying container growing of their flowers and food.**

Gardening Forum members often observe that "the only thing you *have* to do is plant—everything else is just advice." But that advice is essential if you join the renaissance in container gardening.

People have been growing fruits, vegetables and flowers in containers for 4,000 years, but improved potting soils and cultural techniques—as well as worldwide interest in growing tropical crops in nontropical climes—have made container growing more flexible than ever.

The reasons to plant in pots cover a lot of ground. Lack of arable land can be one strong incentive. Apartment dwellers aren't immune to the gardening itch, but they don't have the ground to scratch it. So they look to the patio, balcony and windowsills and start planning.

Forum member Bob Goldschmidt recently bought a townhouse in Maryland near Washington, D.C. "I have a few square feet of decent ground space that gets six to seven hours of afternoon sun per day," he says. "The rest of the space I have to make myself—along walls

and backyard fences, and on top of the deck I hope to build next year. Since I am into vegetables and herbs, that means high efficiency and low ground space. Ergo, containers and vertical training."

Even gardeners with a tract to plant may prefer to let their plants go to pots. The back yard might be plagued with gophers, wireworms, fungi that make plants wilt, or microscopic worms that stunt and disfigure peppers and tomatoes. Jack Ruttle, a forum regular from Pennsylvania with two decades of experience as a garden writer and editor, has never been able to grow eggplant in any of his gardens because the soil-borne disease, fusarium wilt, is ubiquitous in his region. So he raises eggplant in containers *on top* of the soil. Paul Mooney in the United Kingdom echoes the advice. He grows cucumbers in "growbags," large plastic bags equipped with a proprietary soil-less mix, to beat the cucumber wilt lurking in his garden loam.

Sometimes even a good-sized garden is inadequate to the gardener's ambitions. George Farmer has turned his garden beds over to experimental plantings of pre-Columbian heirloom plants, so his Austin-area tomatoes reside in 5-gallon tubs.

Frigid winters and scorching summers also offer ample reason to make the garden a movable feast that can trundle indoors when

the mercury dips or soars. I.M. Chenpagga in London uses containers to raise tropical perennials, such as *Salvia fulgens* and *Datura*, "so I can bring mature, tender plants into shelter for the winter." David Hoffman, also of the United Kingdom, keeps a warm memory of Crete forever green in a 9-inch pot. He plucked an oleander flower for his partner on a 1983 trip. She kept it in water until it rooted; now they have oleander flowers all summer and much of the winter.

Special rewards grow from special challenges. Ruttle, who fields many container gardening questions in the Gardening Forum, observes that neophytes often fill their containers with "ground they dug up somewhere instead of using a soil-less mix. You can't duplicate normal growing conditions in a container because the roots can't spread as far." Container soil has to supply more water and nutrients than garden soil, and must have more space between the soil particles. In a way, Ruttle advises, it's better to think of container gardening as hydroponics, where the soil is just a medium. (For more information, see the forum file listings on p. 36.)

United Kingdom gardeners are well-known for their expertise, and virtually all of them use either a standard mix of milled peat moss with slow-release fertilizer or "growbags." Alan Ogden, who keeps potted fuchsia and a bay tree, has recommended Arthur Bower's potting compost to fellow U.K. gardening enthusiasts.

Even in soil-less mix, container plants get thirsty. "You're

going to need to water every day once you get into the season," Ruttle says. "The plants will have grown roots that go through all the soil and they're going to exhaust it of moisture almost every single day. Hot, windy conditions will accelerate that." If you'll be away a few days, advises U.K. gardener Elsby Littlewood, set pots on capillary matting, which wicks water into the containers.

Container plants, especially herbs and vegetables, must be fed heavily, usually with a chemical fertilizer. It's the nature of the

beast: Growing food in containers is not "natural." Ruttle counsels feeding at least once or even twice a week with diluted liquid fertilizer or using a granulated, time-released fertilizer in the soil.

"I recommend against using manure tea or fish emulsion," he says reluctantly. "It smells. Most containers sit on wooden decks that can absorb the stuff and hold the smell for a long time, or on balconies where it might drip down to your neighbors below."

What can you plant in? Ask around

the Gardening Forum and people will testify to the efficacy of everything from plastic garbage pails and chimney flue tiles to giant clam shells—all with drainage holes poked near the bottom. Large containers can be hard to move, unless they're on casters or a dolly. Chenpagga has even found that large granite horse watering troughs, still found along British byways, make superb flower containers, and at a ton each, "theft is not a problem."

In any case, be prepared to take care of container plants. Says Ruttle, "Stake things that need to be staked, such as peppers or eggplant, and pinch things when they need to be pinched, such as tomatoes and flowers. That way, they stay compact and attractive and don't get leggy and start trailing all over the place. You'll be happier if your plants look great." Read more about container gardening reference sources on p. 35.

Patricia Harris and David Lyon are free-lance writers based in Cambridge, Mass.

When to Plant? A High-Tech Answer

Gardening has one thing in common with comedy: It's all in the timing. Knowing when to sow and when to reap has always bedeviled gardeners, but the Gardening Forum (GO GARDEN) may have a high-tech fix. The forum is building a database that should become the best, most detailed horticultural/climate information ever compiled for various microclimates. Certainly it will be more localized than the U.S. Department of Agriculture hardiness zone maps found on the back of U.S. seed packages.

It doesn't take a genius to see that while St. Louis and Boston have similar minimum winter temperatures and thus share the same hardiness zone, gardening conditions are very different in the two cities. Moreover, reports Assistant Sysop Virginia Blake-lock, members are checking in with data from parts of Europe, the United Kingdom, Australia and New Zealand.

Like all database systems, the forum's Garden Log depends on high-quality data. Every flower-grower, tomato-raiser and tree-lover on CompuServe can help. The Garden Log needs data from your back yard. Examine the format in the sample file GARDEN.LOG in Library 14, "Garden Survey & Log": Include place, date and observations. For example, "Boston, May 18. Common lilacs finally opening after three days of temperatures of about 70 degrees." Leave observations in Section 14.

The ongoing log will tell what's blooming where, when people planted certain seeds

and when they came up, when tomato plants began to set fruit, how daylilies reacted to unusually heavy rains, when the tomatillo harvest began in Texas, the start of the sour cherry harvest in Michigan, and more. Over time, the database can become a landmark horticultural tool.

The log is currently in development, but there will probably be two usable end-products: a diary format that could be downloaded by state or province, and a database format to be queried by date, location and flower/vegetable types. Additional divisions of the diary format may be made later for European and Asian climates. What could the logs tell a gardener? Bulbs that do well in Philadelphia, perhaps, or strains of chile peppers that set fruit reliably near Denver. When to expect the lilac blooms in Cleveland, or when to plant spinach in southern Florida.

In addition to the diary and database, the forum is

considering a "bloom wave" bulletin system, based on member reports, says Blakelock. The idea came from forum member Hisashi Kokubun, a plant recorder at the Morris Arboretum of the University of Pennsylvania in Philadelphia. He reports that in his native Japan, events such as cherry blossom or dogwood blooms are plotted as a "front" or "wave" moving across the country and are reported in newspapers, much as New Englanders plot peak foliage viewing in the fall.



Rides 'Bloom wave': Kokubun

—PH & DL



Southwest-flavored containers are perfect for growing spiny desert plants: Cactus gardens

Read More About It

Gardening in containers has more permutations than you can shake a trowel at, and many articles on the subject have appeared recently. Search Magazine Database Plus (GO MAGDB) using the keywords CONTAINER GARDENING and INDOOR GARDENING. Here's a sampling:

GENERAL

■ "A Salad Basket in Two Weeks? Yes, with a Quick-Sprout Mix of Salad Greens," *Sunset Magazine*, March 1991, vol. 186, no. 3, p. 92(2). Reference #A10404098. Mesclun is a hot food trend, and this article shows how to grow gourmet salads on the windowsill or in gift baskets.

SOIL

■ "Container-soil Physics and Plant Growth (Biologist's Toolbox)," *BioScience*, October 1990, vol. 40, no. 9, p. 685(2). While the technical explanation can be hard going, this article should halt overpacking of potting soil with its explanation of why roots need air as much as they need water and nutrients.

■ "Perennials in Pots. They Can Last for Years. Here Are Choices," *Sunset Magazine*, November 1989, vol. 183, no. 5, p. 196(1). Reference #A8065973. Perennials are usually permanent plantings, but this article shows how to make them portable. Growing perennials in containers can be tricky, since some plants require outdoor conditions that must be replicated indoors. This overview and list of suitable plants is a good place to start experimenting.

■ "Can You Grow Vegetables in Pots? Yes, If...," *Sunset Magazine*, April 1986, vol. 176, p. 104(3). Reference #A4189755. This is a good introduction to growing vegetables in everything from garbage pails to terra cotta landscape decorations. It provides an overview of vegetables suited to patios, porches, along walkways, on windowsills or rooftops.

CONTAINERS

■ "What About All the New Plastic Pots?," *Sunset Magazine*, November 1988, vol. 181, no. 5, p. 238(2). Reference #A6730244. Technical and aesthetic advances in plastics molding make certain plastic pots the best choice for some plants.

"A Long Happy Life for a Wooden Container," *Sunset Magazine*, March 1987, vol.

178, p. 196(2). Reference #A4696710. This piece promotes using old wine barrels as flower containers and tells how to keep them literally in shape.

CARE AND TECHNIQUES

■ "Repotting Rootbound Plants Can Save Water and Work," *Sunset Magazine*, July 1989, vol. 183, no. 1, p. 146(2). Reference #A7695509. Container plants eventually displace soil with roots. Know the symptoms and what to do about them.

■ "Salad Garden on a Deck Rail ... It's Hydroponic," *Sunset Magazine*, April 1988, vol. 180, no. 4, p. 126(2). Reference #A6476941. Hydroponic gardening is usually associated with basements and fluorescent lights, but these plans show how to beat the watering/feeding problems of outdoor plantings with a deck-rail hydroponic system.

■ "Eight Ways to Save Work and Water When You Garden in Containers," *Sunset Magazine*, July 1987, vol. 179, p. 154(2). Reference #A5093784. If container gardening has one downside, it's the frequent watering that's necessary, especially in warm weather. These tips save both labor and water.

■ The National Gardening Association manages the Gardening Forum. For a subscription to its bi-monthly magazine, *National Gardening*, call 800/727-9097.

Use Your Florist, Walter Knoll

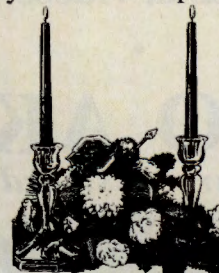
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Dig These Up: Container Gardening Uploads

The Gardening Forum (GO GARDEN) libraries are a wealth of information on soil, growing techniques and individual flowers, fruits, herbs and vegetables. While the main focus is in-ground gardening, would-be container gardeners will find many useful files. Here's a sampling:

FREE SEEDS AND PLANTS CATALOGS

List of mail-order seed and plant companies that provide free catalogs on request. ASCII format can be easily edited to create mailing labels. Library 2, "Vegetable Gardening," FREE.CAT (11,686 bytes).

HYDROPONIC GROWING

Discussion of the ins and outs of growing vegetables in liquid solution under lights. Library 2, HYDRO.THLD (10,289 bytes).

BOTTOM HEATING SEED BEDS

Transcript of an online discussion about using heating pads, coils, heat tape and other strategies beneath seed flats to encourage germination. Library 2, BOTTOM.THLD (2,065 bytes).

FLOWERS AND COLOR SCHEMES FOR CONTAINERS

Guide to mixing different flowering plants for pleasing displays in containers. Library 3, "Flower Gardening," BOUQUE.TXT (4,334 bytes).

USDA HARDNESS ZONE MAP

Where do you fit in? Hardiness zones are still the rough gauge of climate for selecting plants that will grow outdoors. Graphic format. Library 8, ZONES.GIF (54,672 bytes).

FROST DATE DATA

Average dates for first and last frost for 120 U.S. cities. Library 8, "Help!" FROST.TXT (8,278 bytes).

POTTING MIX FORMULAS

Potting soil and garden soil are two entirely different critters. This file supplies do-it-yourself recipes to create soil mixes for different applications. For the soil-less mix best for most kinds of container gardening, see the entry on seed-starting mixes. Library 10, "Pests and Soil," POTTNG.TXT (3,725 bytes).

GROWING PLANTS UNDER FLUORESCENT LIGHTS

Charts show the spectra of cool white and daylight fluorescent bulbs versus specialized plant-light bulbs. Accompanying text file discusses the implications of the charts. Library 11, "Tool Talk," PGROW1.TXT (3,125 bytes), PGROW2.TXT (4,068 bytes).

POTS AND PLANS

Oriented to starting plants for transplanting into the ground, this article from *National Gardening* magazine also provides helpful information on common and unusual containers. Library 11, POTS.TXT (12,019 bytes).

HYDROPONIC RESOURCE LIST

Hydroponic equipment became scarce for a while when it was associated with drug production. This file explains where to get materials and books on legitimate hydroponic gardening. Library 11, HYDPNC.TXT (3,632 bytes).

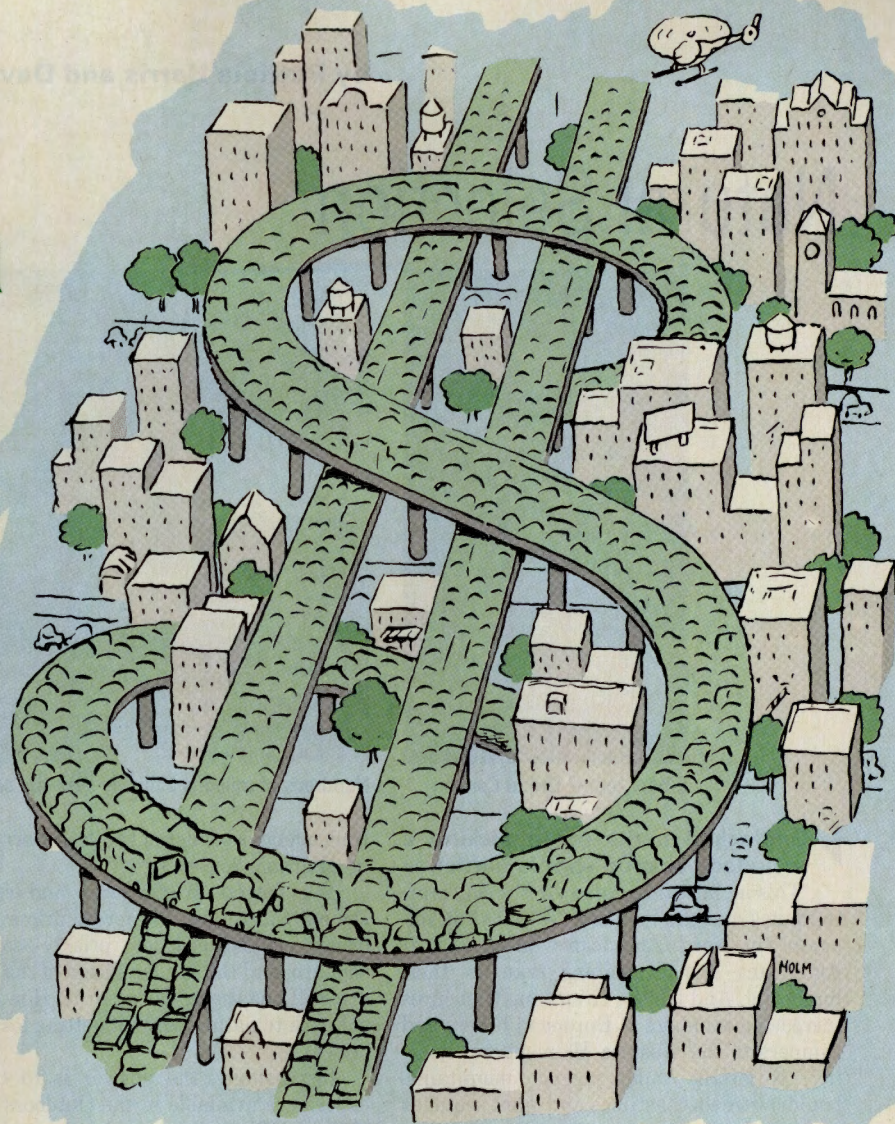


Impatiens, chrysanthemums and Boston ivy add a colorful touch to above-ground areas: Front porch

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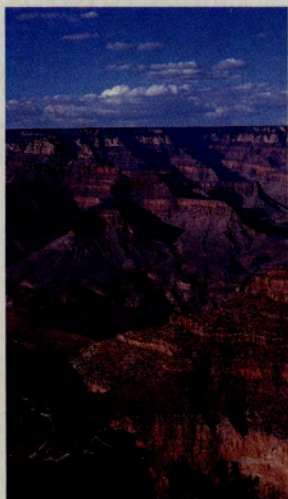
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Natural Selection



Elbow room? Grand Canyon



Hundreds of millions annually seek the serenity of U.S. National Parks: Bull elk in Yellowstone

► Gridlocked parks mean picking a secluded vacation spot is harder.

"This is the forest primeval, the murmuring pines and the hemlocks"—that's the image of the North American wilderness that Americans and Canadians take as their birthright. And it's the siren song that lures increasing numbers of European hikers and campers to the Western Hemisphere. Roaring waterfalls and jagged mountains, boulder-strewn coastlines and giant sequoias—that's the dream.

With apologies to Longfellow, the reality can be more like this: "Sky Traffic 1 reporting. Looks like a 6-mile backup at the park

from a fender bender at the gate. Sorry, folks, no alternate routes."

Yet, despite traffic jams and creeping commercialization, the forest primeval, the desert landscapes of prickly-pear and saguaro, and the sudden bloom of the tundra are still out there. Question is: How do you get back to nature without getting lost in the crowd?

Increasingly, the answer is to tap the experience available in the Outdoors Forum (GO OUTDOORS), which member Al Goggins appreciatively calls the "the world's largest international backwoods outfitters and travel agency," noting that customers

have to make their own arrangements.

The day-to-day action and advice takes place in Section 10, "Camp/Hike/Walk/RV." The cumulative expertise of forum members is formidable; there is probably someone on the forum who has already been wherever you plan to go. Forum member Jim Garrett, for example, revised his hiking plans for U.S. National Parks based on forum discussions. "The best feedback came from those who offered information on the less-traveled trails that are not mentioned in the more popular trail guides," he says. "I also found that the respondents were very honest; if they did not like an area, they said so and

Outdoors Forum's Family Album

It's the record of the big one that *didn't* get away, the stop-action shot of a kayaker shooting the falls, the immense vista that inspired John Muir a century ago. It's Library 4, "Outdoor Graphics," in the Outdoors Forum (GO OUTDOORS).

Photographers have been dragging cameras over the rivers and through the woods since the advent of wet-process, glass-plate view cameras. Today's 35mm autofocus cameras may be easier to tote than the 8-by-10 behemoths of old, but photographs that capture the spirit of the outdoors are as elusive as ever.

The Outdoors Forum harbors an amazing number of professional writers and photographers, including Forum Manager Joe Reynolds and Assistant Sysop Tony Mandile. Each has contributed 100 images to the Outdoor Graphics library.

Despite the occasional keepsake image,



Montana Bighorn sheep: Among GIF images

such as a shot of Reynolds holding a large bass aloft, most of the 200-plus graphic images (GIFs) are difficult wildlife photo-

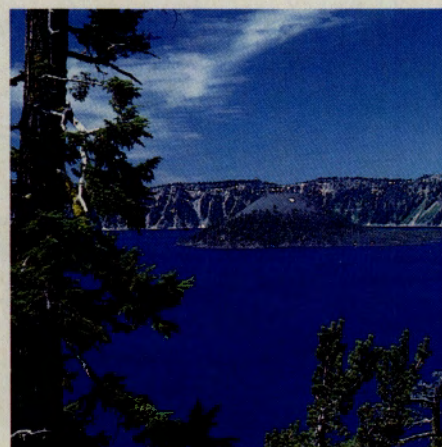
graphs (such as strutting wild turkey, bull elk) and outdoor scenes "of some of the world's most beautiful natural locations," as Reynolds puts it.

Presently, the Outdoor Graphics library emphasizes the field-and-stream, fish-and-game aspect of the forum. Reynolds adds, "We will also be working to develop high-quality GIFs related to other areas of the forum—scouting, cycling, birding, climbing, camping, boating and more."

The library is by no means limited to photo professionals. Forum members are encouraged to participate in a contest by uploading GIF files to the forum or sending slides or prints to Reynolds for scanning and uploading. Professional photographers serve as judges to select winning entries in several categories. Winners receive a month of free connect-time in the forum. See the forum's special announcements for details.



Human crush means parking spaces, campground vacancies are an endangered species: Grand Teton



Popular Oregon park: Crater Lake

gave reasons. It's great to know that with this forum you have the most up-to-date information on trails throughout the United States and the world, and some of the most reliable sources I have found."

Forum members flesh out hearsay impressions. When a member announced plans to hike Bright Angel Trail in Grand Canyon, he soon learned that the 10 percent of visitors who venture down from the canyon rim almost all gravitate to Bright Angel. Members suggested alternate trails with strategies to cope with their hardships, such as lack of potable water.

Getting back to wilderness in North America usually means visiting one of the national parks. The U.S. National Park Service administers 361 parks that range from a fraction of an acre to 7 million acres. The crown jewels of the system, the 50 sites with "National Park" in their names, cover 74,000 square miles. Canada's National Parks system includes 34 parks totaling more than 70,000 square miles. In 1991, 268 million people visited the U.S. parks, up 16 percent from the year before. By the end of the century, experts project 360 million a year will pass through the gates.

With so many people heeding the call of the wild, unfettered access is quickly vanishing. Rafting a wild river or trekking a lone-some desert usually requires a permit, a mechanism to protect fragile ecosystems. Parking spaces are an endangered species at such places as the Cape Cod National Seashore. National Park campgrounds, especially those for RVs, frequently post the "no vacancy" sign.

So how can you minimize aggravations if you want to see one of the popular spots in high season? Debbie Emery and her family were among the 3.1 million visitors to Yosemite National Park last summer. Any-

one who has seen Ansel Adams' Yosemite landscape photographs is drawn to the place. But the park's extraordinary beauty so close to central California population centers spells human overload—not being able to see the forest for the RVs. Recognizing the park's reputation for crowding, the Emerys posted a plea for advice in the Outdoors Forum. Should they take mountain bikes for all four family members? What sights should they be sure not to miss? What should they avoid? How could they cope with the crowds?

Goggins gave the Emerys sure-footed advice, including specific trail suggestions. In general, he advised riding mountain bikes to get to the trailheads. Cycling takes less time than walking ("pleasant but slow") or driving a vehicle ("tedious, frustrating, maddening and part of the problem with Yosemite"). The best bet: Leave the tourist amenities behind and "spend your time on trails out of and away from Little Yosemite Valley itself."

But there are other strategies for heading for the hills. While some parks—Yellowstone, Grand Canyon, Shenandoah in the United States, or Banff and Jasper in Canada—are heavily visited during summer vacation weeks, the good news is that even these are less crowded in the off-season and that other, less heavily trafficked spots still exist. Forum members report being virtually alone on Yellowstone's trails shortly after Labor Day, and aficionados of desert hiking rave about the Grand Canyon trails in spring, fall and winter. One experienced hiker advises, "Go before Memorial Day." The North Rim of Grand Canyon National Park opens in early May, but the crowds don't arrive until June. Meantime, thanks to the snow-melt runoff, the desert is in full bloom.

Even during the late-June to Labor Day

PERSONAL BUSINESS

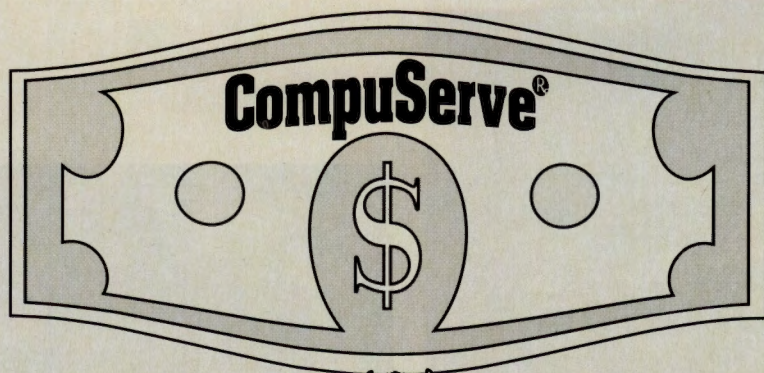
crunch, Bryce Canyon or Zion National Parks in Utah are sedate compared to the Grand Canyon, suggests Rick Tourangeau of the U.S. National Park Service. In California, consider Redwood National Park or Lassen Volcanic National Park rather than Yosemite if you seek solitude. The least used parks in the lower 48 states offer some of the most rugged wilderness—Isle Royale in Michigan and Voyageurs National Park in Minnesota, a canoeist's paradise of streams and lakes. Similarly, Kootenay National Park in British Columbia boasts much of the Rocky Mountain scenery of Banff and Jasper but many fewer visitors.

Not everyone is looking for complete isolation, however, and the Outdoors Forum also helps out with somewhat tamer excursions that don't involve the remote trails of national parks.

Forum member Deborah Deegan learned about solid local advice the hard way. Another forum member suggested Olentangy Indian Caverns Campground near Columbus, Ohio. But her party had already made reservations at a well-known campground chain at Buckeye Lake. "We spent three miserable nights ... the worst camping experience yet. Loud all-night music, wet ground, no grass, etc. The last day of the trip we decided to check out Olentangy Caverns, which were beautiful! The campground is truly lovely—large shady lots, cheaper than the other one, beautiful pool. Olentangy is the best camping spot near Columbus."

Sometimes advance advice completely alters a member's plans. Stan Racis reorganized an entire trip based on forum messages. He scrapped preparations for a horseback camping trip in the Adirondack Mountains in New York because he received

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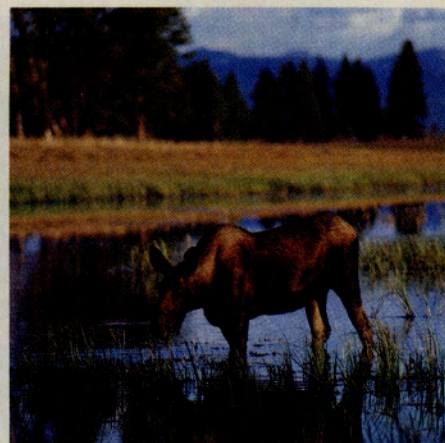
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NORM SMITH

Northern overexposure: Yellowstone moose

"such good suggestions that I went to Colorado instead. I was given the name of a specific outfitter and used them," he says, noting that the outfitter was a small family operation that he would not have found except through direct referral. "The results were only tremendous! That trip may be the best vacation experience I ever had."

The forum also yielded leads on "secret" fishing holes in upstate New York. "Anyone who loves and appreciates fishing is automatically considered one of the family, so sharing of secrets becomes mandatory," Racis says.

Forum members freely admit that while they may prefer solitude and silence on the trail, part of the outdoor experience is telling about it around the campfire—or the glowing computer screen.

Patricia Harris and David Lyon are free-lance writers based in Cambridge, Mass.

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National Park Info Online

To really get away on a getaway, start with an overview of choice destinations. Check into Information USA (GO INFOUSA) and select Option 10, "Vacations and Business Travel," then Option 2, "Parks and Camping." You'll find ordering information and brief descriptions of the publications of the U.S. National Park Service. Better yet, you'll also find state and local park listings under "Camping."

If you prefer to avoid the obvious, see the listing that describes the National Park Service brochure, *Lesser-Known Parks*. It's essential reading if you want to take a page from *Huckleberry Finn* and "light out for the wilderness." Likewise, Information USA provides the essential phone numbers for reserving campsites in the U.S. National Parks and the parallel system of National Forests.

Although there are many online discussions of Canadian wilderness destinations, Canada's National Parks system hasn't posted online information as yet; however, brochures are available from Parks Services, Environment Canada, 25 Eddy St., Hull, Quebec, Canada K1A 0H3.

Camping and Hiking Files

The Outdoors Forum's Library 10, "Camp/Hike/Walk/RV," is stuffed with useful files for getting equipped: checklists for packing, strategies to minimize your personal impact on the environment, and directories of suppliers and subject experts. See the library directory, ODFLIB.10, for details.

Individual recommendations for extraordinary places to go (and threads about how to visit them) have a way of ending up as files in the Outdoors Forum as well as in the Travel Forum. Check out these files (and many others) for useful previews of outdoor spots with elbow room:

OUTDOORS FORUM (GO OUTDOORS)

Library 10, "Camp/Hike/Walk/RV"

GRAND CAMPING

A guide to backpacking the Havasupai area in the Grand Canyon of the Colorado. SUPAI.TXT (4,440 bytes).

THE ADIRONDACKS

Hike across the heights of the Adirondacks, complete with lodge details. ADIRON.HPR (3,065 bytes).

CANADIAN ADVENTURES

Along the Bruce Trail in Ontario from the trailhead to Cypress Lake. BRUCE.DOC (15,862 bytes).

HIKING JOURNAL

A journal of the 45-day hike the length of the Appalachian Trail. ATHIKE.TXT (33,311 bytes).

NEW YORK TRAILS

Books, guides, maps and more about hiking in New York. Contains addresses, prices and sources. HIKENY.TXT (6,170 bytes).

TRAVEL FORUM (GO TRAVSIG)

BAJA GUIDE

Baja California offers some of Mexico's best campgrounds. Library 3, "Mexico, Central America," BAJADR.MEX (7,209 bytes).

ISLAND OF DOMINICA

Caribbean island offers extraordinary hiking in a tropical rainforest. This file gives details on a hike to Boiling Lake and Valley of Desolation. Library 4, "Caribbean," HIKE.DOM (7,281 bytes).

SWISS HIKING

When a forum member who was visiting Zurich asked for suggestions on nearby daytrips and hiking excursions, other members came up with these suggestions. Library 8, "Europe," ZURICH.THD. (6,831 bytes).

MAUI HIKE

A guide to day hikes and longer overnights to and around the crater of Mt. Haleakala on Maui, Hawaii. Library 11, "Hawaii Help Line," BACKPK.MAU (8,625 bytes).

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Singles Together

► Solo players in the dating game mingle in Human Sexuality area.

AIDS. Alienation. An economy that makes one-time Club Med types wonder if they can handle anything more pricey than a Roach Motel. Date rape, sexual harassment and fear of being accused of same. Men Who Hate Women Who Support a Cottage Industry of Best-selling Authors Who Write Endlessly about the Whole Sleazy Mess. Are we having fun yet?

A guy we'll call Ricky summed up the thoughts of many in a message posted in Section 5, "Singles Club," in the Human Sexuality Open Forum (GO HSX-100): "I want someone to curl up with and watch a movie. Someone to walk hand-in-hand with in the park. Someone to share a little corner of my life with. But this is the '90s, and that's not allowed anymore."

Ricky was probably feeling especially down that day, but we all know whereof he posts. According to the U.S. Census Bureau, some 40 percent of all adults—more than 70 million Americans—were single in 1991. Despite their numbers, however, modern singles in search of marriage or a long-term relationship don't have it easy. Once upon a time, they could count on meeting their own kind in the normal course of community life at, say, the big barbecue at Twelve Oaks, or

under the odd Veronese balcony. People paired off at an early age like applicants for Noah's Ark and stayed that way. But times change, and so do options for singles—for better and for worse. Ricky might not like a lot of the new social parameters, but he also has a resource that Rhett and Romeo never dreamed of: a modem. Ah, bright lights, big electronic global village.

At least one current member found the Singles Club when, as a new CompuServe member, he impulsively typed FIND LOVE at a prompt. (FIND MARRIAGE and FIND SEX also will point you toward the forum.) The Singles Club welcomes everyone—divorced, widowed, never-married, older, younger, those who love being single, those who hate being alone, and even married people who can offer a little hindsight perspective. (The one possible exception is gay and lesbian singles, who are better served by heading around the corner to HSX's three gay and lesbian groups, or over to the Issues Forum's Section 17, "Gay and Lesbian Issues.") Once on board, singles can lurk or dive in and schmooze on topics from jealousy to shyness to safer sex.

So, what's a nice girl (or boy) doing in a place like this? Can cruising at 1200 bps result in a meaningful relationship?

"Traditional dating involves a progres-

sion: You see someone and get a visual impression, then you begin to talk to them and find out what their values are, and then you go out with them," says Dr. Samuel Pauker, an assistant clinical professor of psychiatry at New York Hospital. The bar scene of the '70s and '80s frequently forced people to skimp on the second step, often with disastrous results. What online relationships do is to change the progression so that people start with the second step. "There's an opportunity to get to know each other better that's just not commonly available in the typical post-college, urban dating lifestyle," adds Pauker, who is also co-author of *The First Year of Marriage: What to Expect, What to Accept, and What You Can Change*. The downside is that people risk "getting swept up in the idealization" of relating to someone who may not "push their buzzers" when they finally meet in person.

The online experience "offers a way for members to experiment with different ways of being," adds Palo Alto marriage counselor Marty Klein, author of *Ask Me Anything: A Sex Therapist Answers the Most Important Questions for the '90s* and one of the forum's consulting editors. "Your vulnerability is reduced by the geographical space and freedom from face-to-face contact. In a safe setting, you can test being more self-revealing. You



KAREN STOLPER

can try talking about new subjects, and you can play with new ways of expressing yourself."

But it would be a mistake to assume that most of the action on the section is a "meet market." Plenty of members use the Singles Club as an electronic support group (or maybe a big online dorm bull session) to get feedback on their adventures in the Jungle Out There.

"I just went out on a first date with a girl, and it seemed as though we got along well, except for one thing: She insisted on paying her own way," one young man wrote. It was a new experience for him, and he wondered if he should take the woman's position as a sign that she was interested only in being "just friends." Men from all over assured him that Dutch treating is fairly common, and a female member explained that many women don't like the man to feel that he has rented them for the evening, with the attendant possible expectation of sex in return. "I'm glad to hear it's not as rare an occurrence as I thought," the relieved fellow responded.

Sometimes people may get a blunt opposite-sex point of view that they're unlikely to hear from the person they're actually dating. Like the man who complained that most women don't want "nice guys" like him. A woman replied: "Women don't want nice guys. They want equals. Personality is also required. If you are so patient and tolerant, how can she feel free to fly off the handle now and then? She needs room to be human—not to keep up with your goodness."

Singles also can gripe about the annoying social restrictions that they all face, from the inflated cost of travel packages for singles to what one man called the "must fall in love" syndrome (in which you're invited to an all-eyes-are-upon-you dinner party where the host desperately wants to fix you up with someone you don't turn out to be interested in but don't want to hurt). Members take the long view, and joke about the sometimes dreary process of meeting Mr. or Ms. Right. "The chances of finding someone of compatible interest and sexual persuasion is about 95 percent against," one man philosophically noted. "So we've just got to go out there and meet the first 19 so we can find No. 20. I'm having a good time and learning from my mistakes on numbers 1-19." A female member replied with an electronic grin: "But it's kinda scary to think about being someone else's 1-19, isn't it?"

In a culture that chugs along on "family values," the Singles Club is also a supportive environment for those who are delighted to be single and don't necessarily want to clone the Brady Bunch. "I really love women," wrote one twice-divorced man, "but I hon-

Singles Files

The library may not be the most traditional spot to party hearty, but newcomers to the Singles Club can still get a good feel for the place by downloading files of conferences or threads on topics of perennial interest to the unattached. As always, members can browse using keywords; those who want a list of all of the files in Library 5, "Singles Club," should read the file LIB5.CAT.

In addition, the HSX Q&A Databank contains questions and answers, feature articles and manuals that benefit singles. Keyword search topics include dating, loneliness, romance, love and shyness (GO HSX).

Here are some of Section Leader Lana M.'s recommendations for files in Library 5:

Starting Over—How does someone start over? The basics. SINGL1.THD (18,944 bytes), SINGL2.THD (21,063 bytes) SINGL3.THD (9,221 bytes), SINGL4.THD (8,953 bytes), SINGL5.THD (13,194 bytes).

What Do Women Want?—Are modern women shameless looksists who will date only an Adonis? This thread tackles that question, with asides on issues from what people mean when they use the word "feminist" to the who-asks-whom-to-dance dilemma. ADONS1.THD (27,970 bytes), ADONS2.THD (28,419 bytes).

estly can't imagine settling down with one woman again." (Another member posted back, "I don't recommend giving up on marriage any more than I would recommend giving up on liver. Of course the chances of my ever liking liver are around .0000000000001 percent, but it could still happen.")

Section Leader "Lana M." (like other self-help groups, HSX preserves privacy) married young and had never really been alone until she was divorced in her late 30s. Although she's had several serious relationships since, "I was surprised to find that I truly enjoy the peace and quiet of being alone, and that between career, community activities and CompuServe, my life as a single is quite fulfilling. If I accomplish anything in Singles Club, it will be to turn on a few lightbulbs for people who are beating themselves up about being single."

A laudable goal, certainly. But it's still true that the Singles Club is one of the few forums on CompuServe that many people join with the hope of disqualifying themselves. Take Victor and Karen, who got to know each other online a while back. "I was able to meet someone who shared my interests and with whom I want to spend the rest of my life," says Karen. Victor and Karen are now married, and their daughter Kristina was born this year. ◀

Lindsay Van Gelder has had recent articles appearing in Allure, Ms., The New York Times, The Los Angeles Times and Town & Country. Her CompuServe User ID number is 70007,1416.

Misery Loves Company—So do success stories. One man in this thread reports being fixed up with a girl in college, not clicking, marrying other people, divorcing and now finding each other again. The moral: "blind dates can work, even if it takes 20 years or so!" BLNDDT.THD (12,031 bytes).

Personal Ads—Conference on how to write effective personal ads. (Some hints: Don't lie about yourself, weed out people now who won't agree with you later about such fundamental issues as smoking and children, arrange to meet your date in a place that's public but not too noisy). PRSNAL.CO (14,854 bytes).

Parents—Thread begun by a divorced woman with a 6-year-old son asking, "Do you think it's all right for children to know that their parent is sleeping with someone they aren't married to?" PARNTS.THD (13,848 bytes).

Modern Romance—A no-holds-barred discussion of what we like and what we do when we're turned on, from the woman who swore that "when I'm interested in a man, my lips get redder and fuller" to the one who channels sexual frustration into scrubbing her house, plus a funny side discussion of sexy clothes. SIGNAL.TH1 (18,241 bytes), SIGNAL.TH2 (20,187 bytes).

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Following are summaries of hardware and software reviews available for reading this month in *Online Today*. To read the complete reviews, use the GO commands listed at the end of each summary.

HARDWARE

Faster Windows Printing

PrintSprint (Myriad Enterprises Inc.), an accelerator for Hewlett-Packard LaserJet printers and Microsoft Windows, works by building the image for an entire page in the computer's memory. It then sends that image to the printer through a special interface card. Reviewer Hardin Brothers found that installing PrintSprint was generally easy. He also reports that users can easily switch between the normal printer driver and PrintSprint at any time. Although PrintSprint generally sped up printing, he was disappointed that the speed increase wasn't more dramatic. *GO OLT-5765*

SOFTWARE

Fast File Transfers

FastLynx 2.0 (Rupp Technology Corp.) can transfer up to 8MB of data per minute between two IBM computers. It also can transfer files from one disk or directory to another. Users can access the disks and files of one computer directly from a second computer using FastLynx's device drivers. A pair of special cables is included for the fast file transfers. Reviewer Christy Brothers says FastLynx was easy to install and use.

For more information, visit the PC Vendor C Forum (GO PCVENC). To read the review, *GO OLT-5800*.

Manage Complex Projects

Microsoft Project 3.0 (Microsoft Corp.) is a full-featured project manager for Microsoft Windows and for Macintosh computers. Projects can be defined with either a top-down or bottom-up approach, and tasks can be linked together in several ways. The program features both Gantt and PERT charts of the entire project or any group of tasks. Reviewer Harry Green says the pro-

gram is designed to parallel the way most project managers work, and simplifies editing and adding tasks to a project. He says the manual is the weakest part of the package but that otherwise this is an excellent program.

For more information, visit the Microsoft Applications Forum (GO MSAPP). To read the review, *GO OLT-5780*.



Top Windows Drawing Package

CorelDRAW 3.0 (Corel Systems Corp.), an integrated illustration package for Microsoft Windows, includes modules for drawing, auto-tracing, retouching photos, showing slides and managing graphics files. Reviewer William J. Lynott says the drawing program has been greatly improved from previous versions and, apart from a few minor glitches, the entire program works very well and is an excellent value for anyone who needs to create or manipulate computer-based images.

For more information, GO COREL. To read the review, *GO OLT-5850*.

Upgraded Word Processor

Ami Pro 3.0 (Lotus Development Corp.) is a professional-quality word processor for Microsoft Windows. The newest version includes style sheets, an outliner, spelling checker and thesaurus, simplified table generation and macro commands. It also features customizable frames for text and images, drawing and charting facilities, document revision tracking and equation editing, plus many other capabilities. Reviewer Franklyn Jones says Ami Pro 3.0 is extremely easy to learn and use, even for those who don't want to read the manual.

For more information, visit the LDC Word Processing Forum (GO LOTUSWP). To read the review, *GO OLT-5770*.

Improved Quick Macros

QuicKeys 2.1.2a (CE Software Inc.) is a macro key program for Macintosh computers. The newest version of the program adds icons and menu items to help users remember the macro instructions that have been

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defined, along with a keyboard templates printer. Also included in this version is Instant QuickKeys, a series of dialogs that helps users create new macro commands. Reviewer Anthony Watkins says Instant QuickKeys makes the program more accessible. He also applauds the new QK Icons portion of the program, which lets users launch macros with a mouse click and perform standard operations on files with drag-and-drop.

For more information, visit the Macintosh A Vendor Forum (GO MACAVEN). To read the review, GO OLT-5810.

Contacts in Windows

ACT! for Windows (Contact Software International), a full-featured contact manager for Microsoft Windows, features a database with up to 70 user-defined fields, customizable pull-down menus, a report generator, calculator, word processor and form letter generator. Reviewer William J. Lynott reports that ACT! has made a successful transition from MS-DOS to Windows. He says the Windows version is easy to use but that it is noticeably slower than the DOS version and its built-in word processor is barely adequate for many tasks.

For more information, visit the PC Vendor E Forum (GO PCVENE). To read the review, GO OLT-5820.

Fast and Easy Statistics

SPSS for Windows (SPSS Inc.), a professional-quality statistics package for Microsoft Windows, features simplified data importing and editing, generally intuitive menus and dialog boxes, powerful analysis and graphing options, and a manual that helps users learn the general principles of statistical analysis. Reviewer Hardin Brothers says the program fits well into its Windows interface and is much easier to use and understand than earlier versions of SPSS. He applauds both the power of the program and the clarity of the manuals. GO OLT-5830

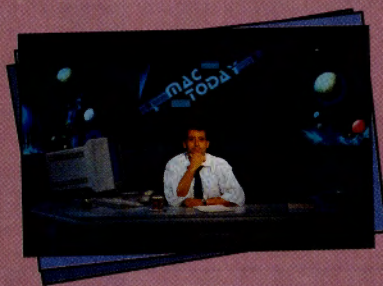
Animation and Multimedia

PROmotion 1.02 (Motion Works International) creates both animation and full multimedia presentations on Macintosh computers. The program features path-based animation with "actors" and "props," sound recording and enhancement, and full support for Apple Computer's QuickTime multimedia standard. Included are diskettes and a CD-ROM that contains extensive multimedia material and samples. Reviewer Anthony Watkins says new users who study the manuals carefully will find this program to be one of the easiest, best animation programs available. GO OLT-5848

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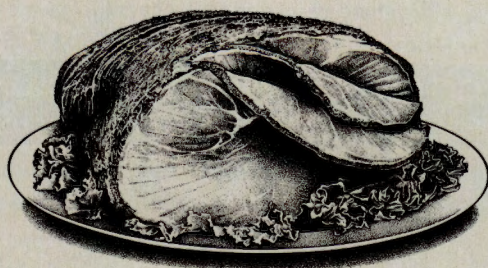
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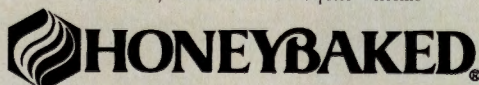


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Movies on Your Computer

The QuickTime 1.0 Starter Kit (Apple Computer Inc.) includes the software necessary to create and play QuickTime movies on Macintosh computers. It features a movie player, converter and recorder along with a picture compressor and a CD-ROM collection of animations, film and video clips, and color images. Reviewer Anthony Watkins reports that the program was difficult to install, but worked well. He criticizes the Recorder's user interface and the Converter's lack of a preview screen, but otherwise found the program powerful and easy to use.

For more information, visit the Mac Developers Forum (GO MACDEV). To read the review, GO OLT-5790.

Enhancements for Windows

Calc+ and Powerstrip (Abbot Systems Inc.) are two utilities for Microsoft Windows. The first is a calculator that can run in personal or desktop-publishing mode. In the second mode, it can convert measurements among inches, points, picas and other standard units of measure. The calculator also features a running tape on the screen that can be copied to the Windows Clipboard or saved in a file. Powerstrip is a menu bar that speeds up the process of launching applications by giving users instant access to all Program Manager groups and program items. Reviewer Franklyn Jones finds Calc+ weak but says Powerstrip will appeal to those wanting an alternative to the Windows Program Manager. GO OLT-5860

Spot Stock Market Trends

AIQ Trading Expert 2.0 (AIQ Inc.) uses artificial intelligence to help users spot stock market trends using IBM computers. The program uses the combined wisdom of a group of stock market authorities to evaluate market signals and recommend that traders buy or sell specific stocks. Included in the package is 20 years of historical data and the ability to download daily stock information from several sources. The program also can be used as a portfolio manager. Reviewer Harry Green says the program is easy to use but warns that it is not infallible. GO OLT-5870

A Doggy File Manager

Golden Retriever 2.0 (Above Software Inc.) is a file manager and organizer for Microsoft Windows. It organizes files by drawers and folders, following a familiar filing cabinet metaphor. The program also features its own file manager. Reviewer Christy Brothers says Golden Retriever is easy to work with, but that its limit of six drawers and its inability to place folders inside other folders are limiting. She concludes that potential users should wait for a future version. GO OLT-5880

Shareware Catalog Maker

Catalog-on-a-Disk (EmmaSoft) is a shareware program for IBM computers that creates disk-based catalogs for distribution to clients and customers. It has one program that turns text files into compressed catalog files and creates appropriate opening screens. A second program, which users ship on their distribution disks, displays the catalog in several formats and lets customers create a completed order form by selecting items with a cursor bar. Reviewer Hardin Brothers says the catalog creation program can be a little awkward to use at times, but the program that displays the catalog is simple and intuitive.

For more information, visit the Working From Home Forum (GO WORK). To read the review, GO OLT-5885.

Converting Graphics Files

Hijaak for Windows 1.0 (Inset Systems), an image converter for Microsoft Windows, can convert files and clipboard images from one form to another using a wide range of raster, vector, fax and PostScript formats. It also can capture DOS and Windows screens and save them in many formats. Reviewer Christy Brothers says Hijaak for Windows generally works well but somewhat slowly. She recommends that users download the latest patch files to help correct bugs.

For more information, visit the Graphics Vendor Forum (GO GRAPHVEN). To read the review, GO OLT-5905.

Import Data from Anywhere

Outside In for Windows (Systems Compatibility Corp.) for Microsoft Windows can import data from files created by more than 90 word processors, spreadsheets and database managers. The program lets users view the imported data on the screen and copy any portion of it to either a Windows-based or DOS-based word processor. In most cases, the formatting of the original file can be retained. Reviewer Christy Brothers found the program easy to use, especially with the macro commands that it installs in popular word processors. GO OLT-5915

Shareware Portfolio Manager

Capital Gainz version 3.0 (DBLinX), a shareware investment portfolio manager for IBM computers, features pop-up forms for recording security purchases, sales and distributions, and can create a variety of reports. It can maintain multiple portfolios, and report gains and losses for income tax purposes. Reviewer Harry Green found the program useful and flexible, but criticized it for making some entries difficult to verify and for features that can make the program difficult to use. He says the program is certainly worth investigating, but you must be careful entering data and selecting options.

For more information, visit the IBM Applications Forum (GO IBMAPP). To read the review, GO OLT-5925.

Control Windows Tasks

Task Manager (Metz Software) is a utility program for Microsoft Windows that simplifies task and file management and automates repetitive operations. Included are a manager that replaces the normal Windows task manager, a scheduler for automated tasks, and a utility that can launch applications and DOS commands easily. Reviewer Franklyn Jones says the package's Quick Utilities, with such features as a file find and text search, are its most useful features. Although the package is designed to simplify the operation of Microsoft Windows, Jones says it will be most appreciated by power users who spend their computing time with several different Windows and DOS applications.

For more information, visit the Windows Third Party C Forum (GO WINAPC). To read the review, GO OLT-5935.

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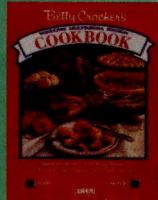
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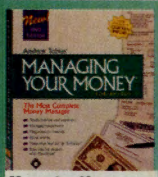
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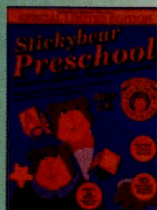
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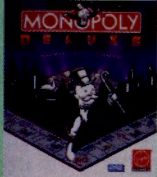
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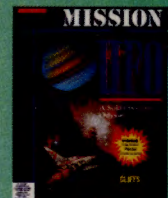
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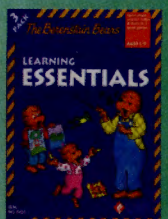
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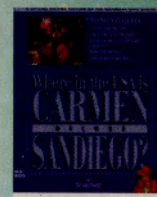
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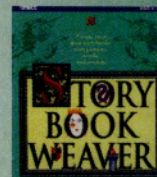
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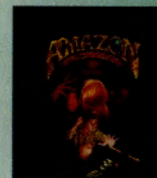
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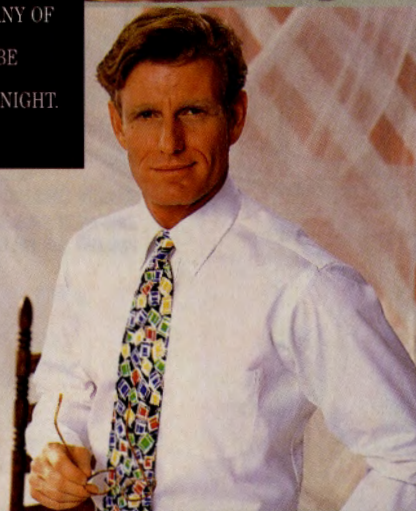
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with Kasparov
Sensor Chess.**

With 32 levels of versatile play, this chess challenger is the right move for beginners and intermediate players. The computerized game knows all common chess rules and will even suggest moves. Requires four AA batteries (not included).

**SHARON LUGGAGE AND GIFTS. GO SL
KASPAROV SENSOR CHESS \$74.95
2ND-DAY AIR DELIVERY, ADD \$7**



**Dress in style with
the pinpoint Oxford
buttondown shirt.**

Long the standard of the Ivy League, this best-selling dress shirt is made of 100% imported, pinpoint Oxford cotton. Features include 3 3/8" collar points, seven-button front, button-through sleeve plackets and extra long tails. Available in white, blue, pink, yellow or ecru.

**PAUL FREDRICK SHIRTS. GO PFS
PINPOINT OXFORD BUTTONDOWN SHIRT \$33
CUFF MONOGRAM, ADD \$5
2ND-DAY AIR DELIVERY, ADD \$5**



**One size fits all with JCPenney
gift certificates.**

Give a gift that's always the right size and color — a JCPenney gift certificate! Available in denominations of \$5, \$10, \$25, \$50 and \$100. Certificates can be sent to you or directly to the recipient. Allow 5 to 7 working days for delivery.

JCPENNEY. GO JCP



**For online enthusiasts, save on
CompuServe gift certificates.**

Here's the perfect gift for CompuServe family and friends. CompuServe gift certificates provide \$25 worth of online connect-time good anywhere on the CompuServe Information Service. (Watch for your "thank you" in your electronic mail box!)

**THE COMPUSEVE STORE. GO ORDER
\$25 COMPUSEVE GIFT CERTIFICATE \$21.50
INCLUDES SHIPPING AND HANDLING**

**Order Christmas trees and
decorations toll-free.**

Looking for the perfect Christmas tree? Visit the AT&T Toll-Free 800 Directory for over two dozen growers who will deliver the finest firs and evergreens directly to your door. Select "Browse" by category and choose "Gifts/Holidays/Collectibles." You'll also find toll-free sources for everything from greeting cards and decorations to gifts and collectibles. This holiday season, "deck the halls" the toll-free way.

AT&T TOLL-FREE 800 DIRECTORY. GO ATT



Fill your holiday season with music and get eight CDs free.

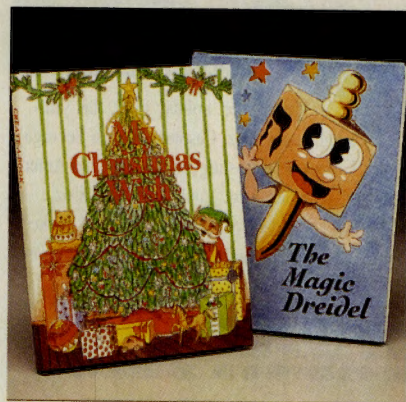
Treat yourself and those on your list to the perfect holiday gift — music! Join the Columbia House CD Club online and choose eight CDs free. You'll choose from over 300 of the hottest selections. Complete club details online.

COLUMBIA HOUSE. GO FREECD

For genteel quaffers, tipping sticks are a distinctive gift.

The original tipping stick is reported to have been invented for Edward, Prince of Wales. In order to continue enjoying his occasional tittle while attending the races, he had a walking stick made with a whiskey vial hidden inside. The sticks also unscrew in three parts for easy travel. Available in Captain (with compass) and Sundial styles.

THE COURT PHARMACY. GO RX
CAPTAIN TIPLING STICK \$24
SUNDIAL TIPLING STICK \$30



For true believers, give customized holiday books.

Surprise a child on your list with a holiday book in which he or she is the star! In *My Christmas Wish*, your child visits the North Pole to help Santa and his elves select toys for the boys and girls. In *The Magic Dreidel*, the magic dreidel describes the historical story of Hanukkah to your child. You provide information about the child's name, age and hometown and Create-A-Book does the rest.

CREATE-A-BOOK. GO CK
MY CHRISTMAS WISH \$14.95
THE MAGIC DREIDEL \$14.95

Save \$8 on the Rolodex pocket planner at Penny*Wise Office Products.

The perfect stocking stuffer, the credit card-sized Rolodex pocket planner holds 150 names, numbers and addresses. Features a replaceable yearly week-at-a-view appointment planner and a full-function calculator. Item #ROL-RPP3.

PENNY*WISE OFFICE PRODUCTS. GO PW
ROLODEX POCKET PLANNER
REGULAR PRICE \$29.99
SALE PRICE \$21.95

**BEST
BUY!**



For discriminating dressers, Brooks Brothers' camel hair coat is the perfect gift.

This stylish double-breasted camel hair coat features a peak lapel, two patch pockets and one inner pocket. Made of 60% camel hair and 40% wool with 100% acetate lining.

BROOKS BROTHERS. GO BR
CAMEL HAIR COAT \$150





**For fine food fanciers,
select a caviar sampler.**

The perfect holiday feast, this sampler includes 1 oz. Caspian Russian Sevruga caviar, 1 oz. American sturgeon caviar, 1 oz. American salmon caviar, 4 oz. smoked salmon, 8 oz. crème fraîche, and 11 oz. peasant bread, all packed in a holiday bag tied with ribbon. This selection is perishable and shipped via two-day delivery.

**ADVENTURES IN FOOD. GO AIF
CAVIAR SAMPLER \$85
INCLUDES SHIPPING IN THE CONTINENTAL U.S.**



**Art aficionados will treasure the Head
of the Virgin from Michelangelo's Pietà.**

For five centuries this masterpiece has been one of the chief artistic glories of St. Peter's Church in Rome. A detail of the *Pietà*, the Head of the Virgin, has been recreated in cast marble with incredible accuracy. Each plaque contains approximately 65 oz. of refined marble from Carrara, the region from which Michelangelo ordered the single block of marble for the *Pietà*. A bracket on the flat, reverse side of the head permits easy mounting on any surface. Measures 13½" tall. Weighs 7 lbs.

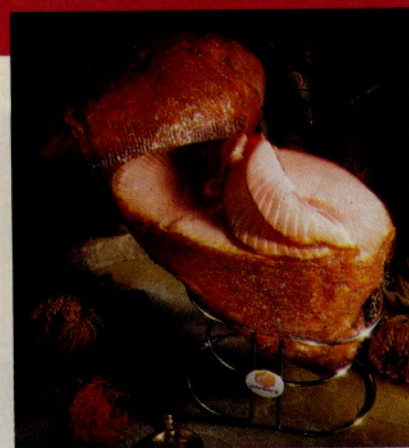
**THE METROPOLITAN MUSEUM OF ART. GO MMA
HEAD OF THE VIRGIN \$150
OPTIONAL BACKGROUND DISPLAY PANEL \$55**



**Give the Standing Ovation for
only \$39.99.**

Nearly two feet across, this holiday favorite is sure to please clients, family and friends. The festive gold box boasts an impressive collection of cheese favorites including colby, cheddar, edam, monterey jack, brick and sharp cheddar, plus beef sausage, beerwurst, pizza sausage and mettwurst. Mustards, preserves, honey, peanut butter and roasted mixed nuts round out the feast. Figi's will gladly enclose your business card or holiday greeting card.

**FIGI'S GIFTS. GO FG
STANDING OVATION \$39.99**



**For those special people on your list,
give HoneyBaked brand hams.**

Order as late as 3 p.m. EST Dec. 23 for holiday delivery of HoneyBaked brand hams, the original spiral-sliced ham. Hams are available in unique gift packages surrounded by delectable gourmet items, or separately. Gift packages containing a ham begin at \$73. Also featured online is a complete line of desserts, nuts and confections priced from \$13 to \$39. All prices include normal delivery charges.

HONEY BAKED HAMS. GO HAM

**Save \$24 on a Moulinex juicer at
Shoppers Advantage Club.**

Cut \$24 for Shoppers Advantage Club members only, the Moulinex juicer has a capacity of 750 ml/24 oz. and features a stainless steel strainer. Makes juices, desserts, and hot or cold soups. White only. 160 watts, full one-year warranty. Model #C-864. Ordering is for Shoppers Advantage Club members only. Not a member? Try the club for three months for only \$1.

**SHOPPERS ADVANTAGE CLUB. GO SAC
MOULINEX JUICER LIST PRICE \$69
MEMBER'S LOW PRICE \$45**



THE COMPUSERVE COMMITMENT TO ELECTRONIC SHOPPING



As a CompuServe shopper, you are on the leading edge, shopping today the way the rest of the world will shop in years to come—electronically! We are continually striving to expand our roster of stores to provide you with the best products, services and information available. We welcome your comments and suggestions.



Enjoy free shipping on orders of \$100 or more at Barnes & Noble.

Place an order of \$100 or more at Barnes & Noble this holiday season and standard shipping is **free** anywhere in the continental U.S. You can choose from hundreds of books, videos, CDs and gift items, all at low discount prices. Check out Barnes & Noble's Holiday Picks, too. Among the books you'll find are *The Exploits of Sherlock Holmes* (Sale price **\$6.95**) *The Ultimate Book of Number Puzzles* (Sale price **\$6.95**). Express delivery is available for an additional charge. Order by **December 1** for standard holiday delivery. GO BN

The Chef's Catalog offers 2nd-Day UPS delivery.

For the gourmets on your list, visit The Chef's Catalog for a wide selection of brand name cookware, cutlery, kitchen appliances and cooking tools at very affordable prices. Gift suggestions include a 13" Calphalon Everything Pan (**\$95**), Henckels 7-piece Steak Block Set (**\$59.99**) and a trio of Microwave servers: a 2-qt. pasta cooker (**\$16.99**), an apple baker (**\$12.99**) and a 2-qt. asparagus cooker (**\$16.99**). Best of all, The Chef's Catalog will ship your order via 2nd-Day UPS for only \$5.95! Order as late as **December 21** for holiday delivery. GO CC



Order by December 20 for holiday delivery at Florida Fruit Shippers.

Orders received at Florida Fruit Shippers by Sunday, **December 20** will be shipped for holiday arrival. Recommended for last-minute delivery are ¼, ½ and full bushels of delicious seedless navel oranges and ruby red grapefruits or gift assortments such as the Tower of Delights, the Palmbo or the Champagne Hamper. All prices include **free** delivery within the continental U.S. Details online. GO FFS

Shop Hammacher Schlemmer's Express Gift section.

Hammacher Schlemmer's Express Gift section features items they will gift wrap and express deliver for \$10 each. If your order is over \$100 and you use your American Express card, the gift wrap and delivery are **free**! Among the featured items are The Best Bread Baker (**\$299**), the Full-Body Feather Pillow (**\$79.95**) and a Panoramic Camera (**\$99.95**). Request a **free** Express Gift catalog online. Order by **December 21** for holiday delivery. GO HS



More Sources for Last-Minute Orders.

Order by **December 22** at **Coffee Anyone ??? (GO COF)** for holiday delivery. Choose from a wide variety of gourmet selections, including gift baskets, coffee and tea samplers, and a gourmet Christmas stocking, all with delivery available via Federal Express.

Order any gift certificate from **Bose Express Music (GO BEM)** and Bose will include a **free** catalog subscription (a \$6 value). Bose's catalog lists over 70,000 CDs, cassettes and videos. Order by **December 20** to ensure delivery by December 24.

Flower Stop (GO FS) promises holiday delivery via Federal Express for roses ordered by 6:00 p.m. EST **December 23**.

800-Flower & Gift Shoppe (GO FGS) will guarantee holiday arrival on items ordered as late as midnight EST **December 21** for Christmas, and midnight EST **December 15** for Hanukkah.

For lots more last-minute gift options, GO MALL and consult Holiday Bazaar '92.



SHOPPERS GUIDE

Use this handy table when placing your order.

Do you have last-minute holiday shopping to do? Never fear! These are just some of the many Mall stores that offer one-, two- or three-day rush

delivery. For details on delivery options and costs, consult each store's individual shipping section. GO MALL

Sources for Last-Minute Santas

ADVENTURES IN FOOD, 60 AIF
AMERICANA CLOTHING, 60 AC
BARRER & NOBLE, 60 BN
BOSE EXPRESS MUSIC, 60 BEM
BRETON HARBOR BASKETS & GIFTS
BROODS BROTHERS, 60 BR
THE CHIEF'S CATALOG, 60 CC
COCOA-COLA™ CATALOG, 60 CMC
COFFEE ANYONE???, 60 COF
COMPUTER EXPRESS, 60 CE

THE COURT PHARMACY, GO RX
DALCO ELECTRONICS, GO DA
DIRECT MICRO, GO DM
800-FLOWER & GIFT SHOPPE, GO FGS
FRT'S GIFTS, GO FB
FLORIDA FRUIT SHIPPERS, GO FFS
FLOWER STOP, GO FS
THE GIFT SENDER, GO GS
HANNAKACHER SCHLEMMER, GO HS
HOLABIRD SPORTS DISCOUNTERS, GO HB

HONEY BAKED HAMMS, GO HAM
INDEPENDENT INVESTORS RESEARCH,
INC., GO RH
K&B CAMERA, GO KB
THE LASERS EDGE, GO LE
MACWAREHOUSE, GO MW
MAC ZONE/PC ZONE, GO MZ
MCGRAW-HILL BOOK COMPANY, GO MH
MICROWAREHOUSE, GO MCW

MISSION CONTROL SOFTWARE, 60 MOS
ONIAH STEAKS, 60 OS
PAUL FREDRICK SHIRTS, 60 PFS
PENNY WISE OFFICE PRODUCTS, 60 PW
PETWORKS, 60 PT
RENT MOTHER NATURE, 60 RM
SHARON LUGAGE AND GIFTS, 60 SL
SOUNDS & VIDEO ONLINE, 60 SO
WALTER KNOLL FLOREST, 60 WK

[illegible]

Calling all Monday morning quarterbacks, gridiron gurus and football fanatics! If you know your football, you could score *big* in The Electronic Mall's Football Playoffs. The contest kicks off Tuesday, December 1 and runs through Friday, January 29.

Every week, you'll have a chance to answer two multiple-choice football questions, one pro- and one college-related. Answer correctly on your first try, and you'll score a first down and earn 10 points. Get it right the second time, and you'll get five points. Get it right on your third attempt, and you'll get two points. Fourth try, you're out of luck and forced to punt!

Enter every week for nine straight weeks. We'll keep track of your score for you. We'll also post the leading 25 players' names and scores online every Monday. The players with the most points by Friday, January 29, 1993 will win valuable prizes. You'll find complete regulations online. Now here's a look at what you could win:

GRAND PRIZE (one winner):

A Magnavox Camcorder, retail value \$1,149

Compliments of Shoppers Advantage Club. GO SAC

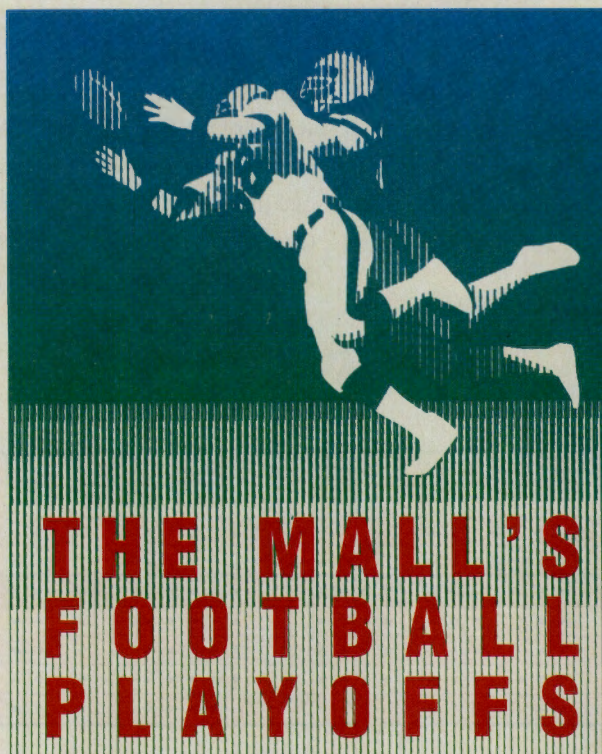
This 8mm camcorder with flying erase head features a 6:1 power zoom lens with macro, CCD imager with 2 lux low light, full range digital autofocus with manual, two-position speed shutter up to 1/1000, auto iris, auto date/time recording, auto tracking, auto play, edit search, tape remaining indicator, fade in/out, tilt up eye piece and record/review. The camcorder comes complete with AC/RF adapter, VHF cable, 300/75 OHM adapter, one-hour battery pack, A/V cable and shoulder strap. Weighs only 1.61 lbs.! Model #CVM710.

FIRST PRIZE (two winners):

An Authentic NFL® Team Jersey, retail value \$99

Compliments of JCPenney. GO JCP

Each shirt is made to the same specifications and by the same manufacturer as the individual franchises: Champion®, Russell® or Wilson®. In "dark" team colors, the shirt may be customized with your name or your favorite player's name (up to 12 letters) and numbers 0-99. 100% nylon jersey. Men's sizes M-XL. All 28 teams available.



**Test your football IQ and
win valuable prizes!**

SECOND PRIZE (one winner):

**Authentic Miniature Football
Helmet, retail value \$99.95.**

Compliments of

Hammacher Schlemmer. GO HS

Made by Ridell® and officially licensed by the NFL, these helmets will be prized by any football fan. They are available for all 28 NFL teams, 60 popular college teams, and 17 vintage NFL teams from the years 1956 to 1979. Perfect for home or office, the helmet sits on an oak display stand. Measures 5" x 4½" x 6½".

THIRD PRIZE (four winners):

**Football Software, retail values
\$59.95 to \$24.95. Compliments of
Computer Express. GO CE**

You'll select from four popular
programs: *Playmaker Football* by

Broderbund (\$49.95 value), *Fantasy Football* by FFL (\$39.95 value), *John Madden Football* by Electronic Arts (\$24.95 value), and *All American Football* by Interplay (\$59.95 value).

FOURTH PRIZE (three winners):

NFL Follies, Crunches, Highlights, Histories, retail value \$14.95

Compliments of Omni Technics. GO OT

A classic VHS video containing some of the sport's most vicious hits, unbelievable plays and outrageous miscues. Always a fan favorite, this action-packed film features some of the NFL's biggest stars. A timeless compilation you'll want to enjoy again and again. GO OT for other football videos from Omni Technics.

FIFTH PRIZE (three winners):

Figi's Famous Grid Iron Sausage, retail value \$44.95

Compliments of Figi's. GO FG

Sausage fans will love tackling this big 6-lb., regulation football-sized, all-beef sausage. It's the perfect way to kick off tailgates or at-home, game-time gatherings.

SIXTH PRIZE (50 winners):

A CompuServe Connect-Time Credit, retail value \$10

Compliments of The Electronic Mall. GO MALL

Get into the Mall Playoffs, test your football I.Q. and win!
GO MALL

Cosmetics Express offers brand name cosmetics and perfumes overnight.

Just in time for holiday gift-giving, Cosmetics Express has opened its doors online. You'll select from more than 75 prestige fragrance, skin care and cosmetic lines such as Elizabeth Arden, Clarins and Giorgio. Need suggestions? An online beauty consultant is available to help you select just the right product or gift. Especially recommended for the holidays are perfumes and colognes. Over 50 fragrances for men and women are offered,

including 273, Joy, Drakkar and White Diamonds. You will also find skin care products and cosmetics. All Cosmetics Express purchases made prior to 6:00 p.m. EST are delivered overnight (business days) by Airborne Express for only \$5. CompuServe shoppers are also invited to complete an online Personal Profile. Cosmetics Express will let you know of promotions and specials on products you already use and will send you **free** samples of products you might be interested in. To look your best, GO CM.

NEW
MERCHANT



Visit 800-Flower & Gift Shoppe for all your gifts.

NEW
MERCHANT

Birthdays. Get Well Wishes. Holiday Greetings. No matter what the occasion, you will find a gift that's just right at 800-Flower & Gift Shoppe. This holiday season, send a Hanukkah Ribbon Centerpiece (\$34.99, \$44.99, \$54.99) or an Evergreen Wreath (\$29.99, \$39.99, \$49.99) to far-away family and friends. To thank business associates, consider a Fruit Sweets Basket (\$50, \$90, \$115) or a Chocolate Mousse Cake (\$19). For the kids on your list, opt for a Chocolate Dinosaur Egg (\$16) or a Junk Food Basket (\$40, \$70).

All gifts are shipped anywhere in the continental U.S. within two business days! For gifts to go, GO FGS.

HomeFinder by AMS

Check out your new neighborhood before you move.

The HomeFinder Service helps make sure your new community is right for you before you move. By providing a detailed information packet and personalized assistance from a relocation expert, your questions about schools, recreation, taxes and other common concerns can be answered before you move. Professionals across the U.S. and Canada will help you find just the right home. You will also receive valuable discount coupons worth over \$500 off on services you will need when relocating. It's HomeFinder's way of saying "welcome to the neighborhood." To make the right move, GO HF.

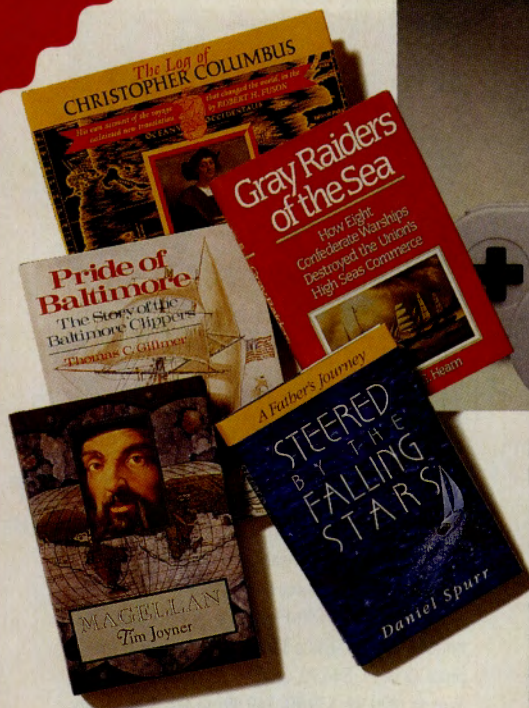
NEW
MERCHANT

Find unique gifts at Alaska Peddler.

For unique gifts direct from the Last Frontier, visit Alaska Peddler. You'll find a wide array of gifts including Alaskan-designed T-shirts and sweatshirts for adults and children, smoked salmon products, hematite, jade and gold nugget jewelry, plush Arctic animals, travel videos and a selection of one-of-a-kind items such as 3-lb. and 7-lb. bags of glacier ice! Especially recommended for holiday giving are the smoked salmon and halibut gift packs, genuine gold nugget jewelry and custom designed leather accessories such as wallets and checkbooks made of Alaskan salmon or sea bass. International delivery available. For gifts made-in-Alaska, GO AK.

NEW
MERCHANT





For sailors, first mates and history buffs, select nautical books galore.

If there's a sailor or history buff on your list, stop by McGraw-Hill and request a free copy of their Marine catalog, featuring over 500 books, videos and computer software selections. From the historic voyages of Columbus and Magellan to a modern-day father-son journey, you'll find something suitable for every seafarer on your list. All pictured titles are hardcover.

MCGRAW-HILL BOOK COMPANY. GO MH
PRIDE OF BALTIMORE: THE STORY OF THE
BALTIMORE CLIPPERS \$24.95
THE LOG OF CHRISTOPHER COLUMBUS \$34.95
GRAY RAIDERS OF THE SEA \$24.95
MAGELLAN \$24.95
STEERED BY THE FALLING STARS:
A FATHER'S JOURNEY \$19.95



Spring into action with Super Nintendo® entertainment system.

Nintendo 16-bit games spring to life on your screen with full digital stereo sound and over 30,000 colors in dazzling 3-D. Two specially contoured, eight-button controllers and a Super Mario World™ game cartridge are included.

SEARS. GO SEARS
SUPER NINTENDO® ENTERTAINMENT
SYSTEM \$139.99

Keep abreast of the stock market with The Wall Street OverView Report.

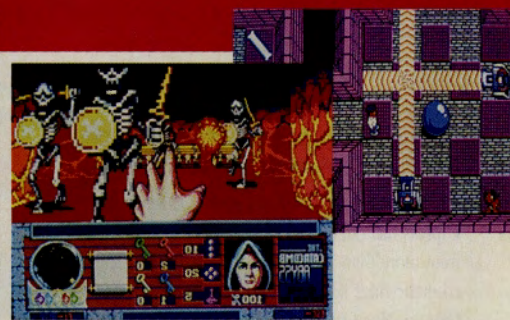
Now you can get all the market recommendation and forecast data produced by all the major U.S. brokerage firms in one place. *The Wall Street OverView Report*, with more than 2,000 analysts contributing, and issued monthly, allows you to browse all the stocks with recommendations (over 3,500) or any of the over 60,000 EPS estimates. Ranking information is also included. Sorry, reports are preprinted and cannot be faxed or downloaded.

INDEPENDENT INVESTORS RESEARCH. GO IIR
THE WALL STREET OVERVIEW REPORT
SINGLE ISSUE \$29.90
FOUR QUARTERLY ISSUES \$99
ONE-YEAR SUBSCRIPTION \$249

Experience the luxury of the all new 1993 Lincoln Mark VIII.

Here is the sport coupe from Lincoln designed to shatter the barriers between luxury and performance. The all new Mark VIII will captivate you with its shape and thrill you with its performance. It is what a luxury sport coupe should be. Complete details, graphics and free brochures in the Lincoln-Mercury Electronic Showroom.

LINCOLN-MERCURY SHOWROOM. GO LINCOLN



Order games for only \$15.95 each at Softdisk Publishing.

Softdisk Publishing invites you to check out two exciting game series, *Rescue Rover* and *The Catacombs*. In *Rescue Rover*, your faithful friend Rover has been dog-napped by evil robots and it's up to you to find him. In *The Catacombs*, you wander through catacombs, dungeons and cemeteries in search of treasure and lost souls. Select from *The Catacombs*, *Catacombs 3-D* and *The Catacomb Abyss*. More games are planned in both series.

SOFTDISK PUBLISHING. GO SP
RESCUE ROVER AND THE CATACOMBS GAMES
\$15.95 EACH



Learn to play the piano the easy way with Miracle Piano Teaching System.

The *Miracle Piano Teaching System* from Software Toolworks makes learning to play the piano easy and fun. Through its interactive system, you learn at your own pace and level. Advanced artificial intelligence software monitors your progress and develops personalized lessons for you as you go along. There are 250 lessons that use 100 songs and work to teach you all styles of music. Soon, you're playing like a pro! The package includes the teaching software, plus a 49-key velocity-sensitive MIDI keyboard with 128 digitized instruments and sound effects. You can play up to 16 notes and eight instruments at a time! Whether you prefer Bach or rock, this system will bring music to your ears. IBM and compatibles. Item #ED3394. Macintosh Item #MUS0092.

MICROWAREHOUSE. GO MCW
MACWAREHOUSE. GO MW
MIRACLE PIANO TEACHING SYSTEM \$349





Save 10% at WaldenCOMPUTERbooks.

Join Waldenbooks' Preferred Readers® club and enjoy 10% savings on computer books for every interest. WaldenCOMPUTERbooks offers a wide selection of computer humor books, best-sellers and new releases for holiday giving. Use your preferred member discount online or at any Waldenbooks location coast to coast. Plus, you'll earn valuable points on every purchase good toward \$5 merchandise certificates.

WALDENCOMPUTERBOOKS. GO WB
101 USES FOR A DEAD COMPUTER
 FROM HAYDEN \$9.95
FRACTAL VISION FROM SAMS \$39.95
INSIDE NOVELL NETWORK SPECIAL EDITION
 FROM NEW RIDERS PRESS \$29.95
THE MOST PC FOR YOUR MONEY
 FROM ALPHA \$12.95
OOPS FROM QUE \$14.95

Get dazzling arcade technology at home with the 16-bit Sega Genesis®.

The magic of true 16-bit technology is now available at home with games that look, play and sound exactly like the game arcades. Super high resolution graphics, 500 marvelous colors, stereo sound, and the most demanding, dazzling on-screen action await you. Includes base, one controller for single-player play, Sonic the Hedgehog™ game and hookup accessories.

SEARS. GO SEARS
16-BIT SEGA GENESIS SYSTEM NOW JUST \$129.99

Save on stock trades at Max Ule Discount Brokerage.

Max Ule, CompuServe's first online discount broker, wants to save you money on your next stock trade. Tickerscreen®, the financial information service of Max Ule and Co., a division of Herzog Heine Geduld, Inc., offers you a full menu of online services and information retrieval. Use Tickerscreen to request closing market indexes or price quotes on any stock traded on the NYSE, American or OTC. Request a **free** no-obligation brochure with commission rate schedules. Sign up for Max Ule's weekly electronic Stock-of-the-Week newsletter. Become a client and you'll enjoy direct order-entry of all brokerage buy and sell orders. Refer a new client who makes a trade and earn a \$35 commission credit toward your next trade!

MAX ULE & CO. GO TKR

For Civil War enthusiasts, save \$30 on PBS's epic Civil War home video set.

Five years in the making, this six-CD set brings you 11 hours of the finest viewing ever produced. A historic achievement of immense proportions, this critically acclaimed classic takes you from the firing on Fort Sumpter and the battles at Shiloh and Gettysburg to Lincoln's assassination. The major events of the war – Lee's surrender to Grant, Sherman's Atlanta campaign, Lincoln's freeing of the slaves – are all vividly recreated. Includes a colorful commemorative booklet.

THE LASER'S EDGE. GO LE
PBS CIVIL WAR 6-DISC SET
 REGULAR PRICE \$229.95
SALE PRICE \$199.95

Receive a \$10 connect-time credit when you order the Financial Services Users Guide.

Attention investors! The *Financial Services Users Guide* is your offline tour guide to the many online financial services available on CompuServe. Learn how to research investments, buy and sell stocks, and track your portfolio more efficiently and effectively. The guide is sale-priced at \$17.50. You'll also receive a \$10 connect-time credit good toward usage anywhere on CompuServe.

THE COMPUERVE STORE. GO ORDER
FINANCIAL SERVICES USERS GUIDE
 REGULAR PRICE \$20
SALE PRICE \$17.50
INCLUDES A \$10 CONNECT-TIME CREDIT



Turn up the volume with Thunder Board and get F-15 Strike Eagle II for free.

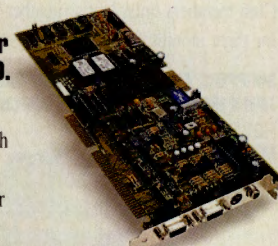
The *Thunder Board* is everything you need in a PC sound card. With great features like an on-board FM synthesizer and on-board digital recording and playback, this one card can meet all of your PC sound needs. Other features include a built-in joystick and power amplifier. Fully AdLib- and Sound Blaster-compatible. Plus, for a limited time, you'll receive *F-15 Strike Eagle II* for free! #10572.

MAC ZONE/PC ZONE. GO MZ
THUNDER BOARD SOUND CARD \$98
INCLUDES F-15 STRIKE EAGLE II FOR FREE!

Display quality computer graphics on your TV and save \$60.

With the PC to TV Super VGA Card with 1 Meg you can display quality computer graphics on a television or PC monitor! The 16-bit VGA graphics adapter features a built-in video encoder to convert your VGA graphics signal to NTSC. The card is fully compatible with IBM's VGA resolution modes. Includes VGA, RCA, S-VHS and RGB output connectors and simultaneous non-interlaced VGA and interlaced NTSC outputs. Also features NTSC recordable resolutions up to 640 x 480 in 256 colors.

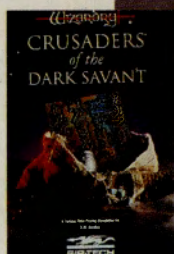
DALCO COMPUTER ELECTRONICS. GO DA
PC TO TV VGA CARD WITH 1 MEG
 REGULAR PRICE \$395
SALE PRICE \$335



Volkswagen makes car buying as easy as GO VW.

If you're in the market for a new car, make Volkswagen's Online Showroom your first stop. From the new mid-size EuroVan to the powerful Corrado SLC or the affordable Fox, you'll see why Volkswagen is the number one car manufacturer in Europe. At Volkswagen's Online Showroom, print complete specifications and options, view graphics or download them connect-free, request free color brochures, and find your nearest Volkswagen dealer. Then, take a test-drive to discover what Europeans have known for so long.

VOLKSWAGEN ONLINE. GO VW



Save \$26 on Wizardry VII: Crusaders of the Dark Savant by Sir-Tech.

Delve into the role-playing world of Wizardry VII, a full-color world filled with dungeons, caves, forests and treacherous waters, in search of a secret hidden ages ago. IBM and compatibles. 10 MHz and up recommended. 256 color VGA graphics. Requires 640K with hard drive. Supports all major sound boards.

SOFTWARE SPECIALTIES. GO SOF
WIZARDRY VII LIST PRICE \$69.95
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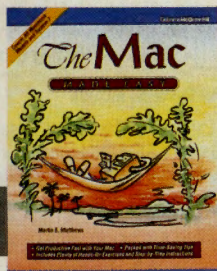
Book Reviews

Following are summaries of book reviews available for reading this month in *Online Today*. To read the complete reviews, use the GO commands listed at the end of each summary.

Managing Your Money: The Official Reference (Third Edition)

By Andrew Tobias,
Compiled by Mary O'Neil
Brady Publishing, 1992
509 pages, \$21.95 (softcover)

Following a tutorial format that covers both basic and advanced features of the Managing Your Money software, this book is informative without being dull, notes reviewer Brian Monahan. **GO OLT-5010**



The Mac Made Easy

By Martin S. Matthews
Osborne/McGraw-Hill, 1992
328 pages, \$19.95 (softcover)

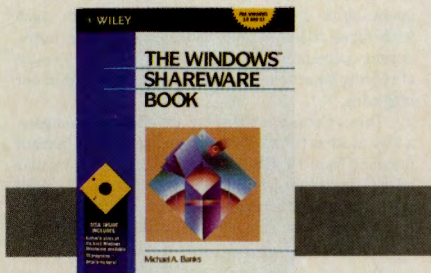
If you think the Macintosh's virtue of "easy to use" is a tad oversold, you'll find much to learn in this text. Reviewer Michael Naver especially praises the author's explanation of System 7. **GO OLT-5060**



Macintosh System 7: Everything You Need to Know

By Deke McClelland
Sybex, 1992
564 pages, \$34.95 (softcover with diskette)

If you're looking for more than an introduction to System 7, this is the book for you. The enclosed diskette of shareware and freeware utilities along with the author's highly readable style make it a good buy, says reviewer Anthony Watkins. **GO OLT-5020**



The Windows Shareware Book

By Michael A. Banks
John Wiley & Sons, 1992
384 pages, \$39.95 (softcover with diskette)

If you want to separate the shareware gold from the dross, this book will make the task easier, says reviewer John Edwards. The author has winnowed the field to about 80 offerings, all of which are available on CompuServe and some of which are featured on the book's enclosed diskette. **GO OLT-5050**

Voodoo WordPerfect for Windows: Tips and Tricks with an Attitude

By Kay Yarborough Nelson
Ventana Press, 1992
359 pages, \$19.95 (softcover)

Crammed with hundreds of useful insights and tips on how to make the best use of WordPerfect for Windows, this book is written in an understandable, anecdotal style. Reviewer William J. Lynott deems it an excellent reference work. **GO OLT-5030**

Upgrading and Repairing PCs (Second Edition)

By Scott Mueller
Que Corp., 1992
1,293 pages, \$34.95 (softcover)

If you're timid about tearing into a PC, you probably need a book less advanced than this one. But for brave souls, this text explains how to configure, troubleshoot and even disassemble a computer. With information rarely found outside the manufacturer's technical manual, this book is invaluable, notes reviewer Harry Green. **GO OLT-5040**

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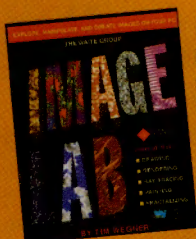
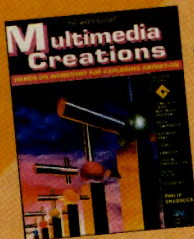


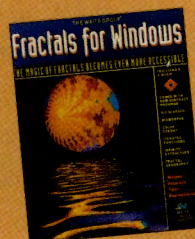
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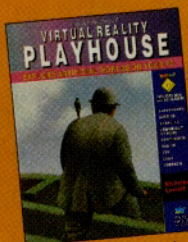
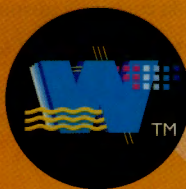
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Pen Expo, co-sponsored by *Pen Magazine*, Boston University, InfoWorld and CompuServe, will be Jan. 25-29, 1993, in San Francisco. The largest pen technology conference in the world, Pen Expo will join thousands of experts from a variety of public and private-sector businesses. For more information on how you can participate, call Pen Expo's registration desk at (508) 649-4200, or access the PenWorld section of the Pen Technology Forum. GO PENFORUM

First-time users of Health Database Plus will receive a rebate for surcharges incurred reading or downloading up to two articles during their first session in December. Health Database Plus contains more than 100,000 articles, most in full text, from 81 consumer-oriented health magazines such as *Prevention*. It also contains summaries, written for the layperson, of articles appearing in leading medical journals such as *The New England Journal of Medicine*. CompuServe's standard connect charges remain in effect. GO HLTDB

Shareware authors and enthusiasts can now access the Shareware Registration Service on CompuServe. This new service allows members to conveniently register hundreds of popular shareware titles directly online, and ensures that authors receive payment for their programs. Programs covered include Time & Chaos, AutoPilot, GIFConverter, WinJammer, CatScan and many more. To submit applications to the service or register your favorite shareware programs, GO SWREG.

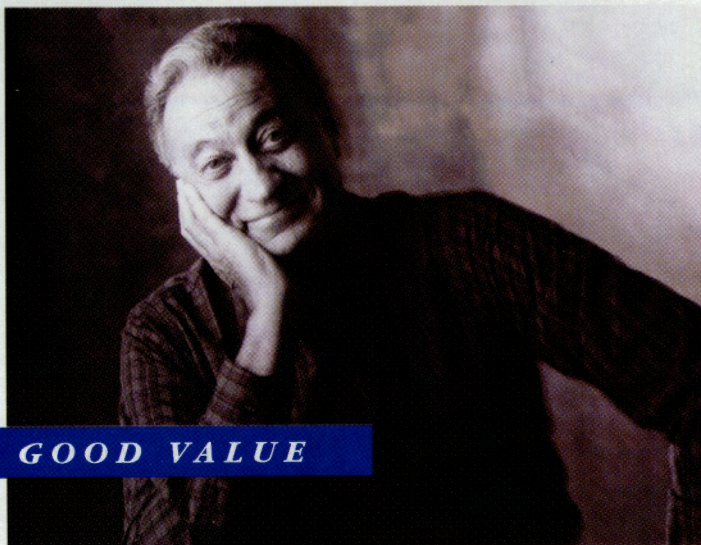
CompuServe has expanded its European network with new direct-dial numbers in Reading, England; Amsterdam; Brussels; Dusseldorf, Germany; and Paris. New connections to the Transpac network also provide lower-cost access to the rest of France. GO RATES for more information on communications surcharges. GO LOGON for access numbers and instructions.

CompuServe has launched its new European Member Recommendation Program. European members can now introduce friends to CompuServe and receive a \$25 usage credit with a phone call to the nearest Customer Service department. Existing members or their friends can purchase full membership kits at discounts of up to 40 percent, and members receive a \$25 usage credit for every new member they introduce. This program operates only in Europe (similar programs are available for members elsewhere in the world). GO FRIENDS

Mac Today, a new syndicated television series about the Apple Macintosh computer, is currently airing around the United States. Hosted by Bob LeVitus, *Mac Today* delves into the Macintosh world with breaking news and the latest products. LeVitus and the program's producers are appearing exclusively in the *Mac Today* section of the Macintosh New Users Forum, which also includes information on stations carrying the program and broadcast times. GO MACTODAY

NEXT MONTH • Shutter Bugged: Getting Familiar with Photography's Tools and Rules • Lost in Spacing: The Trouble with Word Processing Conversions • We Are Live: A Sample Platter of Forum Conferencing • A New Feature, Readers' Writes: With Charles Bowen's How to Get the Most Out of CompuServe Column and More

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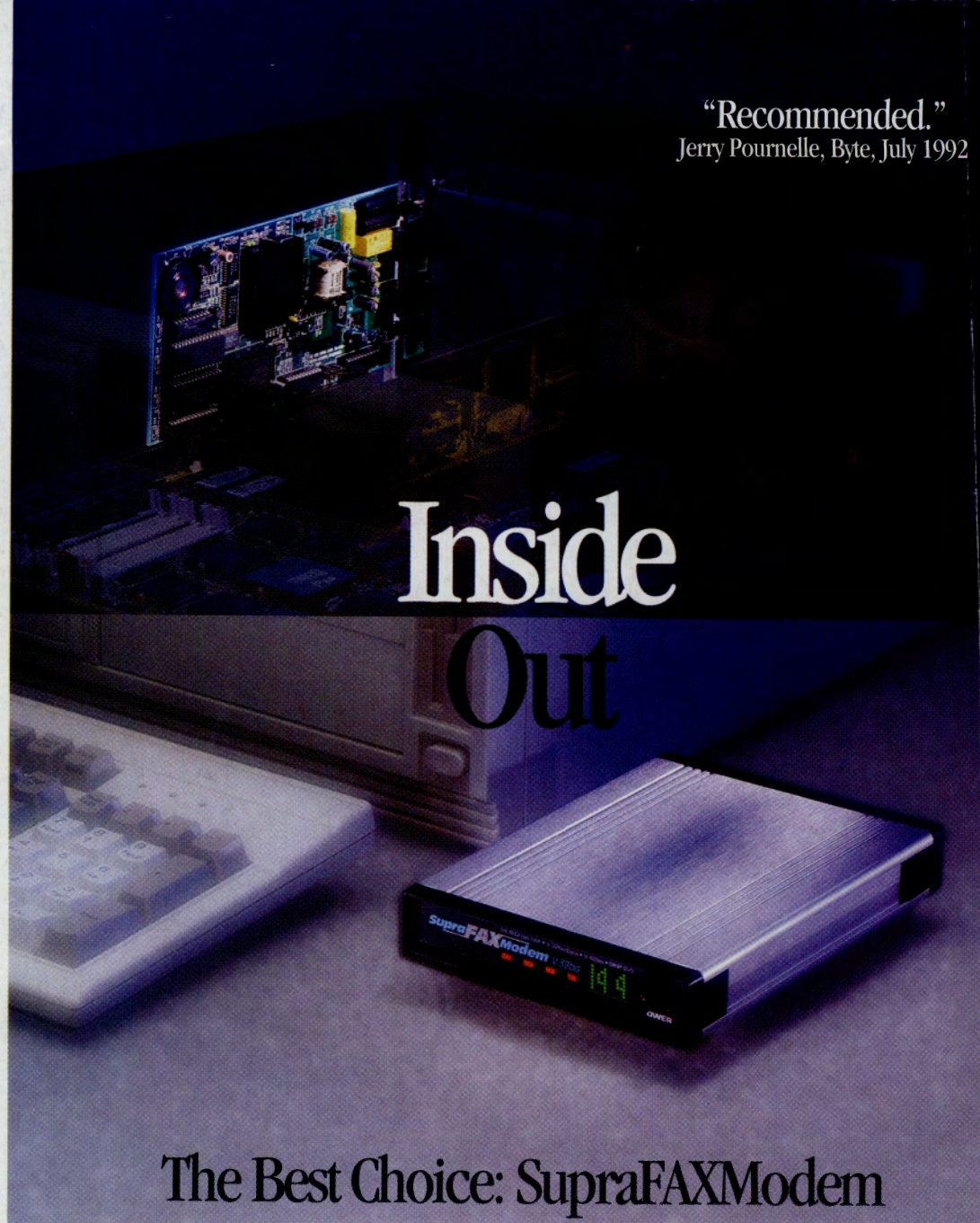
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