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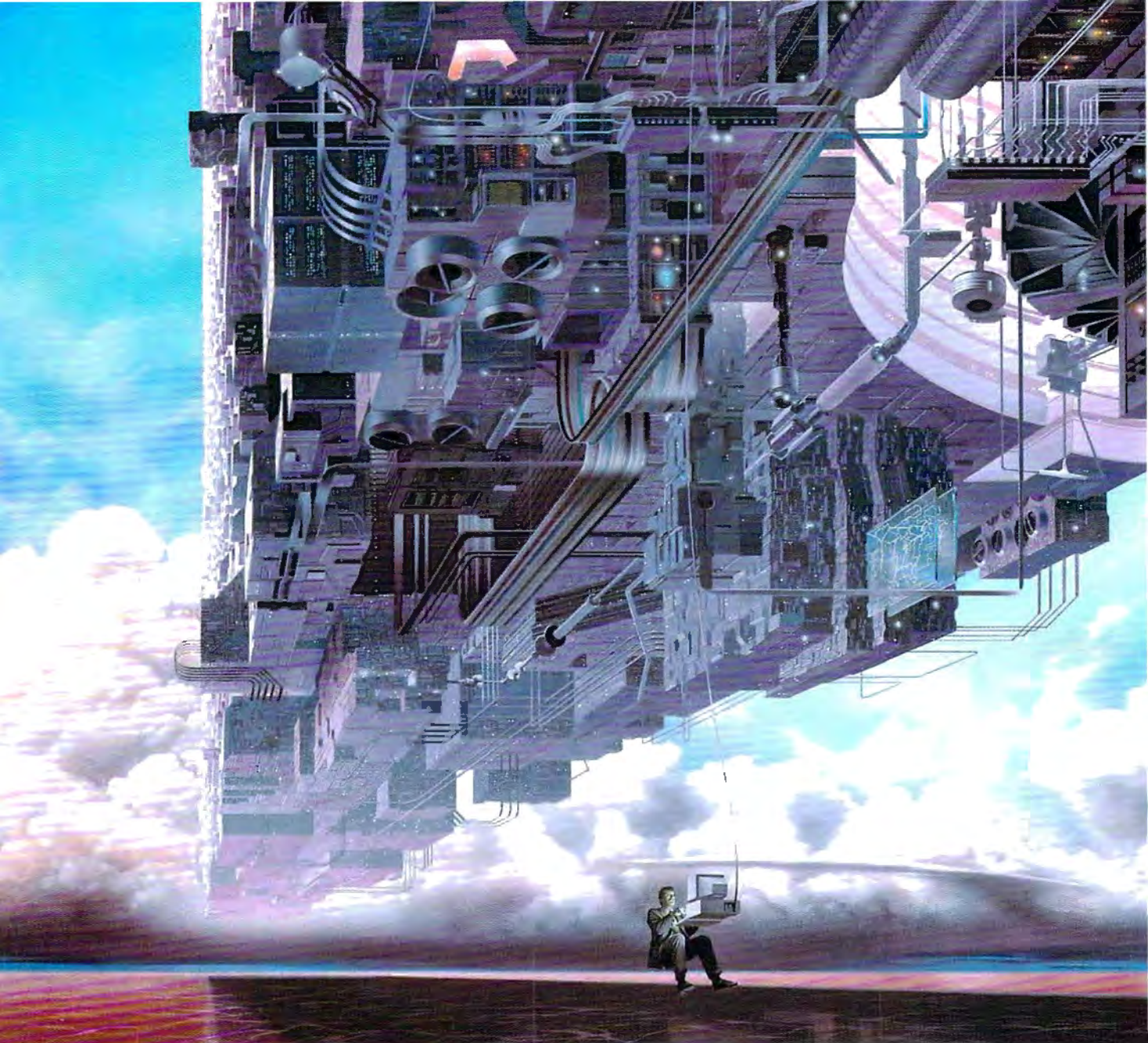
TANDY's TOP GUN TALKS TOUGH

Straight-Shooting John Roach on IBM, Apple, & Tandy



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COMPUTER

JULY
1988

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editorial license

GREGG KEIZER



We Did Not Make the Decision to Drop Type-In Programs Lightly

We expected letters, and we weren't disappointed. The changes in *COMPUTE!* were radical, and we knew we'd hear from you. We did.

Almost all of the correspondence we've received so far made mention of *COMPUTE!*'s move away from type-in programs. *COMPUTE!*, which celebrates its tenth year in September, has carried type-in program listings since its inception. Then why did we drop the type-ins, people asked. Here's why.

In 1979, when *COMPUTE!*'s first issue appeared, personal computers were scarce. Software for those computers was even scarcer. Almost everyone who owned a personal computer was, by default, also a programmer. To use your new computer, you often had to create the software yourself.

Computer literate meant that you not only knew how to operate a personal computer, but also that you knew how the hardware worked and how the software was created. Schools taught classes in computer programming—tots learned Logo, and older children tackled BASIC. Adults poured hours into learning how to program at home, and they loved every minute of it.

Years passed, and as each new computer hit the market—from the Atari 800 and VIC-20 to the TI-99/4A and IBM PC—people invested time writing software because there was little software available. Or they typed in program listings from one of a growing number of magazines.

But when computer ownership reached a critical mass, that began to change. It's hard to pin down a date—I think it was sometime in 1984, after the introduction of the first "appliance" computer, the Macintosh, and during a year when the IBM PC poured into business—but the time came when more people *used* computers than *programmed* them. Part of that shift was due to the burgeoning ranks of personal computer software. More important was that programs got bigger, better, and cheaper. In short, it was often no longer possible to write a program yourself that was better or faster (or even cheaper, when you count your time) than one you could buy.

Computer literacy even took on a new meaning. In schools, it came to mean knowing how to *use* a computer, not how to program one. Computer labs were used to teach students how to use computers and productivity applications like word processors and databases. Individual computers were parceled out—English classes used them to write, math classes used them to

calculate, and history classes used them to simulate.

For those of us already through school, the term meant knowing how to get the most out of the machine and our commercial software. If we programmed, it was probably in a macro language to speed up and simplify our computerized work.

All of this was not lost on computer publications in general and *COMPUTE!* specifically. We came to realize that most computer owners were computer *users*, not computer *programmers*.

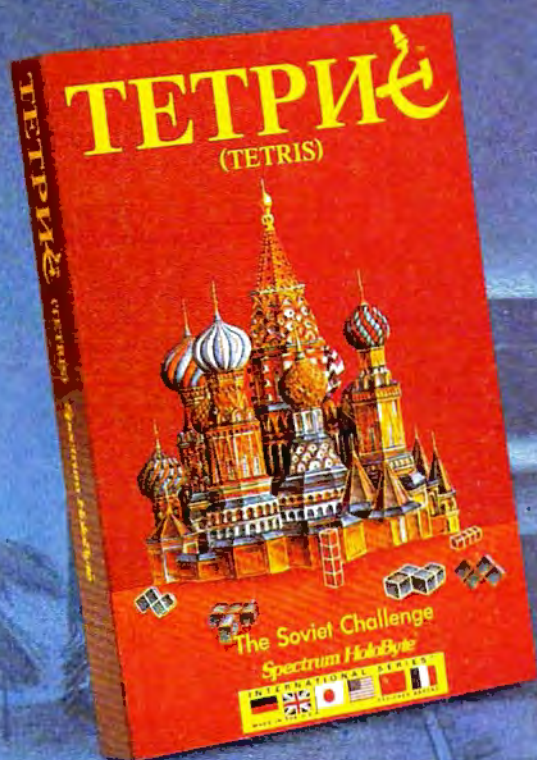
We did not make the decision to drop type-in programs lightly. How could we, since those listings were part of the magazine since its birth? Yet it was the right decision. If we had remained static, not changed, we would have faced a dwindling audience. Not today, perhaps. Not even tomorrow, or next month. But someday.

That's not to say that there still aren't thousands of people—including a lot of you reading this—who enjoy typing in program listings and using the first-rate software that results. There always will be magazines for those thousands. *COMPUTE!* magazine shares the newsstand with three sister publications devoted to computer enthusiasts. *COMPUTE!'s Gazette* is the leading Commodore 64/128 magazine, and will continue to offer 10–20 of the best type-in programs for Commodore users each month. *COMPUTE!'s Apple Applications* is an up-and-coming bimonthly that includes 5–7 top-notch Apple II type-in programs each issue. *COMPTUE!'s PC Magazine*, another bimonthly, comes complete with 6–7 great MS-DOS programs on the disk which comes with every issue. If you have an Apple IIe and want the machine-specific information (and programs) that only a machine-specific magazine can offer, for instance, then pick up *COMPUTE!'s Apple Applications*. If you have a 64, grab a copy of the *Gazette*.

But if you read only machine-specific magazines, you cut yourself off from the rest of the computer world. To reconnect, you need a magazine like *COMPUTE!*, a magazine that provides the information, the news, the product reviews, and the features that transcend the narrow machine-specific concerns. *COMPUTE!* gives you what no other computer magazine can—insight into every corner of a lifestyle that includes a personal computer.

COMPUTE! may not have type-in programs, but it's still one of the best magazine buys around. Stay with us. You'll be glad you did. □

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news & notes

Apple Leans on Microsoft in Copyright Infringement Case over Windows

Apple stunned the microcomputer industry last March by filing a copyright infringement and unfair competition suit against both Microsoft, for its *Windows* 2.03 graphics interface, and Hewlett-Packard, for that company's *Windows*-like *New Wave* graphics environment. According to Apple, both of these products violate the "look and feel" of the Macintosh user interface.

The suit, filed on March 17 in the U.S. District Court at San Jose, California, pits Apple against two industry giants—Microsoft and IBM. IBM is involved in the action because OS/2, the operating system intended for IBM's PS/2 line of personal computers, will use a *Windows*-like interface called the Presentation Manager, which IBM has jointly developed with Microsoft. Many industry analysts believe that IBM and its new line of microcomputers are the real targets of the suit. If the legal status of the

Presentation Manager is in question, many developers and users interested in OS/2 may opt to delay their move to the new system.

Will the suit succeed in court? Most industry pundits say no. There are three reasons for this belief. First, Microsoft has a 1985 license agreement with Apple that allows Microsoft to use the windowing environment found in *Windows* 1.x. Second, the ideas presented in the Macintosh's interface are viewed by many to be non-copyrighable; *You can't copy-right a picture of a trash can* is one common remark. Third, the ideas (whether copyrightable or not) expressed in the Macintosh interface were not originated by Apple; they were almost entirely inspired by the Xerox Star—a system developed at Xerox's Palo Alto Research Center (PARC) that

introduced, among

other things, the graphics interface that included icons, mouse input, and windows.

Apple is a veteran of

courtroom battles. In 1983, it triumphed over an up-and-coming Franklin Computer Company, forcing them to pay \$2.5 million in damages for that company's copying of the Apple II's operating system. In a 1985 case closely related to the Microsoft suit, Apple forced Digital Research, Inc. (DRI) to alter its GEM (Graphics Environment Manager) interface to meet Apple's specifications. After the suit, GEM lost its momentum in the market.

Reaction to the suit by the microcomputer community has been almost uniformly against Apple. Many have even suggested that Apple is trying to stop progress by continuing to exploit eight-year-old ideas. In a positive mood, Phillip Kahn, president and founder of Borland International (famous for its *Turbo* languages and, more recently, *Reflex*, *Quattro*, and *Sprint*), suggested that the software community itself should reconcile disputes without resorting to the courts.

Microsoft isn't taking this action sitting down. It has filed a countersuit for breach of contract against Apple. Although many industry watchers suggest that this is standard

but that may not quite be true. According to John Young, President and CEO of Hewlett-Packard, the suit has offered free publicity to HP and has sparked interest in HP's previously little-known *New Wave* operating environment. Sales of the developer's kit have doubled since the suit, and end users seem excited about the product, too.

—CK



Tandy Announces Micro Channel Machine, Springs CD Surprise

When is a surprise not a surprise?

When it's Tandy's an-

Microsoft

procedure for copyright infringement cases, the countersuit indicates that Microsoft is prepared to fight.

"Everyone seems to come out of this a loser," said one unnamed insider of the suit,

announcement of a widely anticipated new business computer that incorporates IBM Micro Channel-type architecture to provide compatibility with the next generation of PC-standard microcomputers.

When does a surprise catch half a dozen industries off guard?

When it's Tandy's wholly unexpected announcement of a record-and-erase CD.

THOR-CD (Tandy High-intensity Optical Recording-Compact Disc) is a reusable optical disc, able to record, erase, and rewrite, all with minimal degradation of medium or data. The process could have dramatic impact on audio CD, CD-ROM data storage, and other digital recording media such as Digital Audio Tape (DAT).

Both products were announced at a late April press conference in New York.

The new computer, the Tandy 5000 MC, is a high-end machine aimed at the corporate, small-to-medium-sized-business, and power-user markets—anyone with high-speed-memory, networking/

multiuser, and graphics-intensive needs. Reflecting the current state of PC operating system affairs, the 5000 MC supports MS-DOS 3.3, XENIX, or OS/2 environments.

Built around the fast 80386 chip, the 5000 MC includes a video graphics array (VGA) display as well as a standard 2 megabytes of RAM, expandable to 16 megabytes; the machine operates at 20 MHz. Five of the seven expansion slots are compatible with IBM's Micro Channel bus, while the remaining two slots are for memory expansion. In its standard configuration, the 5000 MC includes a 1.44 megabyte 3½-inch disk drive; both 40- and 84-megabyte hard disk drives are available.

Announced retail price for the system without a hard drive is \$4,999; with 40-megabyte hard drive, \$6,499; with 84-megabyte hard drive, \$6,999.

The 5000 MC signals renewed commitment on Tandy's part to penetrate the Fortune 500 market, elusive thus far. The company was also quick to point out its affection for and success in the "Unfortunate 6 Million" market of small to medium-sized businesses.

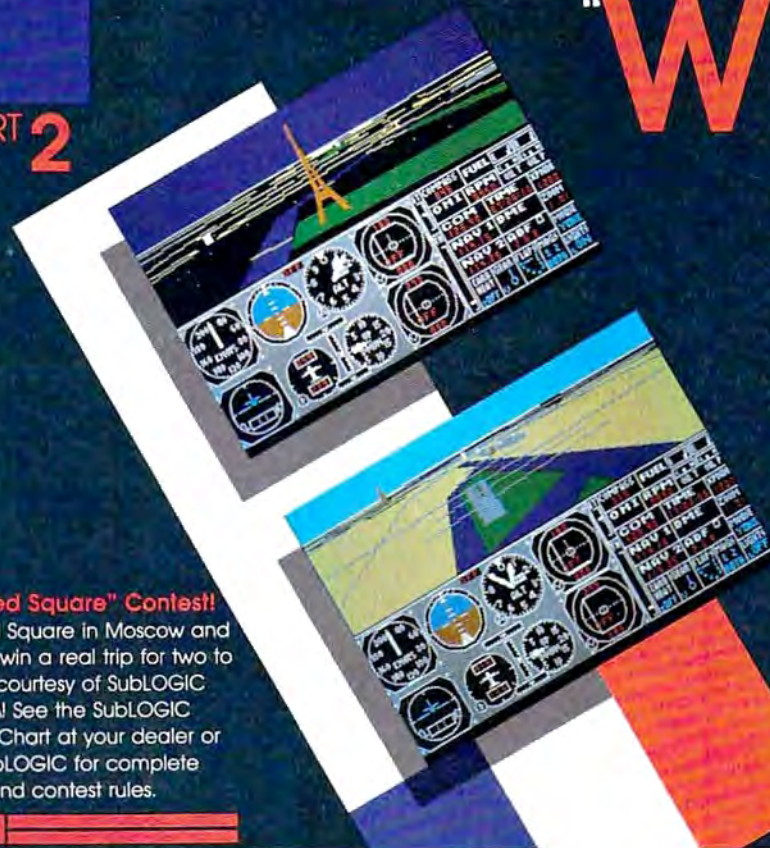
It was, however, THOR that attracted the most attention. Developed at Tandy's Santa Clara, California, Magnetic Media Research Center, the disc is described as a "write many, read many" technology. The current generation of CDs, which now dominate the recorded music industry, and CD-ROM, whose hundreds of megabytes of data storage capacity is finding a ready market in both business and reference industries, are *write-only* technologies: Once a CD is pressed, the encoded information is permanent and unalterable. The search for a

reusable optical medium has been a focus of industry attention.

The new Tandy technology produces optical discs to which information can be written, erased, and rewritten. As with conventional CDs, with which THOR discs are fully compatible, data is stored on the Tandy discs in the form of microscopic *pits* created by a laser. Likewise, a laser is used to read the reflective disc, extracting digital information from the written pits and nonwritten *lands*.

THOR technology, according to Tandy, establishes stable pits in the optical medium. The pits are permanent in the sense that the disc can be played repeatedly; the medium is reusable in the sense that the pits can be erased and rerecorded. Both audio and data discs produced in the THOR format are fully compatible

PART 2



WESTERN EUROPEAN TOUR

Scenery Disk is so beautiful to fly, you'll want to make it the centerpiece of your Scenery Disk collection! This is part two of a five-part guided tour from London to Red Square.

This month we fly to Paris, city of lights. Few sights can compare with the Eiffel Tower at dawn.

Now off to our left you can see Notre Dame cathedral, situated on an island in the Seine. Other Paris highlights include the Arc de Triomphe, Sacre Coeur, Concorde Obelisk, and the Louvre.

Next month we'll finish our tour of Paris and continue on to Germany.



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with existing CD players and CD-ROM drives.

Declaring THOR's production costs to be competitive with existing digital audio formats, Tandy targeted the huge consumer music market as the medium's first arena. Tandy is hopeful of play-and-record THOR-CD decks retailing for less than \$500 within a couple of years of product introduction. Additionally, audio playback and record makes fewer demands on the still experimental hardware and media, making a retail product likely in the next 18 months or so.

A data recording and playback device is expected a year or so after the arrival of the audio deck.

No THOR products were formally announced, but Tandy's display of THOR served a preemptive purpose. The determination of Tandy CEO John Roach to go head to head with not only IBM, but also Japan, Inc., and the rest of the electronics industry is famous; the company's investment in research and innovation is less well known. THOR is an indication that the geography of mass storage is in the process of being redrawn, and that Tandy is determined and prepared to be among the chief cartographers.

—KF

Commodore Goes Back to School

Commodore is moving aggressively to boost its profile in the classroom. After enjoying early success in placing its computers in the nation's schools, Commodore failed to capitalize on its efforts. But as David Archambault, Commodore's new director of education marketing, says, "We've reentered the education market."

As part of its marketing plan, Commodore has established regional sales offices in Atlanta, Chicago, Los Angeles, and West Chester, Pennsylvania. Each of these offices will have a dedicated education-support person whose job is to work with schools, train education dealers, and handle support and warranty questions.

In addition to these four centers, Commodore is working to establish a network of 150 education dealers. Many of these already are full-service Amiga dealers, but they have been specifically targeted as having staff who dedicate a minimum of 60 percent of their time to educational sales and service.

Commodore has also started a new advertising campaign to acquaint educators with its various products. "We've run a series of ads in key educational magazines

that presents all three of our major product lines in three distinct areas," Archambault said.

The 64s and 128s are presented to budget-conscious schools that still need to add computers in their curriculums, while schools that want MS-DOS can turn to Commodore's PC-10 series. And Commodore is aiming to place the Amiga in science, music, art, and graphics departments. Particular emphasis is being placed on that machine's video functionality. "The Amiga can become the lowest-cost interactive video-based machine on the market today," Archambault said.

Commodore is also working with software developers to see products specifically designed for grades K-12. The company recently invited 30 companies to an education software developers' meeting in Philadelphia, where a number of the developers committed to producing education titles for the Amiga.

—TN

Oscars They Ain't, But They're All We've Got

The Software Publishers Association (SPA) counts 325 software publishers, software developers, and magazine publishers in its membership. Every spring and fall, the SPA gathers to talk business, attend seminars, and generally hobnob.

The SPA also hands out awards. The 1987 SPA Excellence in Software Awards, held at the end of March in Berkeley, California, spotlighted 26 programs in 25 categories.

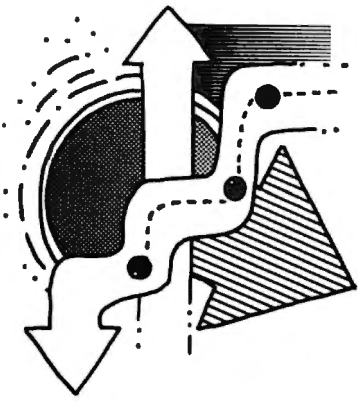
Emcee John C. Dvorak, the almost infamous columnist whose barbs are nearly as welcomed for their publicity as they are feared for their accuracy, put on a show within a show. He managed to draw hisses from the audience more than once. Luminaries from the software industry paired up, Oscar- and Emmy- style, to hand out the plastic awards. Weak "look and feel" jokes were rampant, but personalities such as Trip Hawkins (Electronic Arts), Roger Buoy

continued on page 85



gameplay

ORSON SCOTT CARD



There's No Reason Why Playing a Game Should Be Like Watching a Movie—or So I Thought

Last month I promised that I'd tell you about a series of animated adventure games whose graphics would knock your socks off. The games I talked about last month—*Bard's Tale*, *Exodus: Ultima III*, and *Ultima IV: Quest of the Avatar*—are magnificent. But none of them has the look of a movie. And that's fine. There's no reason why playing a game should be exactly like watching a movie. Or so I thought, until I got *The Black Cauldron* (Sierra) for my kids for Christmas.

I simply wasn't prepared for what Sierra has done to the art of computer animation. *The Black Cauldron* was instantly captivating. Why? Because it *feels* like an animated movie. Instead of the overhead-map shots of *Ultima*, where things are never exactly real, or the point-of-view shots of *Bard's Tale*, where you can never actually see what the characters are doing, *The Black Cauldron* shows the main character, Taran, moving through a remarkably detailed scene—just like in a movie.

The animation was stunningly real. We could move Taran behind trees, rocks, or buildings, and he'd disappear; then he'd reappear on the other side. When we moved him into the stream, he swam. When we used a magic spell, he flew. Animals—and other characters—moved around him; the goat butted him, and he fell down. The whole family gathered around to watch as each child explored the world of *The Black Cauldron*.

The lines weren't as smooth as Disney animation—computer pixels are still too coarse for that. But it's a lot better than Saturday morning cartoons.

How did the Sierra programmers do it, when the *Bard's Tale* and *Ultima* game designers couldn't? They made the right choices from the start. All these games have one thing in common: They have a limited number of different places where the game characters can be.

In the *Ultima* series, each place is the size of a single letter on a normal text screen. The characters are tiny, but they can be in thousands of places in the course of a game without eating up much memory.

In *Bard's Tale*, however, each place requires a complete picture, drawn in perspective. Because you're seeing it through the characters' eyes, you can't watch the characters do anything in the scene. You either stay or go.

But with *The Black Cauldron*, you can see the character move around on the screen. There are a lot fewer memory-eating screen

pictures in the Sierra system. That *should* make the world of the game feel smaller.

It doesn't feel small. Why? Because within each picture, the character can be in thousands of different places. You can explore. You can find things and pick them up, open gates and walk through them, meet people and talk to them. By moving to the edge of the screen, you can move from one setting to the next and explore it in turn. Sierra achieves the same high standard with game after game.

Mixed-Up Mother Goose is that rarest of things: a game for children that isn't trying to teach them something. Children start by picking the character who most looks like them—a dozen different children can save their own game, with their own picture. (My daughter Emily was a little miffed that the blond girl didn't have long enough hair, but even so, she loved moving "herself" around the screen.)

Using that same marvelous animation system, children can go from house to house in a village that includes King Cole's castle, Jack Sprat's house, the old woman's shoe, and so on.

The game consists of finding missing items—Jack's candlestick, a ladder for Humpty-Dumpty—and taking them where they're needed. When you do it, the nursery rhyme is acted out on screen, music and all. My kids loved it. I loved it.

King's Quest III: To Heir Is Human is just as good—and it has the same wacky sense of humor as the other Sierra games. You start out as the servant of a bad-tempered wizard. You have work to do—if you pick up the broom, you watch your character sweep. If you pick up the chamber pot, you have to go empty it. If you lift the rug, you find the dust you swept under it. And if the wizard catches you being lazy, he magically compels you to do calisthenics.

Once he's gone on a journey, you can gather up a few interesting items from the wizard's house—a magic mirror, a potion, your favorite bowl, and yes, even the wings you pulled off a fly—and make your way through the world.

The games could play a little better—there's too much of a solve-this-puzzle-or-else attitude in the programming—but that's a matter for another column. Sierra has done for home computer animation what Disney did for the cartoon back in the 1930s. There's still room for other approaches to visual adventure games—but Sierra has set the standard. □



impact

DAVID D. THORNBURG

Computer Viruses Use Networks to Spread the Disease of Distrust

This past year many computer manufacturers have been touting *connectivity*, the ability to link computers—a few in one office or thousands across continents—in networks. Networks allow resources to be shared. Large program libraries can be maintained on special disk drives called *file servers* allowing people to access files of interest to more than one person. Networks that extend beyond the boundaries of a single building can serve to connect people more closely by allowing the rapid and effortless sharing of information.

One popular use of remote file servers is the distribution of public domain software. National services like CompuServe are loaded with thousands of programs for users with various interests and all brands of computers.

While it used to be that the only risk involved with public domain software was that you'd waste time copying a program you'd never use, a new problem has recently surfaced—*viruses*. Viruses are small programs embedded inside other programs. A virus has the ability to replicate itself and infect almost any program on your disk, including parts of your operating system. The second characteristic of viruses is that they do something—blithely announce themselves or insidiously wreak havoc.

While some may disagree, I think I've traced the origin of viruses back to Alvin Toffler's book *Future Shock*. If this seems like a strange starting point, stay with me. You may recall the impact made by *Future Shock* when it appeared in the early 1970s. This book suggested, among other things, that our future was going to consist of accelerated rates of change. For example, in the future (that is, now) most people would have several major career changes before retirement. This is a marked change from our parent's generation in which people tended to stay in a single career for their lifetimes.

When *Future Shock* appeared, it made a great impact on the science fiction writer John Brunner who was inspired to write a book called *The Shockwave Rider*, first published in 1975. The main character, who is constantly being chased by evil forces, manages to escape detection by rapidly changing careers and identities.

One of the major tools in the hero's arsenal is the computer. By gaining access to the main record-keeping programs, he can generate new identities and destroy old ones. The trick is to keep the network busy while he is working so that others won't be

able to trace him. To do this, he creates a special program called a *worm* that propagates itself through the network to block other people while he is working.

Shockwave Rider was a popular book among computer scientists in the late 1970s, and at least one brilliant programmer decided to see if worms could be created. Within a short time a worm had been created and launched onto ARPANET, a government-sponsored network that linked government and university-based computer researchers throughout the country. Within a day, this program had migrated to the furthest reaches of the country. If one installation eliminated the worm by disconnecting from the network and removing the program from its disks, the worm would reappear as soon as the computer was reconnected to the network.

The worm was a moderately harmless experiment that only affected a few thousand computers, but today's viruses aren't so benign. At best, they're nuisances, and, at worst, they can damage computers.

We have a tendency in our society to glorify those who tamper with the system and get away with it. Many years ago when John Draper (a.k.a. Captain Crunch) was placing international phone calls for free, he almost acquired the status of folk hero. Recently, our papers were filled with stories about high-school kids who managed to link their computers into corporate databases. As troublesome as these events were, they pale in comparison with the damage that viruses can cause.

Once a virus is launched, its creator has no idea where it will end up. A virus may choose to print a message during the creation of a business letter or during the electronic transfer of funds between countries. People who create and launch viruses are not clever; they're not brilliant. They're arrogant, self-centered people who have no business in this field. The challenges of networks aren't technological, they are challenges of trust. If I receive a public domain program from a network, I'm entitled to know that this program isn't going to modify anything else on my disk without my knowledge or permission.

I have no idea what legal challenges confront those who create viruses, but I'd be the first to applaud the filing of lawsuits by those companies whose business has been disrupted by these programs. There is much room for entertainment in the computer field, but viruses aren't funny. □

Letters

Thumbs Up!

What a surprise! When I opened up my mailbox and saw the May issue, I knew something was different. You took a chance with the new layout and design, but it worked, because I definitely like it. It's a long-needed changeover from the old format and the type-in programs.

The new features, such as the "20 Great Computer Games You Must Have," were excellent, as were the reviews and the buyers guide. The old *COMPUTE!* was a good magazine, but the new *COMPUTE!* is great! Your magazine definitely has a group of young, fresh, innovative, talented writers. I am a satisfied reader, as well as many others probably are. Keep up the good work!

*Rick Leahy
Commack, NY*

This is just a short letter I'm sending to tell you how much I like the new *COMPUTE!*. The new layout of the magazine is really great. All of the columns, features, and reviews add a lot to the magazine. I probably think this way because I own an Epson Geneva PX-8, which is not IBM-compatible, so most of the type-in programs included in the old magazine didn't apply to me. Most of the reading I did in the magazine was in the feature articles. Now that more of the magazine is filled with those kinds of articles, it's much more enjoyable to me.

*Joe Buchwitz
Hibbing, MN*

And Thumbs Down!

I have been a loyal subscriber to *COMPUTE!* magazine since 1983 for several reasons. Until now, the magazine maintained an intelligent approach to computing. Its format was diverse, and it catered to multiple levels of user ability. Its type-in programs were often educational as well as entertaining. In addition, the Atari computers were heavily supported.

Now, none of the above are true. Not any more. I just received the comic book that is brazenly titled *COMPUTE! May 1988*.

As stated in the aptly titled "Editorial License," "We changed because we saw you changing. It's that simple." You have indeed made a correct prediction! I will now most certainly be changing. I will be changing to another magazine.

*Ted. R. Niemiec
Chicago, IL*

I've changed.

When I flipped through the pages of my latest issue of *COMPUTE!*, the first thing I noticed was a new, clean layout and design. Very professional, I thought. Then I went to the table of contents to find what new software your magazine had to offer for my computer. To my dismay, I discovered reviews, features, "COMPUTE! Specific," and columns; but no reference was made to the highest-quality software available in print form. Well, I thought, maybe they're hiding it under this "COMPUTE! Specific" section. Of course, after further research, I realized what you already knew, that *COMPUTE!* magazine has begun a new era, one that doesn't include type-in programs.

I really did appreciate you telling me what I'm interested in. I thought I was enjoying the insight into my machine I was getting out of those type-in programs, but I was wrong. I discovered that I didn't need to take advantage of the useful applications that had been presented to me in the past, that the time I spend on my computer would be more interesting, more worthwhile, and more productive if I would read feature articles, buyer's guides, and product reviews.

You like what you've offered, and I would like you to offer me my money back on the issues of *COMPUTE!* remaining in my subscription.

*Robert J. Vigo
Milwaukee, WI*

COMPUTE!

The Leading Magazine Of Home, Educational, And Recreational Computing

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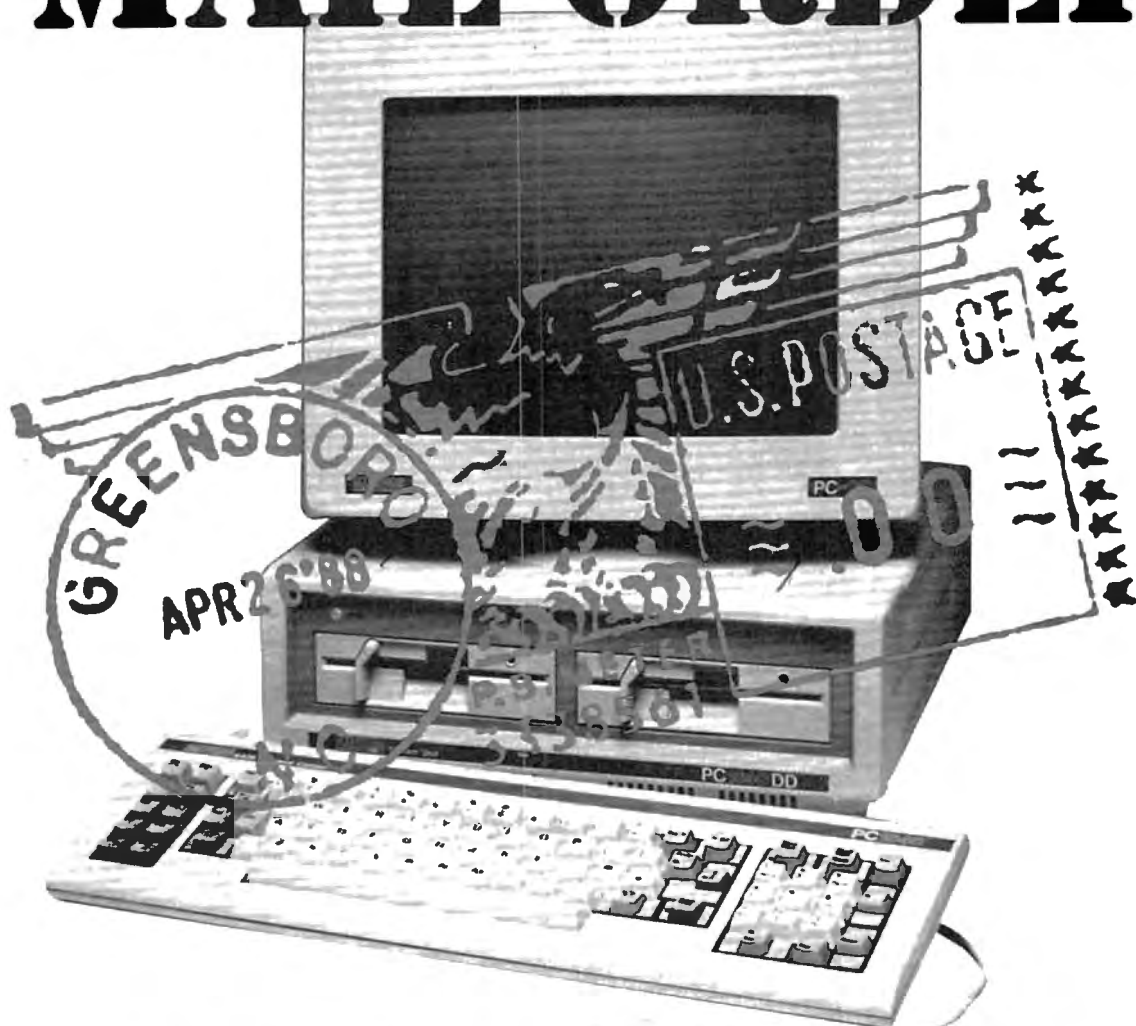
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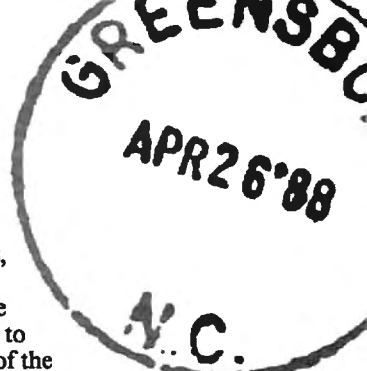


MACHINES

Buy computers and software through the mail with confidence, not confusion.

J. Blake Lambert

Mail order doesn't mean Montgomery Ward catalogs, rural folk far removed from city stores, or chancy buys. Not anymore. Home shopping is an upscale, urban way of avoiding the crowds, saving money, and finding exactly the right thing. Thousands of companies in hundreds of different industries compete for the reader's attention with flashy, colorful catalogs that pour in through the mail slot day after day.



Pepperidge Farms sells cookies and soups, Banana Republic hawks safari-style Third World clothing, and 47th Street Photo pushes electronic gizmos through the mail. Other companies use the mails to get computer hardware and software to your door.

In fact, when the personal computer phenomenon began, mail order was often the only way for some people to buy computers and software. Retail computer stores hadn't sprung up at every mall, and discount software outlets hadn't yet made their presence felt.

Now, though, with computers for sale everywhere from consumer electronic shops to department stores and with software everywhere from Toys "R" Us to the local bookstore, the reasons for buying mail order machines are different.

Legitimate mail order companies make a lot of money by removing profit links from the distribution chain. Getting rid of as many steps as possible between the manufacturer and the user maximizes the seller's profit and the buyer's savings. Concentrating on offering products with quick service, good

prices, useful advice, and convenience, mail order provides one-stop shopping for many buyers.

Purchasing software and hardware through the mail is not for everyone. The reluctance many people feel when buying expensive products by mail is understandable. Overcoming the inherent fear and confusion of mail order can pay great dividends for the knowledgeable user in the form of savings, convenience, and even insurance against making a bad buying decision. What you'll find here is the advice and information you need before picking up that phone and reaching for that credit card.

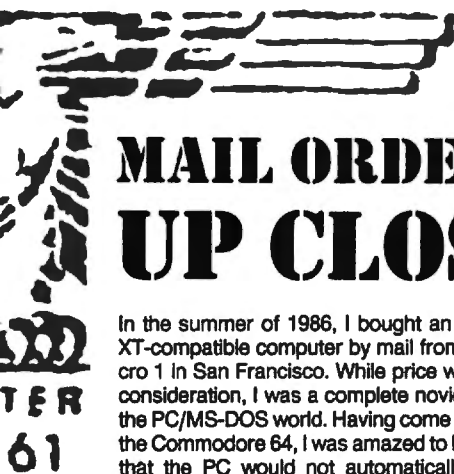
WHAT TO BUY

The first step to mail order buying success is to gather as much information as possible about what you want to order. If you're thinking of buying a self-contained computer (the Commodore 64C, perhaps) or a preconfigured computer (many PC compatibles), this step is simple. Most laptop and home computers are perfect for mail order, for instance, because they're ready to use right out of the box, much like a compact disc player or microwave oven. As

with other consumer products, you'll certainly have to read the documentation to *fully* make use of the computer, but you won't have to decide how to configure the machine when ordering.

When buying a more complex computer with more options, like an IBM PC clone with a graphics card, monitor, and hard disk, the information-gathering process can be more complex. But because the savings can be so great, the effort is usually worthwhile.

Computer magazines provide an excellent way to find specific information about the hardware and software you're interested in purchasing. Many computer magazines regularly perform and describe comparison tests on competing products, offering detailed technical information concerning options, pricing, and performance. Such comparisons have recently selected mail order computers as among the best in terms of quality, price, and performance, especially in the PC-compatible market. ▶



MAIL ORDER UP CLOSE AND PERSONAL

In the summer of 1986, I bought an IBM XT-compatible computer by mail from Micro 1 in San Francisco. While price was a consideration, I was a complete novice at the PC/MS-DOS world. Having come from the Commodore 64, I was amazed to learn that the PC would not automatically include a disk operating system, manuals, or even a graphics card. For me, then, customer service and technical advice were particularly important. I didn't mind paying a fair price if I could get some help when I needed it.

After a couple of calls to Micro 1, I was convinced that the people involved were both competent and trustworthy. Making my best deal, I ultimately ended up with a Turbo-XT clone with two 360K 5¼-inch drives, a color graphics adapter card, one serial and one parallel port, and a Seagate 20-megabyte hard disk. I felt comfortable about the transaction because Micro 1, like most mail order firms, offered a 30-day, money-back guarantee.

Indicating my anxiousness to get started with the new computer, I asked what payment and shipping options were

available. As it turned out, the fastest way to get the computer was to have a local bank wire the funds to Micro 1's bank account in San Francisco. This turned out to be no more costly than other options, and with express shipping, the computer was up and running in my office in under three working days. The hard disk was properly formatted when the computer arrived, and hooking up all the parts took under 20 minutes.

As was typical of the PC clones at that time, the documentation was less than perfect. While the manuals were obviously translated from at least one foreign language and were not as nice as some computer manuals I'd seen, there was ample information about unpacking and using the clone.

Every piece of software in the office worked with the computer and, except for one copy-protected *dBase III Plus* program that thought I was trying to steal it, there were no problems.

In spite of the fact that all was working well, the hard disk was a bit noisy. At first I thought this was normal, not know-

ing how loud a hard disk should be. After several days, though, I became convinced that the disk was defective. On occasion, it failed to boot properly the first time. Finally, I called Micro 1 to discuss the matter.

The technical support personnel there were extremely patient and helpful, and they stressed that if I was unhappy with the disk drive in any way, I could return it for replacement or even for a refund. I explained that I needed to use the hard disk daily in my business. The end result was that Micro 1 sent a new hard disk drive to me *before* I even returned the original drive. This meant that I had virtually no down time except for the couple of hours it took to remove the old disk and install the new one. (I paid for return shipping of the old disk drive, and Micro 1 paid to send the new one to me.)

Micro 1 could have chosen to be difficult about my wish to have a new disk drive and could have tried to convince me that nothing was wrong. Instead, they chose to work with me to satisfy me as a customer, knowing that someday I would tell others. They were right.

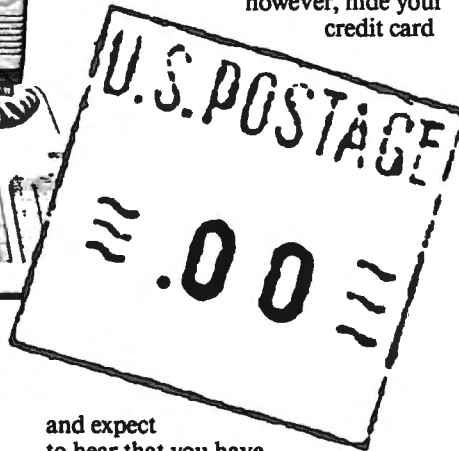


topics related to your purchase, or, if that doesn't work, you can try the interactive discussion or chat modes. Remember, though, that not everyone who gets on a national bulletin board is a computer expert. Consider the advice and opinions carefully before acting, just as you would with any stranger's comments.

FROM THE HORSE'S MOUTH

One of the most obvious but perhaps least utilized methods of getting information and advice is to call the technical support and order lines of the mail order companies who sell the machines you're considering.

During this exploratory call, however, hide your credit card



STRENGTH IN NUMBERS

Another good way to get advice and information on computer products is to join a local computer user group. Some groups go so far as to hold classes on using, maintaining, or even building your own computer system. In many cases, all the information you'll need to make up your mind on what hardware and software to buy will be available from the user group.

While many computer stores offer discounts to user group members, most groups have done plenty of business through the mail. Since some mail order companies work with user groups on volume orders, buying your system with a group's help can save you even more money, as well as provide support for your complaints if problems come up later. Mail order companies are generally interested in keeping the best service reputation possible. A happy user group member is likely to spread the word to others, thus encouraging more sales. Because repeat and word-of-mouth customers are so important to mail order firms, user group members are normally treated with special care.

For those who have the budget and the time, national information services like CompuServe and GEnie are excellent sources of opinions and advice concerning computer hardware and software. You can search through the message archives to read comments on

and expect to hear that you have 30 days to return anything you don't want. If there's a special offer for first-time callers only, start getting suspicious. You can be a first-time caller later with a different salesperson.

At the first sign of pressure, do whatever you need to end the conversation. Top-flight mail order firms don't allow their sales staff to verbally strong-arm customers.

WHERE TO BUY

The most important factor in your choice of a mail order company is stability. It doesn't matter how good the company's prices are if the company goes out of business before your order is shipped. The best you can hope for if the company goes into bankruptcy is a letter from the State District Attorney's office but little, if any, share of a future settlement. Direct marketing is a lucrative business where legitimate companies can make good profits while still offering quality service and products. Unfortunately, it's also a business that has had its share of swindles.

Shopping for price alone is probably the single biggest mistake consumers make when buying direct. Recently, readers of one computer industry weekly publication experienced the horrors

of this situation when first-time advertisements appeared from a company offering software at prices 10-20 percent below those of competing *mail order* businesses. Those who quickly picked up the phone and placed their orders were rudely surprised later to find that no software came and their cards were charged.

While the Better Business Bureau is not a consumer protection organization per se, it's still worth a phone call when buying from a direct marketing company. Most legitimate mail order businesses will be members of their area's Better Business Bureau, and the Bureau will have a file of consumer complaint letters, with the responses from the mail order company. The Bureau will also be able to provide information on the company's structure: how long it has been in business, if it is a subsidiary or parent company of another concern, and other pertinent facts.

ONE YEAR OLD?

Another good way to check a business's success is to track its advertisements over the past year. Generally, the minimum amount of time the business should have been regularly advertising the type of product you're interested in buying is one year. Even fly-by-night companies can buy plenty of advertising on credit. It takes several months from the time advertisements are placed and printed, until all accounts are settled. If a company is placing print advertisements which are as large or larger than those of a year before, it's likely that their business has been profitable. This doesn't mean that the company will offer good service, necessarily, but that it's more likely to be financially viable.

Just as user groups and online services can help determine what hardware and software to buy, they can also help when choosing a mail order company. Most user groups are full of success stories and horrible legends about mail purchases.

The next step is to call the order and technical support lines of the companies still on your list. The better mail order firms have competent sales and technical staffs to help you with the finer points of making purchasing decisions. Of course, these people are there to encourage sales, as well as to promote satisfied customers, so don't let yourself be talked into buying before you're ready. And remember that not all sales staffs are equally competent—get advice and information from several mail order companies before making a final selection.

The final consideration beyond product and price is the mail order house's attitude toward its customers.

This is where written policies displayed in the company's advertisements come into play. Ideally, in addition to the 30-day, money-back guarantee, the company will offer at least a one-year warranty; will charge only when an item is shipped (and not before); will have a clearly stated policy concerning credit card, shipping, and insurance charges; and will provide all the information you need in the advertisement, without hiding any details.

Mail order computer companies have plenty to prove to the public, and the good ones are constantly working to find better ways to really serve their customers' needs. Local computer dealers are feeling the pressure from mail order's success and are having to do more than just sit and wait for customers to walk in and drop money in their laps. In this respect, mail order businesses benefit even those who would never buy anything from them.

Local dealers enjoy telling horror stories about how computers have been lost and damaged in transit, leaving the buyer with a headache and cracked computer. But dealers get their computers the same way people who order from mail order houses do: They order them from distributors who ship them

via parcel services. As long as you do the necessary checks to make sure you're dealing with a reputable mail order firm, there's no more for you to fear from a mail order company than there is for a dealer to fear from a distributor.

CHARGE THAT CARD

When you buy by mail, you'll probably want to pay with a credit card, such as Visa or MasterCard. It's convenient, and you don't have to have the money *that very moment*.

But another reason to pay by charge card is the protection it provides. Although banks (normally the backer of credit cards) cannot stop a card charge, you do have some recourse if you don't get an order; if you get the wrong merchandise, or if the products are defective.

For instance, if you've not received your merchandise within 30 days of ordering, and calls to the mail order company go unheeded, you can file what's called a *dispute letter* with the card's carrier—your bank, usually. The same holds true if you returned the order. Typically, a dispute letter must indicate that you've returned the order (or that you never received it) and the reasons why you sent it back. Such a letter must be filed with your bank within 60 days of the date on the statement which list-

ed the charge. Check with your own bank or credit card customer service for details specific to your area or card.

Of course, it's always best to deal with the mail order company directly. Most have replacement policies for defective hardware and software, for example, and can handle those kinds of problems for you. Back-ordered products are another potential trouble spot, but again, most mail order companies give you realistic estimates of when to expect your order. Many do not charge shipping on back-ordered items in an attempt to ease the problem.

The convenient terms and standard 30-day, money-back guarantee give mail order the edge over most local dealers; in effect, what you have is a month-long insurance policy against making a bad decision.

By simply picking up the phone and placing an order, you can find out firsthand if you'll really benefit from stepping up to more powerful hardware or more sophisticated software.

The mail order firms know that getting you to place the order is the hardest part. Once that's out of the way, all they have to do is make you glad you did. ▶

J. Blake Lambert is a systems analyst with a metropolitan housing authority, a computer columnist for *Pace* magazine, and an avid reader of mail order ads.



MAIL RESPONSE: TIPS FOR SUCCESS

There is perhaps no better way to find out what to watch out for when purchasing through the mail than by talking to mail order industry representatives.

The one item all agree on is that the consumer should do a background check on the company before spending any money. The Better Business Bureau was the most frequently mentioned place to start, followed by user groups and friends.

George Sutyak, General Manager of Programs Plus in Stratford, Connecticut, points out the importance of making a test purchase, saying consumers should "buy something small the first time and make sure that they do what they said they would do for you in their advertisement."

David Hall, Chief Executive Officer of PC Connection in Marlowe, New Hampshire, concurs, recommending that, after deciding on a company, you should "give them a call on their toll-free number and ask a bunch of questions. Ask about compatibility of what you want with what you have. Ask more about the return policy. Be sure that you find out if they have extra charges

for insurance, extra charges for freight. Once you have narrowed it down, . . . test purchase."

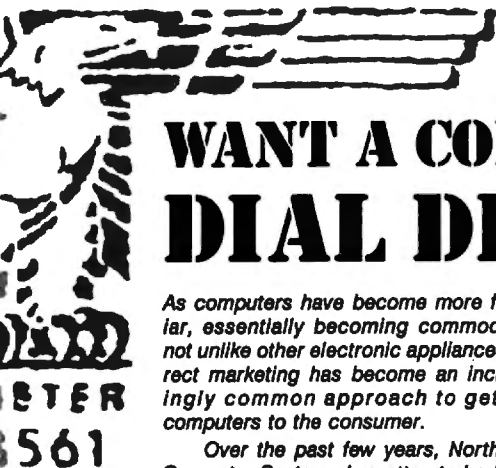
Tom Irby, Manager of International Department/National Accounts for CompuAdd Corporation in Austin, Texas, agrees that toll-free support, not just order lines, are important. "You can tell a lot by just calling an organization." Irby also stresses the importance of checking out the company's stability: "Unfortunately, the majority of people shop for price. A more important factor is the company behind the product."

Ed Gelezinsky, General Manager of Lyco, suggests that mail order buyers look for a company that can provide information as well as products. The best mail order houses and personnel are "trained in the market. Once they get a feel for [the user's] application, they can make sure he's getting the right products, as well as the right price." Breadth of selection is among mail order's large advantages, says Gelezinsky. "Local retailers may carry one or two brands. Mail order cus-

tomers can select from a variety of variables for their needs, budget, whatever is right for them. Mail order dealers have a national perspective."

Sutyak of Programs Plus underscores the high-quality company's motivation to satisfy the customer. "We are not going to be a successful and long-lived company if we only sell to people once. I want your business again. I want you to tell everyone that you know that you got a good deal and got it quickly." Hall echoes this desire to make things easy for the customer, stating that his company wants to show that "it is not as scary to buy things through mail order" as some people would have you believe.

Irby says it is essential to make sure you "explicitly know what the warranties are on the products," but that "mail order is one of the more efficient methods of buying." Sutyak says mail order is the best way for some people to buy. "It's a good way to save money if you are an intelligent user and you know what you want."



WANT A COMPUTER? DIAL DIRECT

As computers have become more familiar, essentially becoming commodities, not unlike other electronic appliances, direct marketing has become an increasingly common approach to getting computers to the consumer.

Over the past few years, Northgate Computer Systems has attracted a lot of attention for its features-packed approach to the direct marketing of MS-DOS computers. Large, text-filled ads emphasize Northgate's commitment not only to price but also to ongoing product innovation and enhancement; even for those not in the market for a machine, the ads are fun to read.

The ads also have something to say. Taking on the industry at every level—from hard disk efficiency to keyboards—the Plymouth, Minnesota company has won a substantial and growing following.

Northgate CEO Arthur Lazere spoke with us recently on the nature of direct marketing, and he offered some basic questions PC buyers should ask before placing an order.

COMPUTE! What led you to position Northgate as a direct marketer of computers?

Lazere As we saw DOS machines becoming more and more of a commodity item, we saw the necessity for in-depth sales technology going away, being no longer as important as when computers were a mystery.

COMPUTE! What prompted the change? Why are in-depth sales approaches less important?

Lazere There were two basic elements involved. One was the general consumer who has computer experience, knows what he wants, and should be buying on a commodity basis. Two, [buyers in] commerce, industry, government, education have computers set up, and they know what they want.

COMPUTE! But it's not solely a price-driven market?

Lazere No. If we can sell beans at a better price than the next guy, the next part of the formula becomes making a better bean.

Up against the Lower East Side of New York [a virtual bazaar of price-competitive electronics], you've got to distinguish yourself. The sales of any product follows a prescribed curve, and understanding the level of the market determines the level at which you serve the market.

COMPUTE! How do you go about this in a commodity market?

Lazere Everybody knows what a computer is. You must sell in a mature fashion, so you sell on what distinguishes your computer from the other guy.

There's a life cycle—once a market matures, it's going to die. But you can inject new life into a market with product innovation, start another growth cycle, see rapid acceleration, which then levels off once more.

With computers, everything looks the same. The boxes all look alike. People assume nothing new can be done with computers—and it just ain't so!

That's why our ads are so verbose. You have to defy common perceptions, so you sell on basis of facts and differences. We realized early that we have to offer a better system at the same or better price than the other guy.

COMPUTE! What can consumers do to ensure that direct-marketed computers live up to the expectations their ads create?

Lazere Find out about the company's stability. Check with the Better Business Bureau in the company's home town. And remember the motto—if the price seems too good to be true, it probably is.

You can also check with the state Attorney General. Make sure there are no blazing violations of good business practice.

Be certain that when they say they'll ship merchandise, they actually ship it. Find out if they handle their affairs properly.

COMPUTE! What other resources can consumers draw on?

Lazere Read the magazines. See if the company appears several times in the industry. Look up reviews of the products.

COMPUTE! Are there any technical questions consumers should seek to answer?

Lazere Find out if the company manufactures its own machines or buys somebody else's.

We buy parts and manufacture our own machines.

COMPUTE! Should the consumer be concerned about those parts?

Lazere Parts that are in the machine should be identified. Drives should be name drives from name manufacturers who are identifiable, the same with the monitor.

COMPUTE! What about warranties?

Lazere There are several things the consumer needs to know. Does the marketer sell on the manufacturer's warranty or his own? What does that mean?

Suppose you put ABC hard drives, purchased through a distributor, into the

machine. The manufacturer—ABC—puts a one-year warranty on the drive. The clock starts ticking when the drive ships. Then the distributor sits on the drive for three months, and the assembler may sit for a few more weeks before the drive is put into a computer.

What happens? A few months after shipping to customer, the drive dies—and it's already out of warranty. The distributor/dealer process used several months of warranty time, and the guy who sold the machine won't honor the warranty.

COMPUTE! What should the consumer look for?

Lazere A warranty from the company that supplied the computer. Look for a one-year warranty on all parts from the date of purchase.

COMPUTE! How about technical support?

Lazere Technical support is a very tricky aspect of this business. It's hard to provide full, free tech support. Most customers don't read documentation thoroughly, which means that most tech support problems are the customer's own doing.

COMPUTE! Given that, technical support remains important. How much hand-holding should the consumer expect?

Lazere Whether toll free or telephone charge, the company should provide free service for the life of the machine.

COMPUTE! Does a toll-free line make a difference?

Lazere If they have a toll-free line, that's great. But I don't know how they manage it.

COMPUTE! Is third-party repair service important?

Lazere We saw third-party repair service as not making a lot of sense.

It makes more sense to send replacement parts overnight and to talk the consumer through the fix. We ship overnight, at our expense, any failed part that the customer can replace.

COMPUTE! What are the particular advantages of buying a computer from a direct marketer?

Lazere The consumer can get customization faster than he can get a dealer to do it—dealers are notoriously out of parts all the time.

You're probably going to get a more satisfactory machine—direct marketing is more likely to deliver a standard IBM architecture machine, especially at the price the consumer wants to pay.

— Keith Ferrell □

Up Periscope!

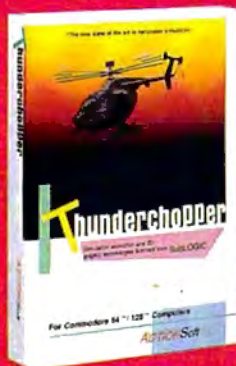
Our first advertising for Up Periscope! boasted of the program's vast superiority over other sub simulators, and detailed the many features that place it generations ahead of the pack.

Now that these facts have become common knowledge, we've asked the man behind the program to go into a bit more detail about how this simulation was created. As Captain John Patten, USN (Ret.) explains:

"I like to think of Up Periscope! as the Flight Simulator of submarine software. In fact, much of the program's 3D graphic routines come directly from Microsoft/SubLOGIC Flight Simulator.

"Whether or not you agree with my terms, you'll have to agree that Up Periscope! has the polish to provide years of unparalleled pleasure. Split-screen views give you the freedom to perform your duties without having to constantly change displays. SubLOGIC 3D graphics provide the realism missing from other submarine simulations. Unlike the U.S. Navy, this sub lets you go on liberty at a moment's notice by saving your mission-in-progress to disk. And I've even included a book about the strategies and tactics I taught in submarine school, with excerpts from actual WWII patrol reports.

"I've used my 24 years of Navy experience to give Up Periscope! the ultimate strategic realism. Experience the sophisticated action and strategy of Up Periscope! for yourself. You'll agree - this is the finest sub simulation available."



Split-Screen View



Enemy Convoy



Torpedo Data Computer



See Your Dealer...


Or write or call for more information. Up Periscope! is available on disk for the IBM/Tandy/compatibles and Commodore 64/128 computers. For direct orders please indicate which computer version you want. Enclose \$29.95 plus \$2.50 for shipping (outside U.S. \$6.95) and specify UPS or first class mail delivery. Visa, MasterCard, and American Express charges accepted.

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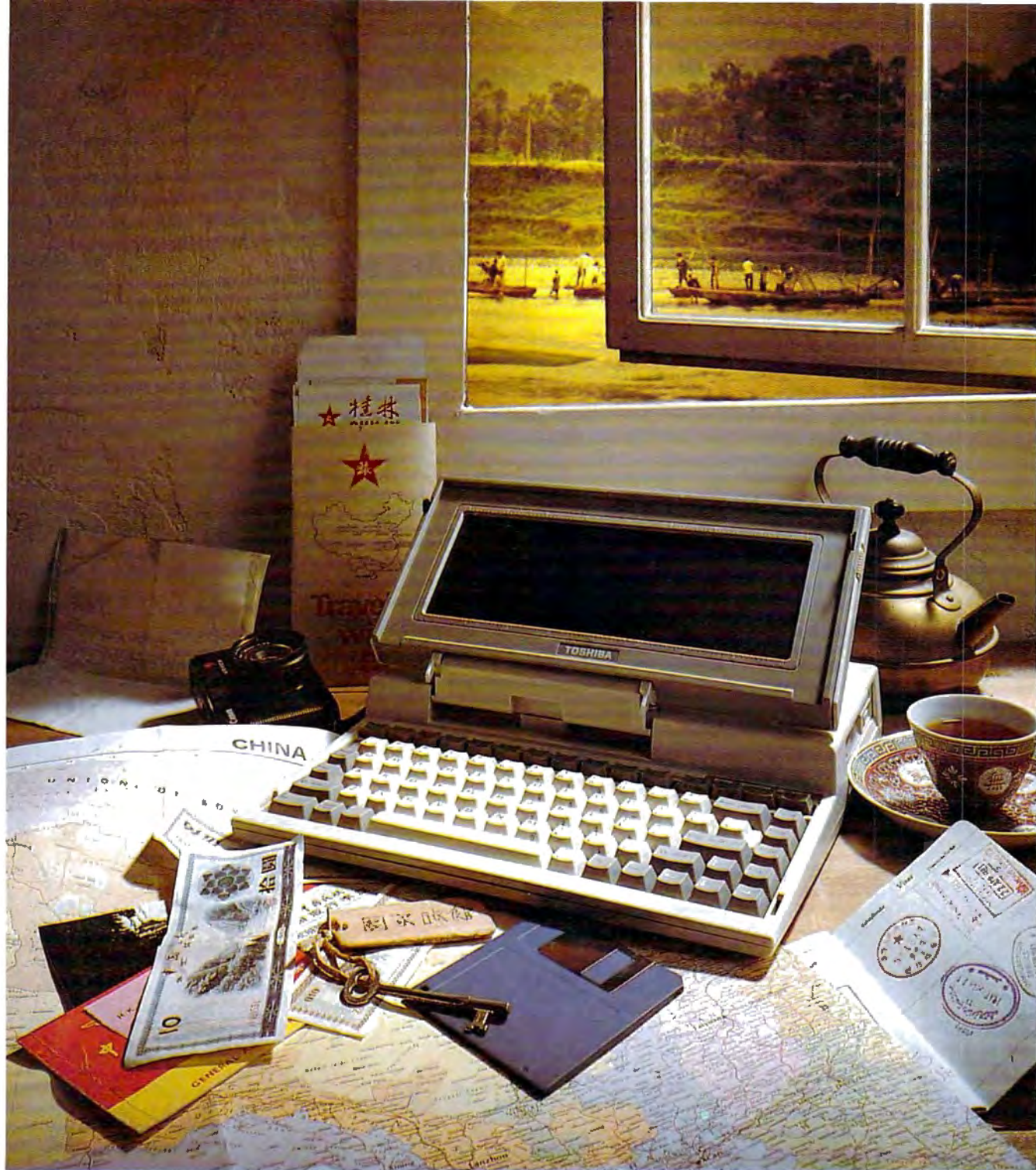
201 WEST SPRINGFIELD AVENUE, SUITE 711
 CHAMPAIGN, IL 61820 (217) 398-8388



AROUND THE WORLD IN 80 COLUMNS



*Don't leave home without it.
Make travel plans or learn a
language with your computer,
and then take it along when
you hit the road.*



All photos © 1988 Mark Waggoner except where noted.

Summertime means travel time. Pack the kids in the car, put your passport in your pocket, smear on the sunscreen. Vacation's here. Just because you're locking up doesn't mean your personal computer has to stay at home. Even if it's not a laptop or portable, you can take it with you. Whether you're traveling for business or pleasure, the computer can make your time away from home more productive and more enjoyable.

Before you leave, your machine can help you make travel arrangements

and reservations, and it can help you learn a foreign language.

Box up the computer carefully if it's not accustomed to traveling, or sling it in its case if it is. But don't forget all the little necessary extras that you can't find on the interstate or in the international airport.

If you're really going away from it all, all the way behind the Iron Curtain, you'll need to plan ahead and fill out lots of forms in triplicate. *Glasnost* notwithstanding, custom agents will still be wary when you cross certain borders with a computer in tow.

Want to know what computers are hot in Sweden? How software from the Soviet Union managed to get in American machines? Why American software has a hard time getting into the German market?

In this article, you'll find answers to these questions, practical tips on caring for your computer on the move, whimsical accounts of encounters with foreign nationals, and more.

Get ready for a whirlwind tour of the world. *COMPUTE!* Travel is ready when you are. ▶

The Well-Traveled Computer

Do you know the three things you should *never* do when traveling with a computer? Could you get help with a software or hardware problem on a vacation a thousand miles from home? Will moving your hard disk destroy the valuable data on it?

Whether you're carrying a feather-weight laptop on your vacation or you're moving a big-iron desktop system across the country, learning the answers to these questions, together with a few simple tips, can save you from disaster and make traveling with your micro or moving it a pleasant experience.

GET IT READY

Before you pack your computer, you need to get it ready for its move. The first order of business is to back up all your data. If the computer has a hard disk, make sure all the important information is copied to floppies. If you have a laptop with volatile RAM storage, save the contents to a safer medium.

If you have a desktop with an old hard disk, it's a good idea to run a program to park the heads before you move the computer. On IBM machines, this program, called SHIP-DISK, comes with each hard disk. Many versions of MS-DOS come with a similar utility, and there are several public domain variations available, so it shouldn't be too hard to find one. If you have a newer hard disk or a portable with a hard disk, the chances are that it automatically parks its heads when the power is turned off.

Floppy disk drives need some attention, too. When you received your computer, each floppy disk drive probably came with a cardboard head protector inserted in the disk's place. If you saved these, insert one into each drive and close the door.

One last prepacking chore: It may be worth your while to check your insurance policy. Is your computer covered if it's stolen or damaged during your trip? Does your policy have any special restrictions?

PACK IT UP

Packing is next, with the emphasis on protection. If you're moving a desktop system, pack it in its original cartons, filling any open spaces with wadded newspaper or packing popcorn.

If you're carrying a laptop with you, the theme should be to dress it down, making it as inconspicuous as possible. An expensive-looking case may tempt a thief.

In addition to your computer, you'll need to carry some extras. If you're a laptop user, you have the big-

gest packing list. First and foremost, you'll need batteries, an AC adapter, and a recharger—if your computer uses one. If you're traveling abroad, a transformer is a necessity. If your computer is going to be a working partner on your sojourn, you'll want to make sure you have *all* the software you'll need, and backups of your important programs. Extra disks—more than you think you'll need—are also a must.

ARRANGE IT

Next, a few arrangements are in order.

An important consideration for laptop travelers is communications. Don't forget your modem, if it's external, and, for a long trip, consider a subscription to a nationwide information service like CompuServe, The Source, or GENie. Through one of these services, you can communicate with contacts at home and store vital information. A communications link may also provide expert help in a hurry if something goes wrong with your computer or your software. And don't forget to carry any necessary phone numbers or access codes with you.

With the arrangements made, your computer packed or bagged, you're ready to hit the road. For those moving a

desktop system, most of the work has been done. You can sit back, enjoy the trip, and look forward to unpacking your system at its destination. For laptop users, things are just beginning. These three important *don'ts* cover most of the bases:

- Don't leave your laptop where it will be exposed to extreme temperatures—LCDs are sensitive to wide thermometer swings.
- Don't leave your laptop lying unguarded on a table somewhere—the screen might as well be blinking *Take me, I'm yours!*
- And finally, don't let strangers play with your computer—a few keystrokes in the wrong places can zap hours of work.

— Clifton Karnes

Computer Mover's Check List

Before you pack:

- Back up programs and data
- Secure hard disk and floppy disk drives
- Check insurance

Packing List:

- Software and hardware manuals
- Batteries, AC adapter, recharger (for laptop users)
- Transformer (for foreign travel)
- Extra disks
- Printer (with extra paper and ribbons)
- Modem
- External disk drive
- Null modem
- Cables
- Important telephone numbers—CompuServe, GENie, The Source

gest packing list. First and foremost, you'll need batteries, an AC adapter, and a recharger—if your computer uses one. If you're traveling abroad, a transformer is a necessity. If your computer is going to be a working partner on your sojourn, you'll want to make sure you have *all* the software you'll need, and backups of your important programs. Extra disks—more than you think you'll need—are also a must.

Perhaps the most important item on the packing list of desktop movers and laptop luggers should be documentation for hardware and software. No matter how familiar you are with your tools, don't deny yourself the comfort of having manuals close at hand.

Laptop users should consider the peripherals they'll need on their trip. It's

Are you tired of listening to hours of endless muzak on the phone while waiting to make airline reservations? Is the lobby of your travel agent's office more backed up than Washington National Airport? Whether you're interested in an overnight stay in a nearby city or a month-long bike tour through Scandinavia, if your computer is equipped with a modem, you can book your own travel arrangements.

The granddaddy of travel-related online services, and still one of the most popular, is the electronic edition of the **Official Airlines Guide (OAG/EE)**. Besides offering up-to-the-minute flight schedule information, you can use the electronic OAG to search for the lowest airfare available and instantly book flight reservations. Recent enhancements to the service include the addition of hotel information, bargain "short notice" travel packages, and the inclusion of on-time performance stats for individual flights. The latter is a real boon for travelers with tight time constraints who want to avoid flights which are habitually late.

While OAG/EE is accessible from most commercial information services, it's usually a surcharged option, costing anywhere from \$20-\$40 an hour over and beyond normal connect-time fees. An attractive alternative to OAG/EE for many users is American Airline's **EAASY SABRE** reservation system, which has recently been added to most popular information systems. EAASY SABRE access entails no added surcharges, includes most of the services offered by OAG/EE, and offers some convenient enhancements.

Besides offering fare-checking and reservations, SABRE lets you specify preferred seating (aisle seat, no smoking, and so on) and special meal requirements (vegetarian, low-fat, kosher, and the like). In addition to air accommodations, SABRE users can book rooms in over 12,000 hotels worldwide and can arrange for rental cars from most major rental companies.

CompuServe offers an extensive array of travel-related information, including special forums dedicated entirely to Hawaii and the Orlando, Florida areas. You can check out the latest Department of State advisories on Nicaragua, arrange for visas to foreign countries, and browse articles such as Lee Foster's "Adventures in Travel"

series. A wide variety of travel packages are offered from Thomas Cook, West Coast Travel, Sears, and Sun 'N' Sand Vacations. The Worldwide Property Guide lets prospective vacationers shop for private homes, condos, recreational vehicles, and yachts for hire.

GENie's Adventure Atlas is great for the traveler with a hankering for something different. Interested in playing golf in New Zealand, floating down China's Yangtze River, or seeing Katmandu from atop your trusty elephant? Just browsing through the available itineraries is a treat in itself. Another section offers skiers the latest information on ski resort conditions. GENie also has **TRAVEL-DATA**, a comprehensive guide to U.S. and international accommodations, restaurants, and travel-related services.

Delphi's travel area includes a number of innovative features. You can sign up online for Auto Drive-away, a service that matches parties who want cars driven to a specific city with qualified drivers. The hotel information-and-reservation section also includes details on banquet and meeting facilities. Fans of the muse can purchase tickets for the hottest shows in New York and London, and arrive in style via limousine service reserved online.

Finally, don't overlook the thousands of travelers who regularly use such services. Don't be afraid to draw on their knowledge when arranging that once-in-a-lifetime vacation. Both CompuServe and GENie have online travel discussion groups, telecommunicating travelers that pass in the night, swapping personal recommendations and experiences.

Travel Agent in a Box

CompuServe Information Service
5000 Arlington Centre Blvd.
P.O. Box 20212
Columbus, OH 43220
(800) 848-8990

DELPHI
General Videotex Corporation
3 Blackstone St.
Cambridge, MA 02139
(800) 544-4005

GENie
General Electric Information Services
401 N. Washington St.
Rockville, MD 20850
(800) 638-9636

— Arlan Levitan ▸



The Language Link

Travel to any major city around the world, and you'll find street vendors as young as ten hawking souvenirs. From Mexico City to Paris to Madrid, it's the same. Somehow they know every tourist. Somehow they speak every language.

For Americans, travel is often a humbling experience. Many of us lack even a rudimentary knowledge of any language but our own. Whatever the reason, foreign travel often turns the brightest of us into instant illiterates.

Unfortunately, total ignorance of a host's native language can be more than a mere inconvenience. To proud foreign nationals, it suggests a tinge of disrespect for their land and culture. We expect visitors here to speak English. Our foreign hosts have every right to expect us to speak their language.

Even when becoming fluent is impossible, knowing a few polite phrases and using them with sincerity and humility can smooth our way in an unfamiliar country. The effort, however faltering, is sure to be appreciated.

So when making travel plans, why not consider brushing up on your Spanish or French or German or . . . ? Several excellent software packages can make foreign languages fun.

SCRABBLE IN FRENCH

Gessler Educational Software distributes Leisure Genius's *French Micro Scrabble*, a computer version of the popular board game (Apple II, Commodore 64, Macintosh, IBM PC XT and compatibles).

Play against others if you want, but the game's real strength is its versatile computer opponent capability. Eight different skill levels provide just the right mix of challenge for any human wordsmith.

For fast-paced action, play against the built-in clock. For hints on strategy, opt to view all boards and observe the computer's thinking process. Test your skill against the program's 20,000-word dictionary, or deactivate the dictionary for advanced person-to-person play.

Either way, you'll never have to calculate your own scores again, and you're sure to improve your French. For those of you planning a trip to Paris or the French Riviera, you can't lose with this game.

SNOOP IN GERMAN

Adventure game fans will appreciate Gessler's two foreign language versions of Spinnaker's *Snooper Troops*. For the Commodore 64, there's a German version of *Case #1: The Granite Point Ghost*. A French version of *Case #2: Lily the Dolphin* is available for the Apple II.

What more adventuresome way to brush up on your second language skills than by cruising around in a Snoopmobile, taking notes and interviewing suspects and witnesses? Don't forget to read the casebook and take good notes. Stick with it, and you'll solve the case and learn a bit along the way.

ATTACK FOREIGN WORDS

Gessler offers three adaptations of Davidson's popular vocabulary program *Word Attack!*—*Bataille de Mots* in French, *Batalla de Palabras* in Spanish, and *Wortgefecht* in German. Each is available in versions for Apple II, Commodore 64, and IBM and compatible computers.

Prospective travelers will find the vocabulary well-suited to their needs. Separate segments cover words related

to dining, sports, school, transportation and daily life.

You can study using a variety of approaches, including an interesting game filled with entertaining graphics and musical rewards. If you prefer, a built-in editor lets you enter your own phrases and words for study.

Spend a few minutes a day with one of these. You'll soon be eager to take your show on the road!

WIN MONEY IN SPANISH

One of the most captivating and practical language programs comes from Fortune Software. *Words of Fortune*—

Spanish Edition (Apple II) brings to home computing all the excitement of the exciting television show.

Play alone or against an opponent. Select simple or more difficult foreign phrases. Translate Spanish to English or English to Spanish. A management mode even lets you create your own phrase list.

Displays are simple. The program lacks fancy graphics and has only limited sound effects. Be careful, though. Even without Vanna White, this program could become an obsession. Worse yet, it might even cut into your TV time.

Learn the Language

Spreche Deutsch, parler en français, or habla español with one of these programs.

French Micro Scrabble

\$39.95

Gessler

900 Broadway
New York, NY 10003-1291
(212) 673-3113

Snooper Troops

\$39.95

Gessler

900 Broadway
New York, NY 10003-1291
(212) 673-3113

BON JOUR
BON JOUR

Bataille de Mots

Batalla de Palabras

Wortgefecht

\$49.95

Gessler

900 Broadway
New York, NY 10003-1291
(212) 673-3113

Words of Fortune: Spanish

\$59.00

Fortune Software

70 Sierra Rd.

Boston, MA 02136

(617) 361-0900

— David Stanton



Behind the Iron Curtain

It just might be easier to sling the computer over the Berlin Wall. Taking a computer behind the Iron Curtain feels more like an exercise in form-filling than in foreign intrigue. In fact, you may find it harder to get a computer *out* of the U.S. than *into* the Soviet Union.

You can jump on a jet with a laptop or other personal computer and go anywhere in the United States without giving the computer a second thought. Take that same laptop to the Soviet Union or other communist country, and it could sabotage your travel plans—unless you're familiar with certain regulations.

The Soviets have no objections to your using a computer inside their country, although it may not help *glasnost* if a surly Soviet customs official finds a copy of Access's *Raid over Moscow* in your suitcase.

A check with representatives of the Soviet Union, Czechoslovakia, East Germany, the People's Republic of China, and Hungary all revealed the same policy. These countries place no restrictions on your entering with or using a personal computer within their borders, but the computer must be declared at customs when you arrive.

A spokeswoman for the German Democratic Republic (East Germany) did offer some advice when traveling to her country. If you're traveling on business with a computer, you can simplify your passage through customs by having a letter from the East German firm with which you'll be dealing. Have the

Computers and Red Tape

Bureaucracy

Traveling behind the Berlin Wall? You'll need forms, lots of forms, if you're heading to what the State Department politely calls a *proscribed destination*. To the rest of us, that's a country like the U.S.S.R., Czechoslovakia, the German Democratic Republic (East Germany), Vietnam, Cambodia, Libya, or Cuba. If you're taking a computer along, you'll need an export license, which requires (of course) that you submit several forms.

Two such Commerce Department forms are:

Form BXA-622P, Application for a Valid License
Form ITA-6031P, Digital Computer System Parameters

You can get these forms at any U.S. Department of Commerce District Offices (most major cities have one), or by writing:

U.S. Department of Commerce
Operations Support Staff
P.O. Box 273
Washington, D.C. 20044
ATTN: Forms.

company explain that you're taking a personal computer into the country in order to make a presentation or to use as part of your work.

She said there are no restrictions on using a computer, but a letter makes it easier to deal with the GDR custom authorities. You'll be required to fill out several forms at the border, and the computer must be taken with you when you leave the country.

After some initial language difficulties, a representative of the People's Republic of China explained that there are no restrictions about taking a computer into his country, but visitors should be prepared to pay duty on it. This money, however, will be returned when the visitor leaves China with the computer in his or her possession.

"You can bring in a regular personal computer," he said. "You can bring it in and bring it out; there's no problem."

A spokeswoman at the United States Department of State stressed the importance of registering a computer when entering a communist country. "That's a very serious thing," says Donna Sherman at the Bureau of Consular Affairs. "It's not something to be taken casually. You want a piece of paper in your hand showing that you have registered [the computer]. When you leave, you'll have evidence that it has been registered, or you'll risk its being seized or face very hefty customs fines."

U.S. citizens who take computers behind the Iron Curtain are likely to encounter more red tape in Washington than in Red Square. Uncle Sam may

even say *never* to taking certain models out of the country. "Some computers can be used to do word processing, but they also can be used to guide missiles," as one unidentified official in the Commerce Department said, incredulous though that sounds. Technology listed as a *dual-use* item can be used in both commercial and military applications. Obviously, the United States does not want this type of technology flowing freely into communist countries.

The Department of Commerce, while trying to encourage trade on one hand, also has the added responsibility of halting the exportation of U.S. technology to our adversaries.

"Preventing the diversion of high technology is as important to the free world's security as expanding our military capabilities," says Paul Freedenberg, acting undersecretary of commerce for export administration.

For reasons of national security, foreign policy, or short supply of certain domestic products, the U.S. wants to know what commodities are making their way out of the country, especially if they're entering adversary nations. This includes the laptop you want to take to Moscow.

To control the flow of technology to approximately 20 *proscribed destinations*, including such nations as the U.S.S.R., Czechoslovakia, the German Democratic Republic, Vietnam, Cambodia, Libya, and Cuba, the United States requires an export license. Since there are more than a score of different licenses, the business person, educator, or tourist taking a personal computer to a communist nation should apply to the U.S. Commerce Department for an *individual validated license*.

These licenses are issued on a case-by-case basis, and they require the completion and submission of several forms. Two that you will need are Commerce Department forms BXA-622P, Application for a Valid License, and ITA-6031P, Digital Computer System Parameters. These forms may be obtained at all U.S. Department of Commerce District Offices, located in most major cities, or by writing to U.S. Department of Commerce Operations Support Staff, P.O. Box 273, Washington, D.C. 20044, ATTN: Forms.

The forms require you to list the make and model of your computer and to supply specific descriptions of all hardware, including central processor, disk drive, display, and communications data. When submitting form 6031, you are to include a separate sheet of paper showing a diagram of your computer system, indicating the processor, disk drives, and printers.

When filling out form 622, the instructions advise you to



Tom Netsel

be as specific and complete as possible or face the risk of having your request denied. Items on this form, however, are not always easily answered. For example, Item 9(c) asks for the Export Control Commodity Number and Processing Code. Unless you're familiar with Export Administration Regulations, you may not know *1565A MT* is the ECCN that refers to personal computers.

Item 12 asks for the specific end-use of the commodity. You should indicate *temporary export* if you plan to take the computer in and out of the country with you. Officials also want to know the actual details of how, when, and where you plan to use the computer and with whom. "If you just say *research*," a Commerce Department official said, "we're going to assume that it's for *nuclear* research and deny your application."

If you have any problems completing the application, help is available by calling any Commerce District Office or the exporter assistance staff in Washington at (202)377-4811. Completed forms should be sent to Office of Export Licensing, P.O. Box 273, Wash-

ington, D.C. 20044. Processing will take two to four weeks for most applications, so don't wait until you're driving to the airport to think about obtaining a license.

If the application is approved, the Commerce Department will send you a validated license. The number on this license must be included on yet another form you'll need (in duplicate) prior to departure. The Shippers Export Declaration (SED) can be obtained at the same time you request the other forms. The SED is used by the U.S. Customs Service to indicate the type of export license being used and to keep track of what products are exported. The Bureau of Census also uses it to compile statistics on U.S. trade patterns.

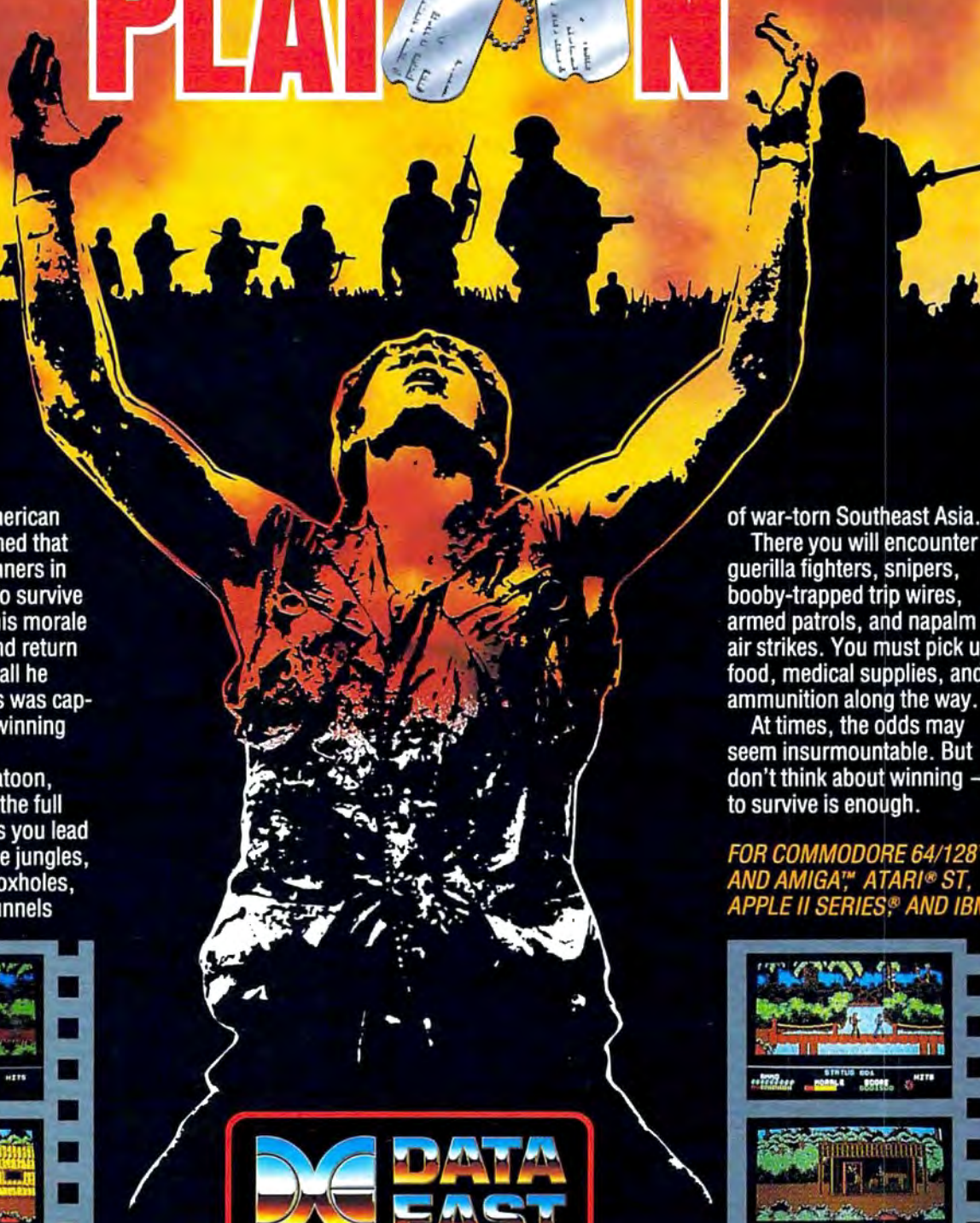
Taking software with you usually presents no problem as long as it's an item readily available from most computer stores. If it's a customized program, check with the Commerce Department.

Finally, be aware that if you want to take an IBM AT, or the equivalent, to a communist nation, your application probably will be denied. Washington just doesn't want some technology to leave the country, although specifications are under frequent review. "These rules were relaxed earlier this year to include computers up to the IBM XT class," according to a Commerce Department official who requested he not be identified. "Last year it would have been difficult to get out with much more than an Atari 400."

— Tom Netsel ▸

THE NAME OF THE GAME IS SURVIVAL.

PLATOON™



In Vietnam, an American soldier soon learned that there were no winners in this deadly game. To survive each mission with his morale and sanity intact, and return to base safely, was all he could hope for. This was captured in the award-winning film, *Platoon*.

In Data East's *Platoon*, you will experience the full impact of the film as you lead your platoon into the jungles, villages, bunkers, foxholes, and underground tunnels

of war-torn Southeast Asia.

There you will encounter guerilla fighters, snipers, booby-trapped trip wires, armed patrols, and napalm air strikes. You must pick up food, medical supplies, and ammunition along the way.

At times, the odds may seem insurmountable. But don't think about winning – to survive is enough.

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For Official Governmental Policy, Please Consult Our Airline



And I thought it would be a snap.

How hard could it be to find out if Czechoslovakia (or any of the other Eastern Bloc nations) placed restrictions on U.S. citizens who take personal computers with them on visits behind the Iron Curtain? Harder than it should be, that's for sure. When I made my first phone call, little did I realize it would take most of a morning to ferret out the above gem of official policy from the Czechoslovak Socialist Republic.

I began my quest for international knowledge by placing a call to the Czechoslovak Embassy in Washington. After I explained who I was and what I was doing, a friendly spokeswoman told me that the information I needed was available through her country's visa office. She gave me the telephone number and suggested I give them a try.

It took several attempts before I got through to the visa office, and then it was a recording that answered the phone. I was told how to apply for a visa. If I wanted to talk with someone in the office, I should call between 10 a.m. and 12 p.m. The fact that I was calling at 11 a.m. didn't seem to impress the answering machine.

If I needed more information about Czechoslovakia, I was invited to call the country's official tourist office in New York. For flight information, I

was given a toll-free 800 number to call.

Since I wasn't having much luck going through official channels, I decided to give the tourist office a try. To be honest, I expected to reach a public relations official who would offer to send me brochures of Prague, but who wouldn't have the slightest idea about Czechoslovakia's official policy concerning Americans trying to waltz across the border with IBMs tucked in their flight bags.

When I called the tourist office, I reached a woman who spoke English

***"You must declare
a personal computer
at customs when entering
Czechoslovakia."***

with a strong European accent. I suspected she might have difficulty with English, so I spoke slowly and tried to explain what I wanted in simple words.

"Hello, I am writing a magazine article and I need some information about Czechoslovakia," I said.

"Yes?"

"Are there any rules or regulations I should know about visiting your country with a personal computer?"

"Yes?"

"Can you tell me what they are, please?"

"Yes?"

Everything I asked seemed to be answered by *Yes?*

I tried again from the beginning, only slower. This time I was met with silence. After putting me on hold for several minutes, she told me I'd have to call C.A., Czechoslovak Airlines, for that information.

I felt a little foolish asking an airline about official international policy, but by this time I had nothing to lose. If it worked, maybe I could call TWA for a clarification of U.S. policy regarding Japanese auto imports.

I dialed the airline's 800 number, and it was busy. I tried several more times before I was connected with a pleasant-sounding woman who listened politely to my request. When I finished, she said she would have to transfer me to another office.

Another woman came on the line, and, once again, I repeated my spiel. She placed her hand over the phone and I could hear her talking to someone in her office. After a few seconds she returned with the information I had been seeking for the better part of a morning. "When you go through customs," she said, "you have to declare it."

"That's all?" I asked in disbelief. Surely it would be more difficult than that to get a PC through the Iron Curtain.

"That's all," she said. "Thank you for calling."

As it turned out, this was just a sample of the bureaucracy I encountered during a three-day telephone marathon with the U.S. Department of Commerce. Trying to glean similar information from Washington regarding U.S. rules and regulations made me long for the simplicity of calling Czechoslovak Airlines.

Maybe I should have called TWA.

— Tom Netsel

If you met a Dragon at your local ComputerLand store, would you try to slay it or program it? How about a Bull? Should you search for a red cape or an MS-DOS quick-reference card?

Each country has its own national identity, and each is making its own unique contribution to the worldwide microcomputer revolution. Taking a whirlwind tour of the globe—with whistle stops in Canada, England, Germany, France, Sweden, Russia, and the U.S.—we'll see many familiar attitudes and computer faces, but we'll also encounter some interesting and thought-provoking differences.

COMMODORE IN CANADA

In Canada, our first stop, familiar names abound, but they're arranged in an unusual way. Commodore made Canada one of its early strongholds, and it has a history of treating its Canadian customers well. As a result, Commodore's 64 and 128 are by far the most popular eight-bit computers. Commodores are also the most-used computers in Canada's schools, with the 64 holding a position in that country similar to the one the Apple II has in the U.S.

Commodore's other computers are doing well in Canada, too, according to



Commodore 64 and 128, followed by Clive Sinclair's [Z80-based] Spectrum," says Derek Cohen, editor of *Personal Computer World*, Britain's leading microcomputer magazine. "These computers currently have the largest installed home base, but the biggest-selling micros in this market are the Amiga and the Atari ST."

The official school computer in the U.K. is the BBC micro, but it is gradually being replaced with better-performing unofficial PC compatibles and the

home computing in France," says Marc Olanié, senior editor of *Décision Informatique*, a French computer journal. "Two years ago, there were lots of British and French home computers, but today that's all changed. The IBM PC and compatibles dominate all the computing in France. Most French hobbyists today have Taiwanese clones."

When Jack Tramiel was the head of Commodore, he had well-placed friends in France, and as a result, Commodore made great inroads in the French market. "When Tramiel left

International Faces, International Computers

Neil Randall, one of *COMPUTE!*'s Canadian correspondents. "The Amiga is selling extremely well and is available everywhere, from K-marts to Canadian Tire stores. And Commodore's PC compatibles are enjoying success also."

In Canada's business arena, Randall reports that the IBM PC and compatibles are the overwhelming leaders, with the Apple Macintosh market still relatively small, but growing. "The Mac has always been priced too high in Canada to make it as a home computer," he reports, "but its strengths are being recognized by the business community, and it's catching on more every year."

U.K. SAYS OK TO AMSTRAD

If the Canadian microcomputer scene is reassuringly familiar, the British offer a few surprises. "The most popular home computers here in the U.K. are the

less-expensive Spectrum.

England's business market is dominated by IBM PCs, a story we find repeated in almost every country in our survey, but there's a surprise here, too. "CP/M machines, particularly the Amstrad PCW, have a strong business base here, and unlike the situation in the U.S., new CP/M applications are being developed in the U.K. all the time," says Cohen. The most popular IBM compatible is the Amstrad, a micro that's manufactured in England, which, along with the 6809-powered Dragon, is one of England's important computer exports.

FRANCE LOOKS TO THE FAR EAST

Moving across the Channel to France, we find a completely different computer scene. "There is no more true

Commodore for Atari, Commodore died here," continues Olanié. "We know that the Amiga is a wonderful machine, for example, but it is completely unknown here. The 64 was the last well-known Commodore machine in France."

Apple has never really been a force in the French market, but the Mac is becoming more popular in an unusual context. "It is the Mac II's new UNIX A/UX operating system that many people in the business community are excited about," reports Olanié. The UNIX operating system is popular with French businesses, and the marriage of the Mac's graphics potential with an established operating system is something the French find attractive.

The PC market in France may be dominated by IBM, but two French PC-compatibles manufacturers are becoming



Gregg Keizer

ing increasingly popular—Bull and SMT Goupil. Both Bull and SMT sell XT- and AT-class systems powered by the 8088 and 80286 microprocessors, respectively. These two computer makers are particularly strong in the educational and administrative markets. Pulling up a strong third in France's PC compatibles horse-race is the British-made Amstrad.

PC20 FOR GERMANY, 64 FOR SWEDEN

In West Germany, our next stop, we find a Commodore-colored reflection of the U.S. market. In the home, the Amiga 500 is the current leader in sales, with the 64 and 128 close behind. West German PC users depend on Commodore's PC20 compatible more than any other computer. Tandon's PCA is next, followed by the Macintosh II. Close behind these are Commodore's PC40 and the Mac SE. IBM's new PS/2 Model 60 comes in as the number 6 best-seller, and number 7? Commodore, again, with its PC10.

To put Commodore's German connection in perspective: According to International Data Corporation, Commodore commands more than half of the entire West German computer market, including an amazing 15 percent of all business systems, a stance other computer manufacturers must envy.

From West Germany, we travel north to Sweden for a brief visit—just long enough to call a few Swedish computer bulletin board systems. Judging from the activity on Sweden's BBS network, PCs are the most-used micros, with 27 percent of the market. Close behind the PC are the Commodore 64 and 128, with 22 percent. Next in line and probably growing is the Amiga,

with 18 percent. The Ataris and the Mac are tied with an 8-percent share, and CP/M machines—another surprise—show a respectable 8-percent hold.

U.S.S.R. HAS ITS KGBjr

Our last stop before returning home is in the land of *glasnost*—the Soviet Union. There have been rumors of microcomputers in the U.S.S.R. for years, but

*We do know,
however, that the
Russians have very
few micro-
computers and
desperately want to
change the
situation.*

no one has ever been certain about the situation. A Soviet-made Apple II clone (nicknamed the KGBjr in the West) is said to be the most popular school computer, but beyond this, nothing about specific machines is known. We do know, however, that the Russians have very few microcomputers and desperately want to change the situation.

According to Richard Staar of the Hoover Institution, "The [Russians']

current five-year economic plan calls for the production of 1.1 million computers by the end of 1990. About 400,000 of these are intended for the 8 million students in the ninth and tenth grades. Last year, however, the personal computers available throughout the Soviet Union numbered only in the tens of thousands. By contrast, the U.S. has more than 20 million."

Unless there are drastic changes in the Soviet system, this country seems to be in a losing battle of catch-up with the West. Staar suggests that even if the Soviets were to achieve their goal of 1.1 million computers by 1990, that country's real need would be closer to 28 million.

HOME OF THE BRAVE (AND LOTS OF COMPUTERS)

From Mother Russia we return to the reassuring shores of the U.S.A. and a look at our own computer culture. What are the most popular computers here? You probably have a good idea already, but here are a few details. It should come as no surprise that the IBM PC and its compatibles are dominating the business market and making great strides in the home as well. Recent estimates place their total number at 15 million. The Commodore 64 and 128 continue to sell well and have an installed base here of nearly 9 million. The Apple line shows strong numbers for both the II series—4 million—and the Mac—1.5 million. The number of Amigas appears to be around 200,000 and growing, and for the Atari ST, it's hovering at about 175,000.

The worldwide microcomputer revolution never looked brighter or more exciting.

— Clifton Karnes, with Tammie Taylor

A World of Software

Do you own an imported car? Perhaps you occasionally enjoy a bottle of imported wine. Where was your stereo made? Your VCR? Americans are no strangers to foreign goods.

Until recently, the great majority of computers and software sold in this country have been made *in* this country. Things have changed. Your Atari, Commodore, or IBM PC compatible was probably made in the Far East. Now take a look at the software you own: How much of it is from another country?

It all depends on which computer you have. If the machine you own sells better in the U.S. than it does overseas, you probably won't see much foreign software. On the other hand, if your computer plays well in Germany or England, there are probably several titles crossing the Atlantic right now. Perhaps there are already a few in your home.

Of course, you can't always tell if a particular program is an immigrant. Some U.S. software companies buy British, French, or German titles and sell them in the U.S. under their own names. And even if your software was written in the U.S., it may have been inspired by a foreign game; Activision's *Shanghai*, for instance, is derived from the oriental game mah-jongg.

As computer software becomes an international business, more and more companies are involved in foreign acquisitions and marketing. There's no set approach being used; the challenges and benefits of importing software are being handled in different ways by different companies.

There are some familiar faces in the world of foreign software. One of the traditional importers is Abacus, which sells software and computer manuals for the Commodore 64, Amiga, and Atari ST. Much of their software is developed in Germany. One of their latest products is *BeckerBASIC*, a GEOS-based version of BASIC for the 64. *BeckerBASIC*, with its support of menus and windows, is similar to the Microsoft BASICs on the Macintosh and Amiga.

Another company that's been involved with foreign software is Mich-

Tron. Gordon Monnier, president of the company, says that since each country is different, it's more difficult to sell software across borders than many people think. MichTron has a reciprocal agreement with MicroDeal in Great Britain. It's paying off for both companies, since each has a right of first refusal for the other's software. MichTron currently sells products for the Amiga and Atari ST. Among their popular titles are *Time Bandits* and *Slaygon*. MichTron also sells products from GFA, a German company.

MicroProse has three foreign offices. When the company first looked at the British market, they found that it was "hit oriented." Several companies were flooding the market with quickly developed software that was actively promoted for only two or three weeks. Because of the long development time which goes into a MicroProse product, the company has had to convince distributors and dealers that their products were different.

The strategy has worked. The British office in Tetbury, England has been doing conversions of MicroProse software for computers that are popular in the U.K. (notably the Amstrad, the Sinclair, and cassette-equipped Commodore computers). MicroProse also has a sales office in France and a brand-new office in Japan.

Activision has had an international division for several years. Its American products are popular overseas, and it also seeks foreign software for U.S. distribution. *The Last Ninja* and *Rampage* are two examples of Activision games developed in England. The company recently acquired British software publisher Rainbird.

Activision is also purchasing Japanese Nintendo home videogame software for the U.S. market.

Spectrum HoloByte has taken advantage of the international software blitz with its International Series of software. The four games, each designed in a different country, have the software industry buzzing. Included in the series are *Tetris*, an addictive game of skill that was designed in the Soviet Union (see review in this issue); *Soko-Ban*, an elegant Japanese strategy game (reviewed in last month's issue); *Zig-Zag*, an arcade-style space game from the United Kingdom; and *Intrigue!*, a mystery thriller from the United States.

— Rhett Anderson □





*The newest magic carpet is your personal computer,
a tool that takes you to the ends of the earth and back
from the comfort of home.*



See the Sights from Home

Stephen Banker

You're standing atop Mount Everest. As you turn around you can see the magnificent, die-cut edges of the lesser Himalayas stretching toward the horizon. Above is a vast, yellowish sky, with layers of cirrus clouds swirling past.

And from below there comes the awesome rumble of an avalanche gathering force. You can hear the wind ripping by, but you can't feel it. Come to think of it, you're strangely comfortable despite the fact that you aren't wearing a coat.

Relax. You're sitting in front of your home computer, where you can soothe yourself with the equally convincing sights and sounds of a Bahamian

beach just as easily as you visited Nepal and its peaks.

The New Magic Carpet Ride

The technology is already in place for such vivid experiences. They involve a link between a computer and a videodisc player, along with a good monitor and stereo speakers.

Why not just watch a videotape? Partly because the videodisc's picture is superior, but most of all because the combination offers *interactivity*—you control the action.

Where do you go next? Up, down, right, left—it's your choice. The picture and sound are appropriate for your

choices because all possibilities are stored on the disc. And the technique is fast because it's random rather than sequential. That means that the head reading the videodisc can skip around, while a tape must roll forward or backward past yards of irrelevant material while searching for the valid scenes.

Match up a bunch of microcomputer technologies, as some of the more enterprising developers are doing nowadays, and what you get is a kind of magic carpet—one that can take you for a lightning-fast ride to any place on earth. Together with the improved displays just finding their way onto the market, it makes for a remarkably convincing experience of foreign and exotic places. The result is an opportunity for people sitting at home to experience other places through their computers and a few peripherals.

Of course, turning on the machine will never be the same as being there. But some of the proponents of systems under development say it is *better*. They mean that gathering and organizing information—computer kinds of tasks—are added to the in-person sensations of seeing and hearing.

Disk Travel Today

This new phenomenon takes many forms. There's some gee-whiz stuff: cutting-edge multimedia techniques that are just appearing or are still in the planning stages. But there are also existing programs, ranging from quite simple to highly sophisticated. The older programs, which lack the bells and whistles of interactivity, are still quite valuable. Some even give a rewarding sense of travel. Let's take a tour of some of the programs that permit you to see the sights from home, beginning with the more familiar software.



Activision's 1985 *Hacker* is an early example of an adventure game that presents points of interest around the world on the computer screen, even if the image is a crude representation of a pyramid or the Eiffel Tower.



Flight simulators also give a taste of geography, although you're oftentimes so frantically working with the controls that you have little time to enjoy the view. Still, new scenery disks simulate terrain and cities from the West Coast of the United States to the mountains around Tokyo. Some may even argue that there is no better way to remember a bridge or a mountain than to crash into it.



Infocom's *Bureaucracy* is a text game that asks you to cut through the administrative thicket of planning a business trip to Paris. While graphics are absent, the process of dealing with the game's *fonctionnaires* is so frustrating that you're ready to forego your *sauce de bourguignonne*, your *Chambolle-Musigny*, and the other enticements of *la belle France* even before the trip starts.



Several developers have put together arcade-style games based on contests of skill. Among the cleverest is *Golf's Best: St. Andrew's* from 1 Step Software, which lays out the tricky links of one of golfdom's most famous courses in the sport's parent country of Scotland. The graphics are scaled correctly hole by hole, and you run the risk of landing your ball in sand traps, water hazards, trees, bushes,

or roughs.



Then there are the *Where in the World (or USA or Europe) Is Carmen Sandiego?* games from Brøderbund, three educational exercises designed to impart geographical knowledge in a sneaky, fun-oriented way to kids and adults alike.



Similarly, *Agent USA* from Scholastic Software asks you to shadow a suspect from city to city, learning a bit about new areas in the process.



Blue Lion Software offers the potential traveler not a game but a slew of practical information tied to rudimentary graphics about tourist spots at home and abroad. The programs bear titles like *Ticket to London*, *Ticket to Paris*, *Ticket to Spain*, and, for those who want to learn about our nation's capital, *Ticket to Washington, D.C.*



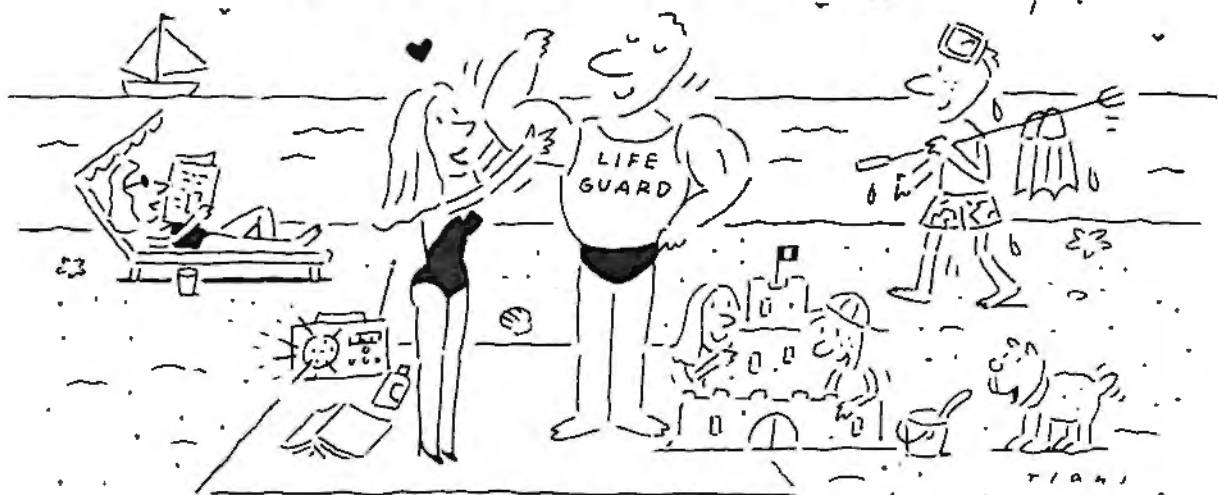
It's no coincidence that one of the early applications of *HyperCard* on the Macintosh was Danny Goodman's *Business Class*, which provides data on 63 separate countries. Not only does it tell time differences and do currency conversions, it also informs the potential traveler about what kind of visas, passports and health certificates to gather in advance; it describes customs limitations; and it even gives a rundown of social customs. *Business Class* specifies the kind of power plug adapter needed for American-bought appliances. It also offers key phrases in the local language and advice on the kind of wardrobe to take during particular seasons. Finally, it lists phone numbers for hospitals, embassies, and the police department. Goodman says that such variety of information is collected nowhere else in a single source.

On the Wire

The would-be voyager also has the option of signing on to any of many bulletin board systems or commercial information services that provide comments, reviews, and anecdotes regarding practically any spot on earth. You can make airline reservations through several of the services, including CompuServe. GENie has a travel section of daunting size and scope. Some of the available subcategories are Terrorism, 1988 Summer Olympics, Lost Bags, and Nude Beaches. There are also

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messages left by users on such diverse subjects as backpacking, limousine services, and the comparative virtues of the airlines' frequent traveler programs.

Be prepared to spend more time than you budgeted, since some of GENIE's quirky, out-of-the-way entries simply insist on being looked at. Who could resist, for example, a category called Airport Characters? Not me. I had long wondered who those people are who hang around in airline terminals. Here was my chance to find out why an airport crowd so often looks the same city to city, even country to country. I opened the category and found, to my disillusionment, that it has to do with the abbreviations attached to airports, such as LAX (Los Angeles) and JFK (Kennedy). Not what I expected, but the exciting thing about travel, after all, is the unpredictability.

Compact Disc Cartographers

There is a huge range of sophistication in software having to do with mapping. At the low end is *StreetSmart* from Street Map Software, which makes it possible to draw a map of your own neighborhood to include with, say, party invitations.

Software Concepts offers *Atlas* on a single floppy disk. Moving the cursor around the globe triggers the name of the appropriate city, along with the region's language, currency, and climate. You can also scale the globe larger or smaller, and you can turn it to see the world from any point of view. The company says, however, that it has no plans for updating the information as populations and boundaries change.

More complex are the new CD-ROM applications, featuring vast storage capabilities. The systems are too slow for full-motion video, but they're just right for charting highways and byways. *GeoVision* and *Highlighted Data* offer maps of the United States for IBM compatibles and the Macintosh, respectively. Both publishers claim that you can zoom from a panoramic shot of the nation (the lower 48, at least) to street-level detail in virtually any location.

Although there are good arguments in favor of staying with paper maps, this technology will be practical once it's installed in automobiles along with a small monitor at the driver's elbow showing the intended route and the present position of the vehicle. A local pilot project is reportedly underway in this country in San Jose. And the Japanese are known to have been working on such a device for several years. Say

farewell to wrong turns down the road.

Look to the U.S. government, as usual, for truly gargantuan projects. The Army Corps of Engineers has designed a UNIX/C-based program called GRASS (Geographical Resources Analysis Support System) which integrates data from paper maps, aerial photographs, and satellite pictures to map vegetation and wildlife patterns as well as roads, boundaries, and human populations. The results are already being used to steer military training exercises away from endangered species habitats and archeological sites.

The Defense Mapping Agency in Washington is engaged in no less a task than capturing the topography of the whole world onto a digital map. On a budget of \$2.5 billion, the job, relying chiefly on satellite observations, is about half done. In the end, the storage will amount to a trillion bits. Those are big numbers, almost incomprehensible to most of us, but, like many military applications, the benefits may trickle down to the public. Eventually, precise maps of anywhere on earth will be available (pending security clearance) on CD-ROM disc or hardcopy.

Fabrice Florin, a San Francisco television producer, has put together a prototype of a multimedia program now licensed to Apple Computer. *WorldView* combines a Macintosh with *HyperCard* and the high-quality display of a videodisc player. On the video screen, the user zooms into a map of Europe, clicking along the way on any of a series of icons, which in turn provide data and photographs on various points of interest. When you zoom into Paris, for example, you can click on an icon of the Arc de Triomphe and get a video tour of the monument.

The videodisc has amazing capacity. It can store up to 54,000 images, and they can be played in rapid sequence as high-quality video motion pictures. Florin says the paramount issue is, as always, substance—"You must have a good story"—but that the technology makes the experience "compelling, emotionally rich, dramatic, and amusing."

Video Masters, and Masterpieces

Unfortunately, there's very little videodisc software presently on the market for those who want to ride their computerized magic carpets to far-flung places. An exception is *The Vancouver Disc* from The Voyager Company. But the brochure frankly warns that "the quality of the photography is occasionally uneven."

The Bank Street College of Education, known for *The Bank Street Writer*, has produced *The Voyage of the Mimi* on videodisc, and it has a prototype called *Palenque*, which explores the ancient Maya site in Guatemala.

The National Geographic Society is working on a videodisc project in collaboration with Lucasfilm that is scheduled to appear in March 1989. Consisting of three discs, it is to be called *The Land: A Geographic Perspective on the American Experience*. It will include 200 original maps.

One of the most widely circulated videodiscs to date is *The National Gallery of Art Laserguide*, available from The Voyager Company. It incorporates some 1600 still images of paintings, sculptures, and graphic art from the Gallery's permanent collection, along with a quarter-hour of motion footage. The software, which first appeared in 1983, has sold some 5500 copies in the United States and another 2500 in Japan.

The disc is sold for \$95 at the Gallery itself, but Russ Sale, Curator of Education, does not consider the experiment wholly successful. He suggests that an array of 1600 pictures gives only a limited sense of the Gallery's total collection of more than 60,000 objects.

Sale says an interactive system designed by NCR to work with the videodisc is in the process of being introduced to the public. The system links a computer, a touchable screen, and a videodisc player. It combines images from the *National Gallery of Art Laserguide* disc with the computer's graphics capabilities to produce text and images in response to queries. Visitors to the Gallery can select from a menu of information, including lists of various tours, films, and special exhibitions. Touch a particular area, and a selection of objects from that part of the museum will be displayed.

But Sale is impatient with the slow pace of getting the technology out. "We've had the disc for five years," he says, "and the interactive program has been at the Gallery since 1986. This is a complicated institution, and it takes time to get the proper housing."

The Curator's restiveness is understandable. But there is an equally understandable cautiousness among people in all phases of the videodisc industry. They are mindful of the painful experience of RCA, which quit making players in 1984, having suffered losses of \$600 million.

"Videodisc players," wrote columnist Michele A. Frank in the September 1981 *Popular Photography*, "will be-

come almost as common as television sets over the next decade." Hah! That should teach the rest of us to steer away from predictions.

What's clear is that in interactive videodisc technology, as in the rest of computerdom, software will drive the market. What's needed now is some irresistible disc-based tour that turns the Joneses' neighbors green with envy—Disney World, Vatican City, and the Playboy Mansion come to mind.

The final irony is that if these things come to pass, and vicarious experiences of foreign and exotic places are within the ability of most personal computers, the result for some people may be less, rather than more, travel. The reason is not that anyone will confuse looking at an image of Bahamian waters with actual snorkeling, but simply that huge companies will prefer to train their employees at their terminals rather than pay for trips.

"Do you realize," asks George Kelly of IBM Advanced Education Systems, "what the training costs are to take a person out of his office and send him somewhere? People can't work while they're training. We developed our interactive system for internal use, to train IBMers—at their desks."

A former columnist for *Popular Computing*, Stephen Banker has written recently for *PC Week*, *ComputerWorld*, and other publications. □

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Columbus, OH 43220
(800) 848-8199
One-time sign-up fee—\$39.95
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\$12.50 per hour at 1200 baud or
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Electronic Map Cabinet

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Highlighted Data
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Washington, DC 20036

National Gallery of Art Laserguide

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The Vancouver Disc
\$59.95
Voyager Company
2139 Manning Ave.
Los Angeles, CA 90025
(213) 475-3524

Palenque (out of print)

Voyage of the Mimi (various titles available in this series)
Holt, Rinehart, and Winston
6277 Sea Harbor Dr.
Orlando, FL 32887
(800) 782-4479

StreetSmart

\$89.99 (base version—384K required)
\$239 (graphics option—CGA, EGA, or Hercules, mouse, 512K required)
IBM PC
Street Map Software
1014 Boston Circle
Schaumburg, IL 60193
(312) 529-4044

Ticket to London/Paris/Spain

\$29.95 each (Commodore 64)
\$39.95 each (Apple, IBM PC)
Ticket to Washington, D.C.
\$34.95 (Commodore 64)
\$44.95 (Apple, IBM PC)
Blue Lion Software
90 Sherman St.
Cambridge, MA 02140
(617) 876-2500

Where in Europe Is Carmen Sandiego?

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17 Paul Dr.
San Rafael, CA 94903
(415) 492-3200, (800) 527-6263

new products!

Ferrari Fantasy

Owners of Amiga computers can now live out their fantasy of racing a \$350,000 Ferrari F1/86 with the release of Electronic Arts' *Ferrari Formula One*. This game is the second title in EA's Sports Legends line.

Players can choose to race on any of 16 re-creations of international race courses such as Monaco, Detroit, Monza, and Brands Hatch, allowing them to simulate the entire Formula One season schedule. Once the player is strapped into the driver's seat, he must check the car's vital statistics and receive advice from Mauro, the computer crew chief. The screen features a re-creation of the F1/86 dashboard including two scrolling rear-view mirrors.

Before racing, players can test the Ferrari in the Wind Tunnel and on the Dynamometer or practice on Ferrari's Fiorano Test Track near Milan.

The game uses the graphics capabilities of the Amiga and features the sounds of the racing world, including roaring engines and the clank of wrenches in the pits.

The suggested retail price of *Ferrari Formula One* is \$49.95.

Electronic Arts, 1820 Gateway Dr., San Mateo, CA 94404

Circle Reader Service Number 200.

Monochrome Copter Attacks

Microprose Software has announced that the IBM PC version of *Gunship* supports Hercules-compatible video displays. The attack helicopter simulation game also supports EGA, CGA, and Tandy color graphics.

Gunship places the player in the cockpit of a U.S. Army AH-64A Apache attack helicopter that features over 30 keyboard or joystick controls. The program re-creates the helicopter's aerodynamics, weaponry, and electronic counter measures. The game takes players to five trouble spots around the world where combat scenarios are played out.

Gunship incorporates a key disk routine to allow users to install the game on their hard disk and make backup copies. Users must still insert an original game disk once during play.

If this program proves to be successful, Microprose plans to configure future products for the monochrome market as well.

Gunship requires an IBM PC, XT, AT, or PS2; a Tandy; or a compatible computer with 256K. The game supports, but does not require, a joystick. The suggested retail price is \$49.95.

Microprose, 180 Lakefront Dr., Hunt Valley, MD 21030

Circle Reader Service Number 201.

Invade Europe

The Avalon Hill Game Company has released *Under Fire* for the IBM PC, Commodore 64/128, and the Apple II.

The game is set in Europe during World War II and features forces from the United States, Germany, and the Soviet Union. Players control paratroopers, engineers, mountain troops, assault guns, tanks, and weapons such as machine guns, bazookas, and grenades. There are nine scenarios to choose from, and users can build their own scenarios with the construction set.

The program contains a tutorial to help first-time players get involved quickly.

The IBM version requires 256K and at least one disk drive, and it retails for \$34.95. A separate map disk is available that can be used with the Hercules Monochrome card. The Mapmaker disk sells for \$25.

Commodore 64 and 128 users can purchase the game for \$34.95. A joystick is optional, and the Mapmaker disk is also available for \$25.

The Apple II version retails for \$59.95, requires 64K, and includes the

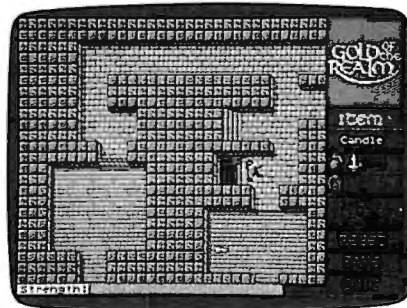
Mapmaker program. A joystick is also optional.

The Avalon Hill Game Company, 4517 Harford Rd., Baltimore, MD 21214
Circle Reader Service Number 202.

ST Adventure

Magnetic Images, makers of clip art and fonts for the Atari ST, has released a new graphics adventure game. *Gold of the Realm* features over 300 detailed screens.

The program features MIDI-compatible music and sound effects. Players can choose from three levels of difficulty. Variations provide players with new challenges each time a game is played.



Players gather treasures in the *Gold of the Realm*.

Gold of the Realm requires a color monitor and a joystick. The suggested retail price is \$39.95.

Magnetic Images, P.O. Box 17422, Phoenix, AZ 85011

Circle Reader Service Number 203.

Explore Reading and Writing

MindPlay has announced the release of *Ace Explorer*, an educational computer program for the Apple II series of computers.

Designed for students in grades 2-8, the program teaches reading and writing with a science fiction theme. Players choose from 60 different story missions and learn to read for sequence

Compiled by
Mickey McLean

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as they visit alien planets, conduct interviews by videophone, and search computer banks for information.

Challenge Upgrade options include sound, time, level, text speed, story selection, story creation, and performance summaries.

The package includes a backup disk and retails for \$49.99.

MindPlay, 100 Conifer Hill Dr.,
Bldg. 3, Suite 301, Danvers, MA 01923
Circle Reader Service Number 204.

Party Time for the IIs

Brøderbund Software has announced the release of *Party Edition*, a graphics library disk designed to be used with the Apple IIGS version of *The Print Shop*.

The two programs together allow users to create personalized invitations, signs, banners, and stationery. Themes include birthdays, weddings, anniversaries, and national holidays. Users can also design special art for almost any event, including barbecues and bon voyage parties.

The disk contains multicolor graphics, borders, letterhead designs, and background and pixel patterns. It also includes 16 full-panel designs which are multicolor theme drawings that fill the front panel of a greeting card or can be enlarged to cover an 8½ x 11 sheet of paper. The elements have been drawn to take advantage of the IIGS's high-resolution and color capabilities.

Party Edition has a suggested retail price of \$34.95.

Brøderbund Software, 17 Paul Dr.,
San Rafael, CA 94903-2101
Circle Reader Service Number 206.

Nine Free-Spirited Adventures

Free Spirit Software has released nine new text adventure games on three disks for the Commodore 64/128 and eight adventures on two disks for the Apple II series.

Eye of the Inca features four text games. In the title game, players search for a diamond in an ancient temple. Players must survive and escape from a South Seas island in *Shipwrecked*. In *Son of Ali Baba*, the player must defeat an evil magician and his army of monsters in Baghdad. The final game on the disk is called *Perils of Darkest Africa*,

where players must search for jewels from King Solomon's mines. The four-game disk retails for \$19.95.

Free Spirit's other four-game disk includes the title game, *Revenge of the Moon Goddess*, in which players travel into South American jungles in search of the lost City of the Sun and the gold idol of the Moon Goddess. In *Frankenstein's Legacy*, players encounter cadavers, old mansions, cemeteries, werewolves, and The Creature. *Night of the Walking Dead* has players looking for Aunt Bedilla's grave, where her locket must be found without disturbing the dead. In the *Sea Phantom*, players encounter ghost ships, sea caves, mansions, and a restless spirit while traveling up and down the Atlantic. The suggested retail price for the four-game disk is \$19.95.

Three Hours to Live has also been released by Free Spirit for the Commodore 64/128. Players in this science fiction text adventure must escape an alien maze filled with poison air in three hours or less. It retails for \$9.95.

Free Spirit Software, 905 W. Hillgrove, Suite 6, La Grange, IL 60525
Circle Reader Service Number 205.

Free Music

Bose has announced a special offer for Apple computer users. Anyone who purchases a Macintosh computer or Apple's new MIDI interface, along with a pair of Bose Pro RoomMate loudspeakers, receives a free music product.

Users can choose from Great Wave's *Concertware+* Version 4, Great Wave's *Terpsichore*, Opcode's *Music-Mouse*, Coda's *Macdrums*, or Intelligent Music's software package. Products have retail values of up to \$100. The special offer expires October 8, 1988.

The Bose RoomMate loudspeaker system features two sets of stereo RCA inputs, which can accommodate two different audio sources simultaneously. The system is designed to be used with computers, MIDI interfaces, mini recording studios, and keyboard or guitar amps. Purchasers may choose from one of the following accessories: MM-2 mounting arms, a travel bag, or a powered microphone. The suggested retail price for the Pro RoomMate loudspeaker system is \$429.

Bose Corporation, *The Mountain*,
Framingham, MA 01701
Circle Reader Service Number 215.

Help Wanted

MCE has released two new software programs in its Career Steps series that are designed to assist users in their quest for the ideal employment opportunity.

Job Search is an educational program for job seekers who are familiar with job-hunting procedures, but need to polish and refine their skills. The topics covered in the program include evaluating personal skills; gathering information; writing résumés, thank-you notes, and cover letters; preparing for an interview; using contacts; and followups.

Present Yourself for Success teaches job seekers how to present a professional image to maximize their chances of employment and career success. The program features lessons in attending to body language, attitude, speech, physical fitness, and dress.

Both programs are available for the Apple II family of computers and the IBM PC. Each program's package in-

cludes a double-sided program disk, a backup disk, and a teacher's manual. The suggested retail price of each package is \$82.50.

MCE, 157 S. Kalamazoo Mall, Ste. 250, Kalamazoo, MI 49007

Circle Reader Service Number 207.

Whistle While You Work

Ad Lib has announced the release of *Ad Lib Pop-Tunes*, a memory-resident program that allows users to listen to pre-programmed songs while working with a spreadsheet or a word processing program. It's the latest in a line of computer music products developed for the Ad Lib Personal Computer Music System, which allow users to listen to pre-recorded music or to create original compositions.

In addition to providing accompaniment to your work, *Pop-Tunes* can operate as a musical alarm that plays at a specified time.

The program requires the Ad Lib

Music Synthesizer Card and has a suggested retail price of \$39.95.

Ad Lib, 50 Staniford St., Boston, MA 02114

Circle Reader Service Number 208.

Burn Rubber

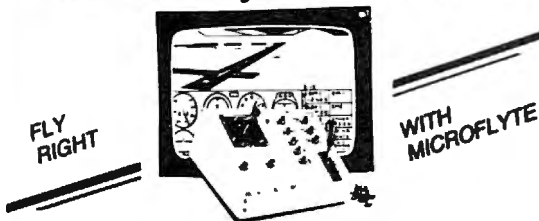
Commodore 64/128 game players can challenge the best in stock cars, drag racing, and the Grand Prix circuit with *Cosmi's Motor Racing Trilogy*.

In *Richard Petty's Talladega*, players race against "King Richard" Petty and 18 other top NASCAR drivers on the Alabama super speedway. The player must first try to qualify his car for the pole position and then compete in the big race. The game features 3-D graphics.

Players can then move on NHRA drag racing with *Shirley Muldowney's Top Fuel Challenge*, where they must select equipment, qualify, burn in tires, and stage the dragster. The player then moves up to the line, watches the starting lights, pops the clutch, hits the

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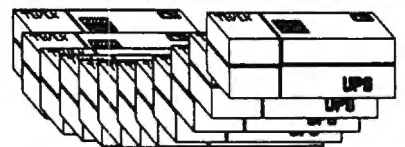
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throttle, shifts through the gears, and then pops the chute.

The final auto racing challenge is *Grand Prix Motor Mania*. This game features high-speed road racing with ten skill levels to choose from. Players race on city streets and dirt roads while watching out for traffic, potholes, broken glass, and other obstacles.

The suggested retail price for *Cosmi's Motor Racing Trilogy* is \$24.95.

Cosmi, 415 N. Figueroa St., Wilmington, CA 90744

Circle Reader Service Number 209.

Blow Away Dust

Users can now rid their computer components of dust with PerfectDuster from PerfectData. This can of compressed air is designed to clean sensitive computer and electronic equipment, especially in difficult-to-reach areas. The



Perfect Duster is designed to clean hard-to-reach places.

product is non-toxic, it dries quickly, and it doesn't leave a residue. Packaged in 12-ounce disposable cans, PerfectDuster comes equipped with a variable trigger that allows controlled dispensing.

The suggested retail price is \$5.95.

PerfectData, 1825 Surveyor Ave., Simi Valley, CA 93063

Circle Reader Service Number 210.

Free Software

Verbatim is offering personal-computer users a free software program each time they purchase a specially marked box of Verbatim's Bonus disks from now through December 1988.

Disk purchasers can choose from *Sinbad's Gammon*, a backgammon game; *Investicalc*, a financial calcula-

tion program; and *Banner Maker*, which prints message banners for parties and special events. The three programs are available for the IBM PC and compatibles, the Apple IIe and IIc, and the Commodore 64.

To receive the software, buyers must mail the coupon inside the specially marked 10-packs of Bonus 5¼-inch single-sided/double-density, double-sided/double-density, and double-sided/high-density disks, along with \$1 for shipping and handling. No proof of purchase is necessary. The suggested retail price of each 10-pack is \$9.25, \$10, and \$23, respectively.

There are no quantity limitations, so buyers of multiple boxes can send for an equivalent number of software programs.

Verbatim, Marketing Department, 1200 W.T. Harris Blvd., Charlotte, NC 28213

Circle Reader Service Number 211.

On the Campaign Trail

Focus Media has announced *And If Re-Elected . . .* for the IBM PC, a program previously available for the Apple II.

Students role-play a U.S. President seeking a second term in this educational simulation. As students make presidential decisions, they are shown their ratings in the polls. The candidate can also try to improve his or her standing with various special-interest groups.

Once all the decisions have been made, the computer displays a map of the United States, the electoral vote for each state, and a running tally of votes for the incumbent and opponent. After a winner has been determined, a final performance summary is provided.

And If Re-Elected . . . requires DOS 2.1 or higher and at least 128K of memory. The program comes with a program disk, a backup disk, a teacher's lesson planner, and a student workbook. The suggested retail price is \$65.

Focus Media, P.O. Box 865, Garden City, NY 11530

Circle Reader Service Number 212.

Atari Eight-Bit Newsroom

Springboard Software has recently released an Atari eight-bit version of *The Newsroom*, a desktop publishing program available for Apple II, IBM PC, and Commodore computers.

Users can produce a two-column newspaper including graphics with this program. Features include a built-in word processor with a selection of five fonts, page layout functions that allow text to wrap around pictures, and drawing tools that allow users to create their own art. The program also contains over 600 pieces of clip art.

The Newsroom is available for the Atari 800XL, 130XE, and 65XE with an Atari 1050 or compatible disk drive. Newsletters can be printed on most dot-matrix printers. The program retails for \$49.95.

Springboard has also announced that it will be releasing *Clip Art Collection Volumes 1, 2, and 3* for Atari eight-bit computers. These clip art programs are designed for use with *The Newsroom*.

Springboard Software, 7808 Creekridge Circle, Minneapolis, MN 55435
Circle Reader Service Number 213.

Eye Saver

Tiffen Manufacturing has introduced the Tiffen EZ-See nonglare CRT screen, which is designed to cut down on glare from computer monitor screens.



The EZ-See screen cuts down on glare and reflections.

The screen is made of a flexible, dark-tinted, lightweight film and can be installed on screens as large as 9¼ × 12 inches. The product provides increased contrast, which minimizes reflections and improves visibility.

Users can install the screen in nine steps by using a pair of scissors and a ballpoint pen. Each step is illustrated on the package.

The suggested retail price is \$14.95.
Tiffen Manufacturing, 90 Oser Ave., Hauppauge, NY 11788

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MS-DOS

DOS's DIR command is always around when you need it, but even when garnished with /W, /P, /SORT, and /MORE, it's boring and somewhat limited. For those who want a directory program with power to burn, there's John F. Stetson's public domain SD—Sorted Directory Utility Program.

SD is distributed with versions custom-coded for the PC and compatibles, the Zenith Z-100 Series, and generic (that is, non-IBM compatible) MS-DOS machines. Special 43-line EGA support is also provided.

What makes SD different from most directory programs is its ease of use and its power. If you simply want a sorted directory, type SD at the command line and you're off. If you want to supply DIR-style wildcards, SD will gracefully use them, too.

SD's real power comes into play, however, when you begin to apply some of its staggering array of command-line options. With these switches you can get just the directory display you need for any occasion. For example, there are six options that allow you to select various file attributes for display (all directories and files, directories only, files only, archive files, read-only files, or hidden and system files). Files can also be dis-

played with almost any range of creation dates, and they can be sorted in every imaginable way. In addition, SD provides system information, disk information, and a summary help screen. There are, in fact, too many SD options to list. The program comes with defaults that the adventurous user can change to suit his or her preferences with DEBUG.

What does Mr. Stetson charge for SD? Nothing. You can get it from any public domain source. If you want the program's source code, along with some useful utilities, however, you can send \$20 to John F. Stetson, 42 Tivoli Lake Court, Silver Springs, Maryland 20906.

OS/Too

The merits of Microsoft's OS/2 are everywhere in the computer press these days. One of the new operating system's most appealing features is its multitasking capacity. Simply put, multitasking is the ability of one microprocessor to run more than one task, or program, at a time. This is accomplished by placing two or more programs simultaneously in memory and switching back and forth between them so quickly that it appears both are running concurrently. With this procedure, each task gets a slice of the processor's time. For this reason, the technique is called *time slicing*.

Although a 80286- or 80386-powered PC with the OS/2 operating system will give you the power of multitasking, you don't have to wait for OS/2 or spend the money for a 386 to have multitasking on your PC or XT right now. There are, in fact, several products that provide multitasking magic for the PC family. Unfortunately, most of them use large amounts of memory, which at the moment

is both scarce and costly. One product, however, *DoubleDOS*, from SofLogic Solutions (One Perimeter Road, Manchester, New Hampshire 03103; 800-272-9900; \$69.95), creates a multitasking, or rather dual-tasking, environment and uses as little as 28K of memory.

DoubleDOS partitions your PC's memory into two sections. Each partition can hold and run one program, and each has its own DOS command-line prompt and resident utilities. You can flip back and forth between the windows using the Alt-Esc key combination or any other hot key you choose.

With *DoubleDOS*, you can download a file from a BBS while you work with a word processor, for example, or print while you recalculate a spreadsheet. In fact, almost anything that ties up your machine can be put in one *DoubleDOS* window while you work on something in the other.

Since the PC was not designed for multitasking, there are occasionally some problems. The most common occur when programs bypass DOS and write directly to the PC's screen. When this happens, the screen output from the program in the background "bleeds through" to the program you're working on in the current window, or foreground. There are patches included with *DoubleDOS* to alter some popular programs' video output, but you can't count on the patch you need being included.

DoubleDOS comes with two extra utilities that most PC users will appreciate. The first is a screen saver, which blanks your screen after a period of time that you specify. The second program is even more valuable. It's a DOS command retriever—a program that saves the commands you enter on the command line so you can later display

them, edit them, and reuse them. This may not sound like much help, but after using one, you'll agree that a command retriever is the best thing since sliced time.

Norton Editor

Every PC user needs a text editor. For large tasks—writing novels, essays, letters, even memos—a word processor is just the thing, but for writing programs or editing text files from a BBS, these large programs' features and sheer size get in the way. Another problem with word processors is that many of them save files in a cryptic, secret format that only they understand. DOS and most compilers need pure ASCII.

An obvious choice for an editor may seem to be EDLIN, the line editor that comes with MS-DOS, but this program is simply a headache waiting to happen. Anyone who's used it can testify that EDLIN's only virtue is that most MS-DOS users don't know that it exists.

What qualities make a good text editor? First of all, it should be small and fast-loading. When you want to change a line or two in a batch file, you shouldn't have to wait for your editor to load. It shouldn't use much memory, either. You'll want to be able to soft exit to DOS from any program that allows it and have enough memory left to load your editor. Next, it should be fast—lightning fast. Cursor movement and scrolling should be quick and fluid. Last, it should have a logical command structure that's easy to use and remember. Even better, you should be able to modify the structure yourself.

Peter Norton Computing, the company that has given the PC world such popular products as *The Norton Utilities* and *The Norton Commander*, also has an exceptional text editor called, not unsurprisingly, *The Norton Editor* (Peter Norton Computing, 2210 Wilshire Boulevard, Suite 186, Santa Monica, California 90403; 213-453-2361; \$75). Does the *Norton Editor* meet the criteria for a first-class text editor? In a word, yes. It's

small (only 32K), and it loads in a flash. The cursor zips along effortlessly, and scrolling is fast and flicker-free.

The command structure couldn't be simpler or easier to use. The cursor is shuttled along with the controls on the PC's numeric keypad, and the insert and delete keys on the keypad work just as you'd expect. The keystroke commands for deleting text are organized in a logical, consistent way: The control key implements a command to the left; the Alt key implements it to the right. For example, to delete the word to the left, you press Ctrl-W; to kill the word to the right, you use Alt-W. For file, block, formatting, and printer commands, the function keys are used as lead-ins for mnemonic, single-letter commands.

If you forget a command, there's online help. In fact, although the short manual is clear and well-written, the editor is so easy to use that you probably won't need to give the manual more than an occasional look.

A nice plus with the *Norton Editor* is its mouse support. You can't choose commands with the mouse, but you can move the cursor, you can scroll and page, and, if you have a three-button mouse, you can use the middle button for marking blocks of text.

Big Blue Suit

Apple's done it. They've filed a copyright infringement and unfair competition suit against both Microsoft (and by implication, IBM) and Hewlett-Packard for these companies' windowing graphics interfaces. According to Apple, Microsoft's *Windows* and Hewlett-Packard's *New Wave* operating environments violate the "look and feel" of Apple's Macintosh.

Apple is at home in the court room. In 1983, it won a \$2.5 million settlement from Franklin Computer for duplicating the Apple II's operating system. And in 1985, Apple brought action against Digital Research Incorporated (DRI) for that company's GEM interface, forcing DRI to change GEM's design until it met

Apple's approval.

The Microsoft suit may have an effect on the future of OS/2, a jointly developed Microsoft-IBM operating system that uses a *Windows*-like interface called the *Presentation Manager*. A preliminary version of OS/2 is already available, but the *Presentation Manager* interface won't be ready until October, says Microsoft.

Many industry pundits believe that, although Apple's suit doesn't have much chance of success, it will worry consumers about the future of OS/2 and PS/2 and thus hurt the market for these products.

One irony in Apple's suit is that the Macintosh's graphics interface may itself violate the "look and feel" of the Xerox Star, a workstation which pioneered icons, mouse input, and a graphics interface.

Clifton Karnes

tributed by Electronic Arts) gives a strong Civil War flavor. Two of the best features are the ability to choose your leadership style—from Heroic (read *insane*) to Cautious (read *wimpy*)—and a simple but effective simulation of the lack of communications on the mid-nineteenth century battlefield.

Son of GEOS

Since the Commodore 128 and 128D don't ship with *GEOS-128* (not yet, anyway), *GEOS128* lacks some of the instant respectability of *GEOS*. It's only a matter of time, though; *GEOS128* is an extremely useful addition to the 128 owner's library.

GEOS128 comes on two double-sided disks. The program disk and a backup program disk occupy two of these sides. On the other two are the applications disk and the Q-Link program. You begin by installing the program disk, which means that all your future *GEOS* packages will be tied to this master disk. The procedure is Berkeley's means of copy-protection, and it has not been without some controversy. Another source of controversy is the feeling among some users that *GEOS128* was released before all the bugs were worked out. It sometimes crashes when you're trying to change disks in a 1541 drive configured as device #9. Other than that, though, everything seems to be working fine.

Like *GEOS*, *GEOS128* contains the deskTop, geoWrite, geoPaint, and the Desk-Accessories. You can use a joystick, KoalaPad, lightpen, or mouse for menu selection and input. In fact, the only real differences between the 64 and 128 version of *GEOS* are that the latter supports 80-column mode and the 1750 RAM expansion unit. Eighty-column mode can be accessed at any time when you're working with *GEOS128* (you don't have to choose 80- or 40-column on startup). The 1750 REU lets you configure as much as 512K as a 1541/1571 ramdisk, a "shadowed" 1541 (which uses the real 1541 as well), for faster screen movement, or for quicker rebooting

64 & 128

SSG began to expand its popular *Battlefront* game system beyond the World War II battlefield with some of the scenarios in *Halls of Montezuma*. Now they've applied it, with some significant changes, to six Civil War battles. First and Second Bull Run, Shiloh, Fredericksburg, Chancellorsville, and Antietam are all simulated here, and all offer a fascinating challenge.

The impressive part is that *Decisive Battles of the American Civil War, Volume One* (Strategic Studies Group, P.O. Box 261, Drummoyne, 2047, Australia; \$39.99—dis-

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of GEOS.

GEOS128 supports all three Commodore disk drives. An RGB monitor (such as the 1084) is necessary for 80-column displays.

More Speed

The 1581 disk drive is arguably the most important hardware investment that a 64 owner could make. Because it uses 3½-inch disks, it's capable of far more storage than the 1541 or 1571; with recent price drops, 3½-inch disks now actually cost less per byte than 5¼-inch ones. And 3½-inch disks are encased in a sturdy plastic covering, making them more durable.

More importantly, though, the 1581 is much, much faster than the 1541 disk drive. 1541 owners have endured abysmal disk access for years (turbo loaders don't always do the job), and the move to the 1581 will quickly spoil them. For a 1541 owner, installing a 1581 makes a speed and convenience difference similar to that experienced by an Amiga or MS-DOS user who installs a hard drive.

If you're still using a single 1541 drive, and you have some money for a peripheral, consider a 1581. Commodore has ironed out the problems that marred the early 1581s, and now they're truly worth a look.

GeoPublish

With desktop publishing the current rage in computerland, 64/128 owners have wondered when their turn will come. Users of the 64, in fact, who have a machine with much less memory than is offered by the Macintosh, IBM PC, Amiga, or Atari ST, have wondered if desktop publishing is even viable on their computers. With the appearance of Berkeley Softworks' *geoPublish* (Berkeley Softworks, 2150 Shattuck Avenue, Berkeley, California 94704), the answer is a definite yes.

At \$69.95, *geoPublish* is one of the least expensive desktop publishing packages on the market. And, as with many 64/128 products, low price does not mean low quali-

ty. The program is filled with solid desktop publishing features, and while *geoPublish* lacks some of the niceties of its kin on the larger machines, it does far more than just introduce the user to the rudiments of this kind of software.

For your money, you get a 160-page manual, the *geoPublish* program disk, and a small addendum booklet. The addendum gives instructions for using *geoPubLaser*, a tool included with *geoPublish* that lets you work with an Apple LaserWriter. For small jobs, such as newsletters and local advertisements, dot-matrix printers are fine, but if you intend to do serious desktop publishing, you'll eventually need a laser printer. Supporting laser printing is a must for Berkeley if *geoPublish* is to be taken seriously. To use the LaserWriter, incidentally, you need an RS-232 interface.

Actually, there are two other sources of high-quality printer output. A good 24-pin dot-matrix printer can provide copy that is actually superior to that produced by a 300-dot-per-inch laser printer. If you can't afford either printer, you can use Q-Link, the Commodore information service, to access a laser printer. It costs a bit, and it takes a little time, but if you need the quality, the wait is worthwhile.

As far as *geoPublish* itself goes, its features are many. You define what you want the page to look like using the Master Pages mode, then place graphics and text on the page using the Layout Page commands. You can create graphics with Page Graphics, the drawing program, or you can import graphics from *geoPaint*. Text, by the way, is imported from *geoWrite* or *Writer's Workshop*.

The *geoPublish* disk contains 21 predefined page layouts. Working with these, editing them for your own use, is a quick and useful way of learning the program's ropes. Once you get the hang of wrapping text around graphics (which *geoPublish* handles nicely), placing text in front of or behind other text and graphics, playing with headline fonts (up to 2½ inches tall), and then producing a good-

looking document, you'll find *geoPublish* of considerable use. It lacks some of the sophistication of Mac, IBM, or Amiga programs (leading and kerning capabilities, for example), but *geoPublish* proves that the 64 can handle desktop publishing. The program works with either GEOS or GEOS128.

— Neil Randall

APPLE II

Working with *AppleWorks* will soon be easier and more efficient. A networked version of the program has been announced by Claris Corporation, the somewhat independent software arm of Apple, and it's scheduled for shipping once the Apple II AppleTalk hardware and software is made available this summer.

The \$1,616 package will require an AppleTalk network, which typically consists of a dedicated Macintosh with a hard disk (to run AppleShare), and AppleTalk cabling (to connect the computers). Apple IIe computers will need a Workstation card, though IIGs machines, with their built-in AppleTalk connectors, only need the Apple IIGs Workstation Software installed on the file server.

With a network in place, users will be able to run *AppleWorks/Network* without using floppies. The program will be accessible from any workstation on the network, allowing easy sharing and transferring of *AppleWorks* files.

It's likely that the classroom will be the first Apple II AppleTalk locale. *AppleWorks*,

the most popular Apple II program ever, is also the most popular application for Apple II computers in school, and so it's a natural for any networked scenario. Teachers will like the freedom from managing scores of floppies, administrators will take kindly to the economics of linking an entire lab full of Apple IIs, and students will find their time spent more productively.

Claris plans to distribute *AppleWorks/Network* through Apple's Education Purchase Program until late this year, when Claris's own education channels open up. Upgrades to *AppleWorks/Network* will be offered until the end of the year to users with ten or more copies of *AppleWorks*. A price has not yet been set.

Where Is She?

Geography may not be the most widely appreciated school subject, but it's managed to turn an unlikely software series into a best seller. *Where in the World is Carmen Sandiego?* started it all. Then came *Where in the U.S.A. is Carmen Sandiego?*. Now the third installment is ready to hit kids' desks in school and at home.

The *Sandiego* series shares a common approach to education: Teach children (and anyone else who plays) in a noneducational format, and they'll learn more because they're having fun. Not a novel concept, certainly, but one which is far easier to describe than to carry out. Broderbund, Carmen's creator, has taken this technique and refined it, and in the process it has made a lot of children eager to turn on the computer.

Where in Europe is Carmen Sandiego? works on the same premise as its predecessors. A gang of nasty criminals is loose throughout a geographic area (in this case, Europe as far east as the Urals); your job, as detective, is to track down each member by puzzling out the geographic clues you get from witnesses and stoolies. To help you out, the package includes the *Rand McNally Concise Atlas of Europe*, which offers maps and facts of the continent. Once

COMPUTE! *specific*

you know where the culprit has fled, you follow him or her, tracking the trail like a dog sniffing a convict's tracks. Other clues appear to help you identify the individual gangster so that you can obtain a warrant before you make an arrest. When you find one of Carmen's gang, you get a chance to tackle another case.

So, if you know that Luxembourg is called the Gibraltar of the North and the Jura mountains are in Switzerland, you'll do fine. If you don't know these things, you have the resources at your disposal to find the information.

The key to *Carmen's* success isn't graphics (which are passable) or sound (which is pathetic), but in the interaction between program and player. The search for information, and thus the process of using reference materials (whether printed or on disk) is not an exciting concept. But by wrapping an entertainment-like cloak around the fact-finding, Brøderbund has created something children dive into.

Mall Museum Tour

Keep an eye on your local mall—it may be the next place you run into an Apple II computer.

The Apple OpenHouse program, which brought computers and software to the masses cruising the malls, has been a certified success. Now Apple has added another megamall event to its marketing calendar.

Apple is participating in MTV's Museum of UnNatural History tour of 27 malls in major metropolitan markets. MTV, the cable network that launched Cindy Lauper, Madonna, and Run/DMC into the heartland of America, is taking to the road with a multimillion dollar interactive display of music, fashion, and technology. The tour started in Atlanta March 3 and will wind up in Boston after Labor Day.

You'll find Apple II computers in two of the Museum's four exhibit areas. Apple IIGs computers, the Apple MIDI interface, and third-party music composition software have

a temporary home in the Long Live Rock exhibit. The hardware and software are there to demonstrate how computers can aid professional and amateur musicians. On the flip side, the Products for Better Living display spotlights Apple products for home productivity, education, and home working.

According to an Apple spokeswoman, mall marketing has been extremely successful because it offers a way for people to learn more about the machines in a nonsales environment.

Wonder if they play MTV instead of Muzak at Cupertino?

Happy Holidays

A surge in Apple IIGs sales in the last month of 1987 has to have put a smile on Apple's corporate face. According to projections published in a computer trade magazine, December was kind to the IIGs, though seemingly at the expense of the two other Apple II models in the line.

Nearly 37,000 Apple IIGs computers were snapped up by holiday buyers, while only an estimated 2,100 Apple IIe's and 13,000 Apple IIc's made it home that month. The trend is clear—the Apple marketing muscle behind the IIGs is paying off in a big way.

Not that heavy Apple II Christmas sales are out of the ordinary. The line has always done well during the end-of-the-year buying season. What was surprising was the strength of the IIGs. It accounted for 14 percent of *all* computers sold. That was better than any other micro—much better than the Macintosh SE (7 percent), IBM PS/2 Model 30 (6 percent), or the Apple IIc (6 percent).

What's not clear, however, is the impact IIGs sales had on its sister machines. Are IIGs buys coming at the expense of the Apple IIe?

The numbers seem to say yes. It doesn't take much more than a trip to a few Apple dealers to see that the IIe's consumer days are numbered. Visit a dealer, and you're lucky if you even spot a IIe. The prominent positions up in the front of the store are given to

the Macintoshes and the IIGs's. A bit further along you'll find the IIc's.

Marketing at Apple is solidly behind the IIGs, an understandable stance when one considers the profit margins on the machine. If Apple sells 20,000 IIGs computers and 20,000 Apple IIe machines, it makes more money on the former.

Apple wants to sell IIGs computers. To many potential buyers, its closest competitor is the IIe. Both the IIGs and IIe have slots for add-on boards, both require external disk drives, and both easily can be expanded with more memory. To maximize IIGs sales, Apple may have to eliminate the IIe.

The Apple IIc is a different beast. If you take a page from the Macintosh book, it makes sense to think of the IIc as the "plug in and turn on" computer of the Apple II line, just as the Macintosh SE serves that purpose for the Mac end. In fact, the most likely hardware pronouncement from Cupertino should be about an enhanced IIc, one with a 3½-inch disk drive, more memory, and perhaps a faster microprocessor.

Words on Works

It's not hard to find information about *AppleWorks*. A slew of books and several regular columns in Apple-specific magazines provide words and words on *AppleWorks*.

Books can't always keep up with the changing *AppleWorks*, though, and magazines can't devote more than a few pages to the program. That's where the *AppleWorks Journal* steps in.

The most recent issue of this Sage Productions newsletter presents 16 pages of professionally produced information on *AppleWorks*. Articles detail everything from two *AppleWorks* templates for the home—a database to help zip through the weekly grocery shopping and a spreadsheet to sort through your checks for tax-time deductions—to using *AppleWorks* with expanded memory on the IIGs.

Readers' contributions

find their way into the newsletter and in many instances are the most valuable. Macros that make life with *AppleWorks* easier, tips on label printing, and questions about desktop limitations all make interesting reading and can be instantly effective.

A subscription to *AppleWorks Journal* is \$39.95 for 12 monthly issues. Contact Sage Productions, 5677 Oberlin Drive, San Diego, California 92121; (619) 455-7513 for more information.

Sage also publishes the first desktop publishing—dedicated newsletter for the Apple II line. The first issue of 16 pages spent time taking several Apple II desktop publishing packages for short test drives, including sample pages. More general information of use to beginning desktop publishers was also noted. The *Desktop Publishing Newsletter* costs \$20 for a six-issue subscription.

—Gregg Keizer



When it comes to Amiga games, violence is already here. Sex was bound to show up sooner or later.

Centerfold Squares (Artworx Software, 1844 Penfield Road, Penfield, New York 14526; (800) 828-6573; \$29.95) begins with a title screen that features a lady in lingerie. This digitized photo should be a strong clue to send the kids into the other room. The next screen lets you select a player. In gameplay, Penny's below average; Terri and The

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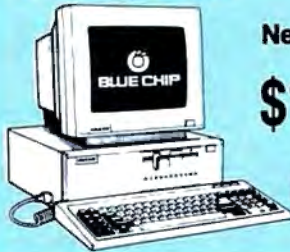


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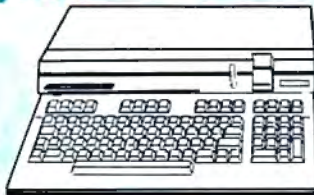
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COMPUTE! specific

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Twins are ranked as average; and Yvonne and Renee are nearly unbeatable. For variety, an option is available for inserting an alternate opponent disk. Males and females will both be represented on the as-of-yet not released disk.

After you choose an opponent, bits of her or him appear on the screen. Several strategically placed rectangles cover critical features of her or his anatomy. To uncover your opponent, you must play a version of the game *Reversi* (commercially known as *Othello*)—one game per block.

The board game is well done. In general, your opponents play the game remarkably well. The artwork is tastefully done; the pictures were digitized in black and white, and then colorized.

You may remember that Artworx previously released *Strip Poker* for the Amiga and other computers. *Strip Poker* is being reworked to use digitized photos.

The 1084 Monitor

As reported in the May issue of *COMPUTE!*, Commodore has introduced a new video monitor that's designed to work with its Commodore 128, PC compatible, and Amiga series of personal computers. Unlike the previous model (the 2002), this monitor comes with all the cables you need to hook it up to Commodore computers of any persuasion.

Unexpectedly, the 1084 isn't just a renamed 2002. It has a new case, perhaps indicating a new manufacturer. It has a VCR button, tilt adjustment, and sharpness controls—all of dubious value.

All the changes are not cosmetic, though. Nice additions are width and height adjustments that let you stretch or compress the screen. This is an easy way to get rid of the screen borders. Also, in paint programs that support overscan, you can effectively increase the resolution of the computer by shrinking the screen.

While you wouldn't want to trade in your 1080 or 2002 for a 1084, if you have a choice, choose the 1084.

Three Amigas

The big news from Commodore is the introduction of three powerful new Amigas at the huge Hannover Fair in West Germany. The new machines are the Amiga 2500AT, the Amiga 2500UX, and the Amiga 3000. The new computers feature built-in hard drives and higher-resolution, non-interlaced screens.

The Amiga 2500AT is an everything machine. Powered by a 68020 and an 80286, the 2500AT runs both Amiga and MS-DOS programs at blinding speed. The machine boots up both AmigaDOS and MS-DOS, allowing you to run PC programs in a window of the Amiga screen. With its combination of high speed and excellent graphics, this computer is a super Amiga 2000.

The Amiga 2500UX should appeal to engineers and university students. It runs AmigaDOS and a window- and menu-based UNIX, which has been called the operating system of the future. A 100-mega-byte hard drive is an option.

For those who don't want MS-DOS or UNIX, the Amiga 3000 is the new Amiga dream machine. With a Motorola 68030 under its hood, it will be more powerful (and less expensive) than the Macintosh II, the current powerhouse personal computer sporting a Motorola chip.

The two Amiga 2500 models will probably ship in September or October of this year. The Amiga 3000 is expected to ship in 1989.

Commodore is clearly concentrating on the high end of the market. However, current figures show that the Amiga 500 is outselling the 2000 by a margin of three to one. Rumors before the show speculated that Commodore would show a version of the Amiga 500 in a case similar to that of the 1000. This didn't occur. It will be interesting to see what shows up at the Summer Consumer Electronic Show (CES) in early June.

Financially, Commodore seems to be doing well. The company has just had its eighth consecutive profitable quarter. Despite continuing strong sales

of the eight-bit line and PC line of computers, Amiga sales now bring in 40 percent of Commodore's profits.

Sound Wars

Sound utilities have lagged behind graphics utilities on the Amiga. Now, though, with the introduction of three new and powerful programs, a new era of Amiga sound is beginning. The programs are *Synthia*, *AudioMaster*, and *Studio Magic*.

Musicians will prefer *Synthia* (The Other Guys, 55 North Main Street, Suite 301-D, P.O. Box H, Logan, Utah 84321; (800) 942-9402; \$99.99). This program is designed to help you create instruments on the Amiga. These instruments then can be used in music programs such as *Deluxe Music Construction Set*, *Instant Music*, *Hot Licks*, and *Sonix*.

Synthia's manual is excellent (and nearly 300 pages long). Both *Synthia* and its manual are designed for beginners and musicians—not programmers. It's fortunate that the manual is so long; *Synthia* is less intuitive than the other programs. That's mainly because it can be used both to design instruments from scratch and to manipulate digitized sounds. There's so much you can do that it will take you quite a while to figure out how to do it.

Synthia is really several different programs, each of which create and manipulate instruments in different ways. Additive, subtractive, plucked string, interpolative, and percussive synthesis are each implemented with a different program. You don't need to stay in any one program when you're designing a sound; you can load any instrument into any of the programs to create new sounds and special effects.

Synthia also includes an IFF Music Player that plays songs created with nearly any music program.

The other two programs—Aegis' *AudioMaster* and SunRise Industries' *Studio Magic*—are geared toward digital sampling and manipulation. Both programs make it

possible to sample sounds with a hardware sound sampler.

Studio Magic (SunRise Industries, 3801 Old College Road, Bryan, Texas 77801; (409) 846-1311; \$99.95) is the more ambitious of the two products. It has a long menu of powerful special effects, everything from echoes to amplitude modulation. If you need to develop strange alien screams for an arcade-style game, this is the program you need. *Studio Magic* also has respectable MIDI capabilities. The program makes it easy to assign different digitized instruments and sound effects to different keys on a MIDI-compatible music keyboard. Unfortunately, the program's manual is poor. It will take plenty of experimentation to get *Studio Magic* to do what you want it to do.

AudioMaster (Aegis Development, 2210 Wilshire Boulevard, Suite 277, Santa Monica, California 90403; (213) 392-9972; \$59.95) is easier to use than *Studio Magic* (or *Synthia*). A drag of the mouse is all that's needed to define portions of sounds. The special effects menu has many of the effects included in *Studio Magic*, but it could use more. The manual is good, and the program seems solid. If you want to borrow a sound, *AudioMaster* lets you listen to any sound data that might be left lying around in RAM from another program.

Each program has its strengths. In the future, many of the programs that you use will have sound effects created or altered by one or more of these programs.

The New, Low Price

There aren't many Amigas in schools. Commodore knows that, so this spring the company effectively lowered the price of the Amiga by offering a specially priced package for educators. Included are an Amiga 500, a RGB monitor, an external disk drive, and a RAM expander. The result is a powerful, two-floppy, one-megabyte machine. The special package price is \$999.80 (\$600 off the suggested retail price).

— Rhett Anderson

The biggest, and most surprising, news of early spring was the latest "look and feel" lawsuit: Apple versus Microsoft and Hewlett-Packard. Microsoft's *Windows* and HP's *New Wave* graphic interfaces are under fire from the self-proclaimed Guardian of the User Interface.

That Apple would go after Microsoft is a surprise in itself. The Macintosh would have had an even harder row to hoe during its first year if it weren't for Microsoft's software support; Microsoft is still the premier supplier of Mac software. In addition, Microsoft made a deal with Apple back in 1985 so that it could develop *Windows*. Apple claims that *Windows 2.03* goes beyond the "limited" rights granted Microsoft in that agreement.

Now, why would Apple want to do this? Is it so that software developers won't port well-established Macintosh programs to other machines, forcing people to buy Macs if they want ease of use and elegance in their software? Could it be to scare IBM away from finishing development on *Presentation Manager*, a derivative of *Windows* developed jointly with Microsoft that, until now, seemed to be protected by Microsoft's agreement with Apple? Or is it because Apple wants to legally establish itself as the originator and owner of the windows/menus/icons interface? The correct answer is *all of the above*.

Where is Xerox all this time? It's no secret that Steve Jobs got the interface idea from Xerox PARC. Maybe Xerox wants to sit back and watch. If

Apple wins and establishes a strong legal precedent for look-and-feel ownership, Xerox can move in and, using the same tactics, take over all the Macintoshes in the world. The Xerox Macintosh. How does that sound? It's time Apple learned that you can't own ideas: You can only copyright their implementations.

Luckily, Apple's legal branch isn't the only department working overtime. March saw the introduction of the CD SC. That's CD as in CD-ROM, SC as in SCSI. Is that clearer?

Compact discs store over 550 megabytes of information—about 700 floppies' worth of data. The CD SC is expected in May, at a price of \$1,199. But don't rush out to buy one, even though there's an audio chip incorporated into the design so you can play audio CDs. There should be a lag of a year or more before you see software that really uses the CDs. Let the developers buy the first few rounds of machines.

News Flashes

The memory market is tight at this writing: The supply of chips is short and there's the inevitable price rise that accompanies short supply. Supplies are expected to be more plentiful by the end of summer or by the end of the year at the latest. The question is this: If buyers are willing to pay the inflated price now, will the sellers drop the price later? Do we have to worry about a Chip Cartel?

A management shuffle and squeeze play at Letraset resulted in the departure of some PC-loving executives. (That's PC as in IBM PC.) The further result is that Letraset has announced it won't do a PC version of *Ready Set Go*. Manhattan Graphics, RSG's developer, has a *Windows* version underway, and it's now apparently free to market it through another publisher.

The price of the Mac Plus dropped by 18 percent at the end of March. Ostensibly, the price cut is intended to widen the gap between the Plus and the SE, making the Plus a low-end, entry-level Mac. There's some validity to that train of

thought. I've consistently recommended the SE with double floppy drives over the Plus with an external drive because the price difference was minimal for the assurance of a machine with a longer production life; now, I occasionally recommend the Plus instead. However, the drop in price more likely presages the dropping of the Plus itself. I'd be surprised if it's still available by January.

The "Peace" virus that caused such an uproar last February finally infected a commercial product: Aldus's *Freehand*. The apparent original source of the virus was Richard Brandow, publisher of a Macintosh magazine in Montreal. Marc Canter, of *VideoWorks* fame, got an infected disk from Brandow. Marc's company, Macromind, makes training disks for Aldus, hence the spread to *Freehand*. On March 2, users of infected *Freehand* programs were "treated" to a world peace message on their screens.

What's a computer virus? A virus is a program that spreads itself from disk to disk by "infecting," or installing itself, in programs and systems. The Peace virus was harmless—but how would you feel about someone breaking into your home to scrawl a peace message in soap on your bathroom mirror? A wonderful message, a harmless medium, but an invasion of privacy nonetheless. And remember, viruses aren't always harmless. Check out CE Software's *Vaccine*, a program that can protect your system from viruses.

Mac Using

Here are some desktop basics and options you should know about, especially if you're using a hard drive.

First, and most important if you're using a hard drive, is to make sure you have only a single System and Finder and a single System folder. Many users drag the contents of a new program disk into a folder on the hard drive. As a result, the System and Finder from that disk reside in the folder on the drive. The easiest way to check whether you have multi-

ple systems is to use Apple's Find File desk accessory. Type in *System* as the name to search for; all the system files and folders will be listed. Take note of their positions on the disk and get them into the Trash right away.

SuperPaint Tips

This month's hints and tips are for *SuperPaint* version 1.1. Using the Option key in *SuperPaint* gives you many options.

- Choosing Select All in the Edit menu with the Option key held down lassos the entire Paint layer.
- Holding Option while using the selection rectangle lassos the selection.
- Holding Command and Option while double-clicking the eraser erases the entire Paint layer.

Suitcase

Suitcase, from Software Supply, lets you have as many fonts and desk accessories as you want. They can be opened automatically or specifically on command. You haven't felt power until you have a scrolling list of desk accessories and, to a lesser extent, all the fonts you ever thought you needed but were afraid to install.

Suitcase goes in as an INIT: You simply drag it into your System Folder and, the next time you start up, it's in your Apple menu. Any font or DA files you've installed in your system are still there, but so are any fonts or DAs that you have in files or folders with specific names on them that *Suitcase* looks for on start-up. In addition, you can use the Open command to find a font or DA anyplace else on a disk.

Suitcase has many fine touches. For instance, if you're working in MultiFinder, the currently opened applications are listed at the end of the Apple menu. That's a lot of scrolling if you have 20 or 30 DAs. But if you hold down the Option key, accessories aren't listed and the applications are near the top.

COMPUTE! *specific*

What tools might you find in an expert's Apple menu? Well, you'd see Apple's standards like the Control Panel and Chooser, as well as Disk Tools II, Calendar, and Phone Pad from Electronic Art's *Disk Tools Plus*; the *Thunder* spell checker from the same company; *Tempo* and *Affini-File* from Affinity Software; *Acta*, *PBRetriever*, and *HyperDA* from Symmetry; *Art Roundup* from Dubl-Click Software; *CheapPaint* from MacroMind; *Word Finder* from Microlytics; *Locater* from PBI Software; and, of course, *Suitcase*.

— Sharon Zardetto Aker

ATARI ST

Bill Wilkinson's company, Optimized Systems Software, has been involved with Atari from the start. It programmed the original 8K Atari Basic as well as such notable eight-bit products as *BASIC A+* (which evolved into *BASIC XL* and then *BASIC XE*). The company also published both *MAC/65* (an excellent assembler) and *Action!*, the fastest languages for any eight-bit computer.

More recently, OSS published *Personal Pascal*, which established a standard for ST languages. But Bill finally did what he has been threatening to do for quite a while: He quit and returned to "a real job." OSS is no more. Rumors say he's earning a living programming in Prolog, a language elegant enough to suit even Bill's tastes.

Users of OSS's products are probably wondering what's going to happen to them. There's no cause to worry: The product line has been picked up by ICD, one of the most

dedicated companies in the Atari market. ICD has a notable product line all its own, and it's more than capable of supporting the new additions from OSS. According to Tom Harker, president of ICD, product development will also continue on OSS products.

Mega Hard Disk

The Mega ST, in contrast to earlier STs, has an internal DMA connection. Among other things, the DMA port allows a hard drive to be connected to an ST. Putting this port inside the machine presents all sorts of interesting possibilities.

Supra Corporation has been quick to exploit this extra port by bringing out the first internal hard drive for the Mega (Mega Internal Hard Drive (40 megabyte), Supra, 1133 Commercial Way, Albany, Oregon 97321, (503) 967-9075; \$995).

The advantages of an internal drive are obvious. No additional desk space is needed, no extra power supply and accompanying tangle of wires is required, and the Mega remains the most portable of the ST models, even with a hard drive.

Although the installation of the new internal drive is relatively simple, it does require opening the case and cutting a small hole for the drive light. Even when installed by a qualified service center, Atari has decided that this alteration voids the machine's warranty. This policy seems shortsighted. The ability to install an internal drive could make the Mega machines more desirable, especially if Atari ever decides to beef up the power supply.

Note: When the first internal drive was introduced by a third-party vendor for the Apple Macintosh (easily the most portable of the power computers), Apple also stated that installing one would void warranties. Users bought so many of these drives that Apple allowed installation of one manufacturer's internal hard drive, then brought out its own internal drive.

Since Supra also makes modems, it's probably only a matter of time before an inter-

nal ST modem appears to further enhance your Mega while reducing the clutter of your desktop.

Seeing Double

An interesting ST hardware gadget comes from Astra Systems, makers of eight-bit Atari disk drives and the System HD+, a hard drive/floppy drive combination unit for the ST. Called the Monitor Switch Box—SW2 (Astra Systems, 2500 S. Fairview, Unit L, Santa Ana, California 92704, (714) 549-2141; \$59.95), it solves the problem of connecting two monitors to an ST's single monitor port.

The SW2 plugs into your ST's monitor port and you plug both monitor cables into it. The SW2 also accepts both monitors' power cords. With the flip of a single switch, you can move from one monitor to the other (causing a reboot), or you can cut power to both monitors. When two active monitors are too close together, the color monitor usually causes interference on the monochrome monitor. The SW2 solves this problem by switching the power, so there's no need to turn one monitor off when the other one is turned on.

The Extra 4%

Speaking of hardware, has your Atari ST needed any repairs? You may not know that when you take your computer back to the dealer while the machine is under warranty, it's the dealer's responsibility to make your machine operational again—not Atari's. If the machine can't be repaired, the dealer can buy a refurbished board from Atari for \$50 or a new board for \$90. Making a repair under warranty can obviously cost the dealer money, so why do dealers agree to make repairs?

It turns out that Atari allowed an extra four percent margin on all computers to compensate the dealers for machines that must be repaired at the dealer's expense. Of course, the four percent has long since been placed in the

bank when a machine comes back for repair, so the dealer may not be too happy about having to repair your computer. Since it's uncertain whether mail-order dealers are under this same obligation, if you buy your ST by mail order, be prepared to pay for repairs.

ST Star Wars

Star Wars, from Lucasfilms (22 Hartfield Road, London, England 193TA; \$34.95—distributed by DoMark), is an amazing, smoothly animated piece of software. In addition to being a blockbuster movie, *Star Wars* was an extremely successful arcade game. It made use of vector graphics—the 3-D wire diagrams that give such an excellent illusion of depth. Up until now, adaptations of vector graphics-based arcade games have not translated well to home computers, which depend upon an entirely different graphics system, known as *raster-scan*. *Star Wars* doesn't suffer from this problem. It successfully duplicates the look and feel of the arcade game and is as much fun to play.

The game is divided into sequences. First comes the battle with Tie fighters as you approach the Death Star. In addition to shooting at the fighters, you can shoot at the fireballs which they shoot at you. Your fighter can survive five hits or collisions with obstacles. When the Death Star moves into view, you zoom to the surface in a breathtaking sequence to blast blockhouses and laser towers.

If you survive, you move down the trench, avoiding obstacles and gun emplacements until you finally have a chance to send a torpedo down the exhaust port of the Death Star. After successfully completing your mission, you're off into space to watch the Death Star explode.

The mouse controls for *Star Wars* are exceedingly smooth, and the game even includes the digitized sound from the original arcade game. If you enjoyed the arcade game, you won't be disappointed by the ST version.

— David Plotkin

hints & tips

Q Finding Shareware

I've seen references in COMPUTE! and other magazines to shareware, but I can't find out where to get it. Can you help me?

Mike Bloom

Shareware is a general term for commercial software that uses a direct-to-the-consumer marketing method, eliminating the retailer, or middleman. Unlike software you buy in a store, you have the opportunity to try shareware before you buy. Some shareware may be purchased, or registered, for a fixed price, while some companies simply request any reasonable contribution.

What a user gets for registering depends on the product. Many shareware authors give registered users a nicely printed copy of the documentation and one or more free updates. Others withhold some useful parts of the program to encourage users to register. Upon registration, these publishers supply fully working versions of the program.

There are three primary sources for shareware: BBSs (Bulletin Board Systems), including commercial online services like CompuServe, The Source, GEnie, and Delphi; user's groups; and for-profit copying companies.

If you have a modem, BBSs are the best places to look for shareware. New titles appear on the commercial services daily and spread quickly to local BBSs.

If you don't have a modem, you'll need to acquire shareware either from a local user's group or from a commercial copier. A user's group ordinarily requires that you join the group and usually charges a small copying fee.

Commercial services' prices vary from \$3 to \$20 per disk. It should be noted that when you purchase a share-

ware disk from a commercial copier, you're not buying the software. You're simply paying for the disk and the copying service. If the product is shareware, the author will still expect you to register and pay him or her, if you find the program useful.

The best way to locate a commercial copier is to look for ads in computer magazines. As mentioned earlier, prices for this service can vary dramatically, so try to find more than one source and compare prices.

Q Renaming Subdirectories

I own an IBM compatible with a hard disk, and, over the months, I've organized the disk with dozens of subdirectories. I'm familiar with the CHDIR, MKDIR, and RMDIR commands, but I can't seem to find a way to rename a subdirectory. Could you help me out?

Nikhil Nadgauda

Although some custom versions of DOS have a command to rename subdirectories (usually called RENDIR), such a command is not a part of standard MS-DOS. To rename a directory, you have to create a subdirectory with the new name using MKDIR, copy all the files from the old directory to the new one, erase all the files in the old directory, and, finally, remove the old subdirectory.

Luckily, these steps can be automated with the following batch file:

```
MD %2
CD %1
COPY *.* %2
DEL *.*
CD %2
RD %1
```

Name the batch file RENDIR .BAT, or something similar,

and call it with the following command-line syntax:

```
RENDIR oldsubdirectory
newsdirectory
```

For this command to work properly, you must specify the complete path name when you name the directories, you must have enough room on your disk to hold a copy of the directory you're renaming, and the subdirectory you're renaming can't have any subdirectories of its own. You can also use RENDIR.BAT to move subdirectories. Be sure to use full path names here, too. For example, RENDIR c:\utilities\deluxe c:\works\paint\deluxe.

Q Saved by the Amiga

I recently purchased an Amiga 500. I am having trouble saving programs from Amiga Basic. No matter what I do, it will only save to the Extras disk. How do you save to and load from a regular disk?

Charles D. Greene

There are several ways to accomplish this. First, you can copy the Amiga Basic language from the Extras disk to your work disk. Do this from the Workbench by dragging the Amiga Basic icon onto the disk icon of the desired disk. Now, if you use the Amiga Basic on your work disk, all saves and loads will default to the root directory of that disk.

Another method is to give both the path name and the filename when you save or load a file. For instance, instead of typing SAVE "GAME" (which saves to the current directory), try SAVE "DFO:GAME" (which saves the program to the root directory of the disk that's currently in drive 0).

Yet another way to choose where your program will go is to change the directory with the

CHDIR command. CHDIR "PROGRAMS:BASIC" changes the current directory to the folder named BASIC on the disk with the volume name PROGRAMS. All loads and saves now default to this folder.

Q DOS 5.1

I own a Commodore 64 and was wondering if you could help me. I just downloaded a program called DOS 5.1. I think it is a new DOS or a new 64 BASIC.

Could you explain what it does and if it is a new DOS or a new BASIC?

Ron Finlaw Jr.

The DOS 5.1 program is distributed by Commodore on the Demonstration Disk for the 1541 disk drive. DOS 5.1 makes many disk commands easier to use. When installed, it waits for commands entered from the keyboard. If a command is issued that DOS 5.1 doesn't provide, the command is sent through to the normal command processor (BASIC). If the command is a DOS 5.1 command, it's intercepted and processed.

DOS 5.1 allows / to represent the LOAD command with the ",8" option. For example, LOAD "SPACEZAP",8 can be replaced by /SPACEZAP. The @ or > characters are used to send commands to the disk drive. The normal command for scratching a file without DOS 5.1 is OPEN 15,8,15:

```
PRINT #15,"S0:SPACEZAP-";CLOSE 15. With DOS 5.1, >S0: SPACEZAP performs the same operation. Using @$ or >$ displays the disk directory without loading it into memory.
```

To install DOS 5.1, simply insert the disk containing the program and type LOAD "DOS 5.1",8,1 followed by SYS 52224 and NEW. The additional commands are now resident and ready to be used. □

buyer's guide

Sports Games

How many sports fans can say they've pitched to Babe Ruth, played 18 holes of golf at Augusta National, or coached the Green Bay Packers to the Super Bowl? Whether you want to pit the stars of the past against those of the present or just compete in your favorite sport for fun, there's a sports game listed in this buyer's guide that will provide the thrill of victory or the agony of defeat.

Basketball: The Pro Choice

Lance Haffner Games
Amiga, Apple II, Commodore 64/128, IBM PC,
Macintosh
\$39.99

In this basketball simulation, the player can coach an NBA or ABA basketball team, choosing the starting lineups, substitutions, shot selection, passing, and offensive and defensive styles of play. Statistics on individuals and whole teams for an 82-game season can be maintained with the stats compiler, and a summary of each game can be printed when the game is finished. The program includes 23 current NBA teams plus over 100 great teams of the past. Additional team disks are available for \$14.99.

Basketball Challenge

XOR
IBM PC
320K required
\$39.95

Players act as coach in this five-on-five realtime college basketball simulation. One or two players can compete or the computer can play itself. Team members' characteristics are weighted according to height, weight, position, and skill ratings. Players can select from 20 college teams. Player fatigue, substitution, jump balls, and fouls can all contribute to the game's outcome.

Championship Baseball

Gamestar (Activision)
Amiga, Apple II, Atari ST, Commodore 64/128, IBM
PC, Macintosh
\$29.95 (64/128); \$39.95 (Amiga, Apple II); \$42.95
(IBM)

In this baseball simulation, the user controls the action—hitting, pitching, catching, running the bases, and sliding. Split-screen graphics allow players to view the plate and the whole field at the same time. The game offers a four-division, 24-team league. Available on 3½- and 5¼-inch disks.

Championship Golf: Pebble Beach

Solid Gold Software (Activision)
IBM PC
128K required
\$14.95

In this first volume of *The Great Courses of the World*, the player can tee off at Pebble Beach. The program recreates that famous golf course, including distances, par, and sand traps.

Computer Baseball

Strategic Simulations
Commodore 64/128, IBM PC
128K required (IBM)
\$14.95

Players can create and manage any major league baseball team using the data for over 20 past and present teams. As manager, the player decides when to steal, bunt, hit, or replace the pitcher. The game features hi-res, animated, color graphics. Additional data disks are available for \$15.00.

Computer Quarterback

Strategic Simulations
Commodore 64/128
Joystick required
\$39.95

This football game begins with the player draft, where each player has \$3 million to compile a complete team. The teams have an arsenal of 36 offensive and 24 defensive plays to use against each other or the Robots, the team controlled by the computer. A clock makes sure the game is played in realtime—the ball has to be snapped in 30 seconds or the offense is penalized. Additional data disks containing statistics from recent NFL teams are available for \$15.00 each.

Dr. J and Larry Bird Go One-on-One

Electronic Arts
Amiga, Apple II, Commodore 64/128, IBM PC,
Macintosh
\$14.95 (Apple, Atari, 64/128); \$19.95 (Amiga, IBM,
Macintosh)

Players can become either Julius Erving or Larry Bird in this one-on-one basketball action game.

Earl Weaver Baseball

Electronic Arts
Amiga, IBM PC
\$49.95

Earl Weaver and Eddie Dombrower coauthored this baseball simulation which allows users to experience many aspects of the game, from playing ball to building a stadium. The arcade-like play mode uses hi-res graphics and sound to pit two teams against each other, including some of the 1901–1975 all-star teams. Users can also take the role of manager, consulting with Weaver to set lineups, trade and draft team members, or relieve pitchers. Managers can also build their own all-star teams and keep the statistics using the built-in compiler (there are 90 statistical measurements). Game players can play in one of the 26 major league parks or design their own ballpark. Instant replay (in three speeds), slow motion, and freeze frame are added to simulate actual TV coverage. Separate data disks including team disks from the 1987 season are available.

Fight Night

Accolade
Atari, Commodore 64/128
\$14.95

This boxing game requires strategy as well as skill. Also included is a boxer construction set.

Mickey McLean

Final Four College Basketball

Lance Haffner Games
Amiga, Apple II, Commodore 64/128, IBM PC,
Macintosh
\$39.99

Players can coach Division I college basketball teams as they compete for the championship with this strategy game. Options include lineup, substitutions, shot selection, passing, defensive and offensive styles, and the 45-second clock. Statistics include rebounding, passing, defense, shooting ability, and overall contribution factor. The stats compiler maintains statistics for individual players and the whole team, and a summary can be printed to the screen or a printer at the end of each game. Players can compete against a friend, against the computer, or watch the computer play itself. The game includes 286 teams from the most recent season plus 70 all-time great college teams. Additional team disks can be purchased for \$14.99.

Football

Software Simulations
Commodore 64/128, IBM PC
Joystick required
\$29.95

One or two players can participate in this football simulation game. Player abilities are determined by speed, power, and catching ability. Users can determine their own playing parameters and call all the shots from the sidelines. Players control the quarterback and receivers on offense and one key player on defense.

4th & Inches

Accolade
Amiga, Apple II, Commodore 64/128, IBM PC,
Macintosh
256K, color graphics card required (IBM); joystick
required
\$29.95 (64/128); \$39.95 (IBM); \$44.95 (Amiga,
Apple, Mac)

4th & Inches features three screens—a scrolling football field, a statistical screen that shows the players' performance and personal records, and a play menu from which to choose offensive and defensive plays. The game incorporates 22 players, the football, and the ball's shadow. The view of the field is from the press box, and action follows the player with the ball. A 30-second clock can be implemented for more realistic play, and the players' energy levels decline as the game progresses.

Full Count Baseball

Lance Haffner Games
Apple II, Commodore 64/128, IBM PC
\$39.99

Full Count Baseball is a baseball strategy and simulation game. The game includes 26 teams from the most recent season and 52 past National and American League teams. Players can use the teams provided or build their own teams through drafting and trading. As manager, the player can choose the lineups, batting order, bunts, sacrifices, steals, and more. The game takes into account variables such as player statistics, fielding range, speed, platooning, and the effect of the ballpark. A stats compiler automatically records player and team statistics, and a boxscore can be printed at the end of the game. Play options include player vs. the computer manager, two-player, and auto-play. Additional team disks can be purchased for \$14.99.



Earl Weaver Baseball features split-screen action, providing a close-up view of pitcher and batter.

GBA Championship Basketball Two-on-Two

Gamestar (Activision)
Amiga, Apple II, Apple II, Atari ST, Commodore
64/128, IBM PC, Macintosh
256K required for IBM: 512K for Apple II
\$34.95 (64/128); \$39.95 (Apple II, ST); \$42.95 (IBM);
\$44.95 (Amiga, Apple II);

Each player can control two men in basketball competition—two against two, one on one, or one or two players against the computer. There are several practice games, including practice shooting, horse, one-on-one, and around the world. Crowd noises provide background sound effects, and a sample sports page is updated with the results of each game.

The Games—Winter Edition

Epyx
Commodore 64/128
\$39.95

Players can compete in seven Winter Olympic trials—oval-track speed skating, downhill skiing, slalom, luge, ski jump, figure skating, and cross-country skiing. The screen can display camera-angle points of view to resemble actual television coverage, and in the downhill skiing competition, players can position the cameras to monitor their performance. Up to eight players can take part in the events, based on the Olympic competition held in Calgary, Alberta, Canada in 1988.

GFL Championship Football

Gamestar (Activision)
Amiga, Apple II, Atari ST, Commodore 64/128, IBM
PC
\$34.95 (64/128); \$39.95 (Apple, ST); \$42.95 (IBM);
\$44.95 (Amiga)

This football simulation is played using an on-the-field perspective, allowing the user to actually run plays and take hits.

Grand Slam

Infinity Software
Amiga
512K required
\$49.95

Players can compete in the Big Four of the world Grand Prix tennis circuit in this action sports game. The competition starts on the clay courts of Paris and

the French Open, and then moves on to the grass of Wimbledon. After leaving Great Britain, it's on to New York and the U.S. Open followed by the Australian Open down under. Players choose either a wood, metal, or graphite racquet, with corresponding stringing tension for different levels of play. Each opponent has unique playing styles and characteristics. Players can even confront the umpire to protest questionable line calls.

Gridiron

Bethesda Softworks (Electronic Arts)
Amiga, Atari ST
\$49.95 (ST); \$59.95 (Amiga)

Players take the part of the football coach, calling plays, sending in replacements, checking out the defense, and controlling the ball carrier. There's a play-book with 40 preprogrammed plays, or users can create their own plays. Using the player-draft option, each player's speed and strength can be set. There are five levels of play for one or two players.

Hardball

Accolade
Amiga, Apple II, Apple II, Atari ST, Commodore
64/128, IBM PC, Macintosh
IBM requires 256K and color graphics card
\$14.95 (Apple II, Atari, 64/128, IBM); \$44.95 (Amiga,
Apple II, ST, Mac)

Hardball is a baseball simulation that offers a 3-D perspective of each field angle. Different screens provide the strategy selections for the managers. There are six pitches that can be thrown by left- or right-handed pitchers, and players appear in large-sized graphics.

Head Coach

MicroSearch
Amiga
\$49.95

Players assume the role of head coach in this pro football simulation strategy game. Players choose the strategy, call the play, and then watch it unfold on the field. The success of the play is determined on the probability of the play working against the defensive formation. The yardage gained or lost is based on statistical results from a professional football game. Other features include instant replay with slow motion and the option to create a team complete with player names, jersey colors, and playbooks.

Hole in One Golf

Artworx
Atari ST, Commodore 64/128
\$14.95 (64/128); \$19.95 (ST)

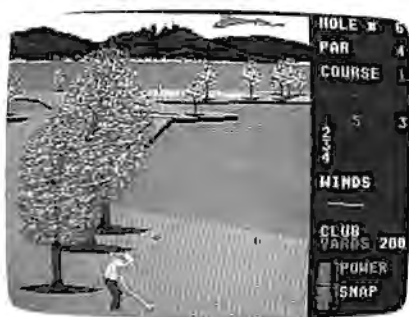
Players can tee off on the North Course and play a round of golf at the Fairport Country Club or use the editor to design their own golf course. This golf game includes backspin, topspin, hook, slice, and power of the swing as well as water traps, rough, and bunkers. The zoom feature magnifies the putting area on the green. The disk contains the master program and six additional courses.

Indoor Sports

Mindscape
Amiga, Apple II, Atari ST, Commodore 64/128, IBM PC
\$29.95 (Apple, 64/128, IBM); \$49.95 (Amiga, ST)
This sports package contains four different indoor games to play—air hockey, ping pong, bowling, and darts. Players can compete against each other or the computer. The program includes 3-D graphics and animation.

International Hockey

Artworx
Apple II, Commodore 64/128, IBM PC
IBM version requires EGA or CGA board
\$24.95 (Apple, 64/128); \$29.95 (IBM)
The fast action of hockey is recreated in this game for eight-year-olds and up. *International Hockey* includes bodychecks, fighting penalties, puck passing, graphics, and sound effects such as crowd noise, an organ, and digitized speech. One or two players can compete in three skill levels.



Swing your way across four challenging 18-hole golf courses in *World Class Leaderboard*.

Leader Board

Access
Amiga, Atari ST, Commodore 64/128
Joystick required
\$39.95

One to four players can simulate an actual game of golf on one of these 18-hole courses. Players choose their clubs, distance, and type of shot. There are three levels of difficulty, and the computer calculates the handicaps and scores. Additional course disks are available.

MAC Pro Football

Avalon Hill
Macintosh
512K required
\$49.95

The user assumes the role of coach in this football simulation game. The action on the field is determined by the actual statistics of the players and the ability of the user to coach. Two people can compete head-to-head or one person can play against the computer. Additional team expansion disks are available separately.

Maxi Golf

Thunder Mountain (Mindscape)
Commodore 64/128
\$9.95

In this golf simulation, the player can experience many of the trials of a real game of golf, including wind force and direction, stance, club selection, and course hazards.

Mean 18

Accolade
Amiga, Apple II, Atari ST, IBM PC
IBM requires 256K and color graphics card
\$39.95 (IBM); \$44.95 (Amiga, Apple II, ST)

One to four players can play famous golf courses such as Pebble Beach, St. Andrews, and Augusta with this golf game. The courses include a driving range and putting green. Using the Golf Course Architect Set, players can even design their own courses, complete with sand traps, water hazards, and trees. Players can compete against other computer golfers in online tournaments by using *Mean 18* on the Computer Sports Network. Additional course disks are also available.

Micro League Baseball

Micro League Sports Association
Apple II, Atari ST, Commodore 64/128, IBM PC
IBM requires color graphics card
\$39.95

Players can manage actual big league players in this baseball simulation game. Teams can be selected from the current season or from previous seasons. Additional team disks are available including all major league teams from the past six seasons, World Series and All Star teams, and star players from the history of a particular franchise. The actual players play up to their potential based on their statistics and can play better if managed properly. Two players can go head-to-head or one player can compete against the computer. A box score/stat compiler disk can be purchased separately.

Micro League Baseball II

Micro League Sports Association
Atari ST
Color monitor required
\$59.95

This program contains all of the features of *Micro League Baseball* and includes a built-in box score and a separate stat compiler disk, as well as a Quick-Play option which allows the computer to play out the game in about 60 seconds. Players must keep track of injuries and can argue with the umpire. The game factors in the stamina of the starting pitcher, the differences between artificial turf and grass, and domed and open stadiums.

Monday Morning Manager

TK Computer Products
Apple II, Atari, Commodore 64/128
\$44.95

Users can choose players from the major league teams of 1905-1985 along with four all-time All Star teams. Play is determined by the actual stats of the players involved, which are updated after every play. In an observe mode, players can select two computer managers and watch a game progress by itself. Nine

main menu selections give users the ability to create their own team, make trades, draft players, and keep stats. Separate team data disks are available.

NBA

Avalon Hill
Apple II, Commodore 64/128, IBM PC
\$39.95

Players can control basketball players of the past and present in this statistical basketball computer game. Users can pick the starting lineups and send in substitutes. The program includes 20 great teams from the past and a stat keeper that keeps track of how well each team is doing. The game features three playing modes: head-to-head, solitaire, and autoplay. The autoplay mode allows the same teams to play several games in a row.

NFL Challenge

XOR
IBM PC, Macintosh
IBM requires 320K; Macintosh 512K
\$99.95

NFL Challenge, licensed by the National Football League, features characteristics of players from all 28 NFL teams including the ability to pass, run, receive, and block. Two players can compete head-to-head, or one can play against the computer. The computer can also play against itself. The program incorporates injuries, substitutions, and fumbles according to NFL statistics.

The Official America's Cup Sailing Simulation

Electronic Arts
Commodore 64/128
\$14.95

Players compete for the America's Cup in this sailing simulation game.

Prism Sports Pack

Thunder Mountain (Mindscape)
Commodore 64/128
\$14.95

Six different sports games are included on one disk—*Turbo 64*, *Derby Day*, *Pilot 64*, *Handicap Golf*, *World Cup*, and *Test Match*.

PRO Challenge

XOR
IBM PC, Macintosh
IBM requires 320K; Macintosh 512K
\$49.95

This scaled-down version of *NFL Challenge* features two equal all-NFL teams. The program includes weighted characteristics such as the players' abilities to pass, run, receive, and block along with their weight, height, speed, and experience. Each player has a selection of 27 offensive and 14 defensive plays. Fumbles, interceptions, and penalties occur according to NFL statistics. The game features one- and two-player modes and a computer-vs.-computer mode.

ProChallenge Baseball

JBE Ltd.
IBM PC
350K, EGA/CGA, and DOS 2.1 or higher required
\$79.99

This officially licensed computer baseball game features ten different game and help screens and complete player lineups from all 26 major league teams. Players can choose from 18 defensive formations and 20 offensive signals as they call all of the shots as manager.

Professional Tour Golf

Strategic Simulations
Commodore 64/128
\$39.95

One to four players can play with or against their favorite pro golfers or watch the computer tee off, chip, and putt. Statistics for 20 professional golfers are provided, and games may be played at Pebble Beach or on a course designed just for this game. Players choose their clubs, angle, and spin. Wind, trees, sand, water, and the difficulty of the course help determine the score for each hole.



The All Pros score a touchdown in Accolade's 4th & Inches.

Pro-Golf

Mastertronic
Commodore 64/128, IBM PC
\$9.99

Pro-Golf is an 18-hole golf course with hazards. Players have a choice of clubs and a touch-sensitive control of the shots.

Pure-Stat Baseball

Software Simulations
Apple II, Commodore 64/128, IBM PC
\$39.95

This statistical replay baseball simulation can be played with one or two players. Individual statistics determine the outcome of the game. Players can choose from teams from the 1985 season in addition to eight classic teams from the past and present. Players can be traded between teams to form a dream team. A Stat-Keeper compiles all player statistics and calculates batting averages and ERAs. Statistics can be printed out at any time. The computer can play a game without graphics in three minutes. Players can choose from three different stadium locations. An optional stadium disk is also available.

Pure-Stat College Basketball

Software Simulations
Apple II, Commodore 64/128, IBM PC
\$39.95

This animated five-on-five basketball simulation game is based on statistics. One or two players can compete, or the computer can play itself. Coaching strategy and player statistics determine the outcome of each game. Players can choose from 20 all-time great college teams. Users can also create their own team by entering statistics. Team statistics can be reviewed or printed at any time. Optional team disks are available.

Radio Baseball

Electronic Arts
IBM PC
\$14.95

Players act as manager in this baseball simulation game. The action is relayed to the user through a radio broadcast-style text that is displayed on the screen. Two players can compete head-to-head or one player can challenge the computer. Additional team disks are available separately.

Sierra Championship Boxing

Sierra On-Line
Commodore 64/128
\$24.95

Some of boxing's most famous bouts can be recreated with this game, or players can create new matches using a list of 50 former and current boxers. As trainer, the player plans a strategy and determines height, weight, stamina, and best punch for the contender. In the arcade mode, players can fight each other or the computer. Two manuals explain the art and strategy of boxing and the history of the sport.

Sluggo

Mastertronic
Commodore 64/128, IBM PC
\$9.99

Sluggo is a computerized baseball simulation.

The Sporting News Baseball

Epyx
Commodore 64/128, IBM PC
\$39.95

In this baseball simulation, players can compete against each other or the computer, or they can set the computer to play itself. Multiple screens provide a variety of views of the action, and all the action is influenced by the actual statistics and capabilities of the ballplayers. Batters can hit and run, bunt, or pull the ball. Other plays include stealing the bases, pick-offs, and brush-back pitches. Teams can be chosen from 26 major league clubs, or players can create their own teams from a field of over 100 famous all-stars. The game includes color graphics and ballpark sound effects.

Star League Baseball/On-Field Football

Solid Gold Software (Activision)
Commodore 64/128
\$14.95

Two games have been combined in this one package. *Star League Baseball* recreates the nine-inning game with animation, sound effects, and true-to-the-game action. In *On-Field Football*, players can call the plays for both offense and defense during four quarters of action.

Star Rank Boxing/On-Court Tennis

Solid Gold Software (Activision)
Commodore 64/128
\$14.95

In *Star Rank Boxing*, players must battle against challengers to work their way up to the title bout. Players of *On-Court Tennis* can challenge a friend or a real-life professional tennis player supplied by the computer. Lobs, swings, and bounces occur just as they would in a real game. Players get to choose the court surface as they play in a world-class match.

Star Rank Boxing II

Gamestar (Activision)
Apple II, Commodore 64/128, IBM PC
\$29.95 (64/128); \$34.95 (Apple); \$42.95 (IBM)

Two players can play each other, or one player can challenge the computer in a battle for the boxing title. Each boxer must defeat four challengers on the way to the championship (challengers become more skillful as the match progresses). In the exhibition bouts, boxers can fight in welterweight, middleweight, or heavy-weight classes, with up to five boxers in any one class. Players must create a training regimen for their boxers and improve their skills in blocking and ducking punches, throwing crosses, jabbing, uppercuts, and body shots. A tale of the tape containing the boxer's statistics and record appears before each fight.



Players must battle all challengers to earn the title in *Star Rank Boxing II*.

Statis Pro Baseball

Avalon Hill
Apple II, Commodore 64/128
48K required, joystick optional
\$35.00

This game uses actual major league baseball player statistics. As manager, the user chooses the lineups and makes substitutions; as a baseball player, he or she takes part in the action, hitting, pitching, fielding, and stealing bases. Major league season disks are available separately.

Steve Garvey vs. Jose Canseco in Grand Slam Baseball

Cosmi
Commodore 64/128
\$39.95

This baseball simulation game includes high-resolution graphics and ballpark sound effects. A scrolling screen gives the user a television-like view of the action.

Street Sports Baseball

Epyx
Apple II, Commodore 64/128, IBM PC
\$39.95

This baseball game is played on a neighborhood diamond made from trash can lids and old tires. The players are neighborhood pals. There are 16 players to choose from, and each has an individual level of skill in hitting, fielding, and throwing. Players also have to be able to avoid tree stumps, bushes, and puddles. The pitcher can throw four balls—fast, slow, right curve, and left curve. There's a split-screen view of the field, with one screen giving a bird's-eye view. For one to two players.

Street Sports Basketball

Epyx
Amiga, Apple II, Commodore 64/128, IBM PC
\$39.95

One or two players compete in this neighborhood-style basketball game. The court is set up in the schoolyard, alleyways, or a park, and three players for each team are chosen from ten neighborhood dribblers. Much of the strategy involves how well each player can put together his or her team, and how well the hoop-shooters can avoid local obstacles such as oilslicks and fences.

Street Sports Soccer

Epyx
Commodore 64/128
\$39.95

Another in the Epyx line of street sports games, *Street Sports Soccer* enables players to take part in a fast, street-style soccer game. Players must first choose a field in a park or on a city street and then recruit a three-member team from the neighborhood kids. Each character has his or her own personality and skills for heading the ball, executing shots, and controlling passes. There are no uniforms, no sportsmanlike conduct, and few rules. Teams can play each other or play the computer with a time or points limit.



Players can relive neighborhood pickup games with *Street Sports Basketball*.

Summer Games

Epyx
Apple II, Atari, Commodore 64/128
\$19.95

Up to eight players can enter their athletes in Summer Olympic competition, including swimming, diving, track, skeet shooting, pole vaulting, and gymnastics. Athletes compete against each other, vying for the gold medal.

Summer Games II

Epyx
Apple II, Commodore 64/128, IBM PC
Joystick required
\$19.95 (3 1/2-inch IBM disk, \$39.95)

Up to eight players can compete against the computer or each other in this representation of the Summer Olympic games. Events include rowing, triple jump, javelin throwing, high jumping, fencing, cycling, kayaking, and equestrian events. There are also opening ceremonies, national anthems, and medals.

Superstar Ice Hockey

Mindscape
Commodore 64/128, IBM PC
\$34.95 (64/128); \$39.95 (IBM)

One or two players can face off against each other or the computer in this ice hockey game. This is a multi-level game—the player can be the owner and general manager, trading and recruiting players or sending the team to a training camp; as head coach, the player can set and change the lines and plan the strategies; or, the player can act as goalie or center. This simulation allows for two-on-two, four-on-four, or six-on-six games. A team can compete against 19 other teams in four divisions for up to nine seasons.

Superstar Soccer

Mindscape
Commodore 64/128
\$34.95

In *Superstar Soccer*, the player can perform as soccer player, coach, or owner and manager. As center or goalie, the player can run, shoot, pass, and even get injured. As the coach, the player calls the plays and sends the team to training camp. The owner/manager trades and recruits team members. One or two players can compete against the computer or each other.

Super Sunday

Avalon Hill
Apple II, Commodore 64/128, IBM PC
Apple II requires 64K; IBM requires 128K
\$35.00

With this statistic-based game, each player enters the offensive and defensive plays for his or her team and then watches as the game is played. There are 20 Super Bowl teams to choose from, and season disks for the champions are available separately. The game also contains solitaire and autoplay options.

10th Frame

Access
Atari ST, Commodore 64/128, IBM PC
Joystick required
\$39.95 (ST); \$49.95 (64, IBM)

Up to eight players can participate in this bowling game. There are several levels of play, including league competition. Scoring is automatic.

3 in 1 College & Pro Football

Lance Haffner Games
Amiga, Apple II, Atari ST, Commodore 64/128, IBM PC, Macintosh
\$39.99

As the coach in this pro-football strategy game, the player can choose from 14 offensive and 6 defensive plays, call timeouts, use the two-minute drill, and compare scouting reports. The game can automatically compute individual and team statistics and provide a scoring summary at the end of the game. The stats compiler can record statistics for every team and player plus past schedule results for each team. The game includes 176 college teams, 28 NFL teams, and 14 USFL teams. Additional team disks can be purchased for \$14.99.

Touchdown Football

Electronic Arts
Apple II, Atari, Commodore 64/128
\$14.95

This football action game can be played by one or two players. Users call the plays and control the quarterback and the intended receiver on offense, while on defense a roving back is controlled.

Tournament Golf

Avalon Hill
Commodore 64/128
\$30.00

Players compete on a regulation 18-hole golf course. As in real golf, the player's shots are hindered by wind, sand, and trees. Players can choose from any club in the bag and control their swing with the joystick. Additional course expansion disks are available separately.

Tri Action Games

Mastertronic
IBM PC
\$19.99

Three games are contained in this program. Players can go ten-pin bowling, shoot pool on a hexagonal pool table, or play five-on-a-side football.

Sports Games Publishers

For more information about the sports games listed in the Buyer's Guide, contact the publishers listed below.

Access
#A 2561 S. 1560 West
Woods Cross, UT 84087

Accolade
550 S. Winchester Blvd.
Cupertino, CA 95128

Activision
P.O. Box 7286
Mountain View, CA
94039

Artworx Software
1844 Penfield Rd.
Penfield, NY 14526

The Avalon Hill Game
Company
4517 Harford Rd.
Baltimore, MD 21214

Bethesda Softworks
(distributed by Electronic
Arts)

Cosmi
415 N. Figueroa St.
Wilmington, CA 90744

Electronic Arts
1820 Gateway Dr.
San Mateo, CA 94404

Epyx
P.O. Box 8020
Redwood City, CA 94063

Gamestar
(distributed by Activision)

Infinty Software
1144 65th St.
Suite C
Emeryville, CA 94608

JBE Ltd.
869 Younge St.
Suite 110
Toronto, Ontario, Canada
M4W 2H2

Lance Haffner Games
P.O. Box 100594
Nashville, TN 37210

Mastertronic
Unit 9G
Mesa Business Center
711 W. 17th St.
Costa Mesa, CA 92627

Micro League Sports
Association
2201 Drummond Plaza
Newark, DE 19711-5711

MicroSearch
9896 Southwest Freeway
Houston, TX 77074

Mindscape
3444 Dundee Rd.
Northbrook, IL 60062

Sierra On-Line
P.O. Box 495
Coarsegold, CA 93614

Software Simulations
959 Main St.
Suite 204
Stratford, CT 06497

Solid Gold Software
(distributed by Activision)

Strategic Simulations
1046 N. Rengstorff Ave.
Mountain View, CA
94043

Thunder Mountain
(distributed by
Mindscape)

TK Computer Products
P.O. Box 9617
Downers Grove, IL 60515

XOR
5421 Opportunity Ct.
Minnetonka, MN 55343

Winter Challenge

Thunder Mountain (Mindscape)
Amiga, Atari, Atari ST, Commodore 64/128, IBM PC
\$14.95

One to six players can compete in five winter events including ski jump, downhill, bobsled, giant slalom, and biathlon.

Winter Games

Epyx
Amiga, Apple II, Apple IIgs, Atari ST, Commodore
64/128, IBM PC, Macintosh
\$19.95 (Amiga, Apple II, ST, 64/128, Macintosh);
\$39.95 (Apple IIgs, IBM 3 1/2-inch disks)

This game lets players take part in seven of the Winter Olympic games including figure skating, bobsledding, and the biathlon. The game includes the opening ceremonies and national anthems. For one to eight players.

World Class Leaderboard

Access
Apple II, Commodore 64/128, IBM PC
\$39.95 (Apple, 64); \$44.95 (IBM)

Three famous 18-hole golf courses are reproduced in this golf game, which includes features such as distance, traps, trees, rough, and water hazards. Players can tee off at St. Andrews, Doral, and Cypress Creek golf courses. A fourth course, the Gauntlet Country Club, was designed for this program. The program also offers a printout of the scorecard, an editor to rearrange the holes, a top view of each hole, a practice putting green, and driving ranges. Additional course disks are available.



Manage, coach, or play any team position in *Superstar Soccer*.

World Tour Golf

Electronic Arts
Amiga, Apple IIgs, Commodore 64/128, IBM PC
\$29.95 (64/128); \$39.95 (Amiga, Apple IIgs); \$49.95 (IBM)

Players can choose from twelve of the world's greatest golf courses or can become an architect and design their own course. Courses include St. Andrews, Pebble Beach, Augusta National, and Shinnecock Hills. The program also includes a championship course made up of the world's most difficult holes. One to four players can participate with a choice of either match or medal play. Players can also compete against up to three computer golfers and set characteristics for each. Split-screen animated graphics give both an overhead view and a golfer's-eye view of the hole. In addition to normal hazards, play-

ers will encounter random weather conditions each time they play. Players can also practice on the driving range and putting green.

The World's Greatest Baseball Game, Enhanced

Epyx
Apple II, Commodore 64/128, IBM PC
\$19.95

One or two players can manage and control (or just manage) a baseball team by using one of the 75 teams provided or by creating their own team. Players include actual World Series and All-Star teams, 1984-85 season teams, classic players, and current stars. Actual statistics for players are included. The game includes trading functions and trivia questions.

The World's Greatest Football Game

Epyx
Apple II, Commodore 64/128
Joystick required
\$19.95

This football strategy game lets one or two players coach as well as play a game of football. Players can use the playbook or design their own offensive and defensive plays and then take part in the execution of those plays.



REVIEWS

//// fast looks

Travel Far and Wide, Organize Your Laptop, Fight the Civil War, Print Great Things with the 64, Fly the F-16, Listen to a Rabbit, Try Out a New PC Clone, Write with Style, Play Cards with Gorbie, and More

Each month, "Fast Looks" offers up snapshots of the newest software and hardware for the Amiga, Atari ST, Apple II, Commodore 64/128, IBM PC, and Macintosh lines of personal computers. These capsule reviews look at notable programs and peripherals, products which have just arrived in our offices and which haven't yet been fully evaluated.

"Fast Looks" gives you glimpses of important and interesting software and hardware *now*, not next month.

Apple GEOS

Berkeley Softwork's Apple version of *GEOS*, a graphics interface for Apple IIc and 128K Apple IIe computers, bears a striking resemblance to its Commodore 64 forebear. With its pull-down menus and mouse-driven operation, *GEOS* brings an easy-to-use operating system to the huge installed base of Apple II machines.

GEOS includes more than just a replacement for ProDOS, however. Much of the attraction of *GEOS*, in fact, comes not from the interface, but from the applications the interface supports. *geoWrite* and *geoPaint*, a word processor and paint program, respectively, are part of the *GEOS* package. Both have the standard *GEOS* look. *geoWrite* offers selectable fonts, styles, and type sizes for flashy documents. *geoPaint* sports graphics tools quite familiar to anyone who has used *MacPaint* (or any of several Apple II paint programs). Art created with *geoPaint*

can be pasted into *geoWrite* documents, illustrating another attraction of *GEOS*—application compatibility. Along with these two major applications, *GEOS* also offers *geoSpell*, a spelling checker.

geoWrite and *geoPaint* are impressive applications for the Apple IIe and IIc. They bring powerful features to well-worn technology. But don't expect *GEOS* to turn an old Apple into a state-of-the-art Macintosh. The word processor has difficulty keeping up with an average typist, for instance, a common problem in bitmapped word processors running on older computers. *geoPaint*, like all *GEOS* applications, runs in black and white, so the Apple's color capabilities aren't put to work.

More of the current Commodore 64 *GEOS* applications are expected to come to the Apple. *geoPublish*, a desktop publishing package with LaserWriter support, will be the first.

— GK

Apple II with at least 128K—\$129.00

Berkeley Softworks
2150 Shattuck Ave.
Berkeley, CA 94704
(415) 644-0883

Skyplot

What kind of Atari ST program requires at least one megabyte of RAM and takes 17 minutes to load? A big program, that's what kind.

Skyplot, probably the most comprehensive astronomy program available for microcomputers, includes position data for over 15,000 stars. Use *Skyplot* to move anywhere on Earth, set the time and date, and then view the night sky displayed as the visible heavens or as a polar, equatorial, or horizon chart. You can search for individual stars, constellations, planets, nebulae, comets, or other celestial objects. Or just point and click to identify an unknown spot of light.

A time-travel option reproduces the sky's appearance in the past or future, letting you search out special events like eclipses, transits, occultations, or Halley's comet. There's even a space-travel option, which displays the stars as they would appear on a planet in a galaxy far, far away (up to 326,000 light years in any direction).

— TH

Atari 1040 ST—\$99.95
Robtek Limited
1983 San Luis Ave., Suite 24
Mountain View, CA 94043
(415) 968-1345

Terrorpods

The setting for this futuristic space adventure is the asteroid Colian, a rock which contains a seemingly unlimited supply of valuable mineral deposits. Over the years Colian has grown into a major mining operation. Ten separate mining colonies have been built to scour the depths of Colian for its precious resources. Each is linked by a shuttle system to transport goods between them.

When word of this rich asteroid reached the Empire, a mother ship appeared in orbit, ready to oversee the manufacture of the Empire's deadly Terrorpod fighting machines. In opposition, the Federation sent you to Colian in an armed Defense Strategy Vehicle to learn the secrets of Terrorpod manufacturing and to stop the Empire.

You must travel to the different mining colonies and try to trade for Terrorpod components. Once all of the components have been collected, you must construct your own Terrorpod. Here, the game winds down with a final confrontation between you and the remaining Terrorpods. You have eight minutes to destroy them all or the game ends.

The game's graphics and sound are simply awesome, with the cockpit view standing out. Graphic adventurers and arcade gamers will want to check this out.

— TT

Amiga with 512K—\$39.95
Atari ST—\$39.95
Psychosis Limited
1st Floor, Port of Liverpool Building
Liverpool
U.K.
L3 1BY
(051) 236-7757

TOPSPOT Quick Reference Chart

Whether you write an occasional quick-and-dirty batch file or design operating systems for a living, if you use an IBM PC or compatible, sooner or later you wind up doing some programming. And as just about everyone who programs discovers, writing programs means that you need an ASCII chart. The trouble is, one can never be found when you need it.

TOPSPOT's answer is a 24 X 36-inch typeset poster that displays the 256 (IBM-flavored) ASCII codes with both decimal and hexadecimal values, the PC's scan codes, decimal color codes, base number conversions, musical note frequencies, and the decimal values for box drawing.

Each section of the poster is an easy-on-the-eye light blue, and the figures are large enough to be read from about eight feet away. The poster has metal top and bottom edges and is made from heavy paper stock.

— CK

IBM PC and compatibles—\$15
TOPSPOT
P.O. Box 881
Marion, IA 52302-0881
(319) 377-0207

KickWork

KickWork, a utility for Amiga 1000 users, combines the functions of the *Kickstart* and *Workbench* disks into one disk, though the merger doesn't come without a price. Files were deleted from the *Workbench* disk to make room for the *Kickstart* file. Most of the files left off were seldom used, such as the demos, printer drivers, and fonts. In fact, you probably won't even notice that the files are missing.

Hard drive owners or bulletin board operators can benefit the most from *KickWork*. If you have a hard drive, you can use *KickWork* to decrease start times dramatically. A few strategic ASSIGN commands in the Startup-Sequence are all that's needed. Bulletin board operators with *KickWork* no longer need worry about a power failure knocking their board offline. With *KickWork* in drive DF0:, the board goes back online, without supervision, as soon as the power comes back on.

— DM

KickWork
Amigo Business Computers
192 Laurel Rd.
East Northport, NY 11731
(516) 757-7334

Contributing to "Fast Looks" this month were Todd Heimark, Clifton Karnes, Gregg Keizer, Dale McBane, and Troy Tucker.



See the U.S.A.

If Johnny thinks Atlanta is a state, or if Paulina has trouble remembering the state capitals for her semester test, help is on the way from Compu-Teach. It has developed a fun and educational way to better acquaint anyone with facts about the United States. Grab your suitcase, your Apple or IBM PC, and *See the U.S.A.*

The program comes on four double-sided disks and includes a puzzle of the United States, as well as a large U.S. wall map. The manual is well written and easily understood. Although the stated age range is from eight years to adult, younger children can certainly enjoy the experience when someone reads for them.

A main menu offers several choices: Practice States, Play States, Practice Capitals, Play Capitals, Play Quiz Game, and Option Menu. Practice modes are used with the master disk, while the Play modes are used in combination with one of five picture disks. Each Picture Disk represents one of the following areas of the United States: Northeast, South, East-Central, West-Central, and Far West. The Play Quiz Game selection asks many questions about places, people, state birds, state flowers, and state mottos. The game may be played with or without sound or the timer function.

Remember Johnny who thought Atlanta was a state? He needs some exposure to the names and locations of the states in our country. Doing this by traveling, even to a bordering state, is expensive for parents these days. But, for the price of a motel room, Johnny can repeatedly "travel" across this country in one session of *See the U.S.A.*

Practicing States takes Johnny from one state to the other and names them for him. He controls the direction he moves and can repeat the trip any number of times. Paulina can drill for

her semester test on state capitals in the same way that Johnny practiced his state names. She just chooses Practice Capitals and her journey begins. After she becomes an expert, she can quiz Mom and Dad.



Just one of the interesting trips you can take with *See the U.S.A.*

To go on an adventure through the states, select the Play States or Play Capitals option. Decide which area of the country is intriguing and insert the corresponding Picture Disk. The program gives the traveler a point of departure and a destination. State or capital names are entered and the car moves in the direction given by way of black dots and red route lines. The large wall map or the U.S. puzzle can help in identifying the bordering states to move through. A beautifully detailed color graphic depicting an important feature or industry of the desired destination awaits the weary traveler. Time logs are provided to keep up with how many hours are spent traveling daily and how many days the journey takes to complete.

In which state was Helen Keller born? Which state has the smallest population? Which state has a state flower called the hawthorne? Does this sound like a great place to sharpen your trivia skills? Select Play Quiz Game and enjoy the brain teaser questions already set up in the program.

This option is a wonderful drill sergeant for a teacher of geography or history. Sets of 20 questions can be made and saved by the teacher on a specific area of study. Each question is answered with the name of a state or capital. Existing questions from the program can be edited and saved. What better way to study for a quiz than to interact with the computer and have a fun time doing the work? Students can even display their knowledge by creating a set of questions for the teacher. This is a clever way for the teacher to get a child to study harder and do a little more research on a subject.

Parents can get involved in their child's learning by working through the program with them. Parental interest usually sparks a child to try harder and therefore learn more quickly. Children get no greater pleasure than to be Mom or Dad's teacher, especially when they get to correct any mistakes!

Paulina now knows all the state capitals, and Johnny won't embarrass himself by confusing states and capitals. Thanks to the easy-to-use and fun-to-learn format of *See the U.S.A.*, children and adults alike are polishing and expanding their knowledge of this vast country. Make your reservation now!

— Nancy Rentschler

See the U.S.A.

For ...

Apple II with at least 128K, or with 64K and two disk drives; IBM PC and compatibles with at least 256K—\$49.95

From ...

Compu-Teach
78 Olive St.
New Haven, CT
(800) 448-3224



WordPerfect Executive

When the laptop computer hits the road, the right software had better be riding shotgun. Although many of today's laptops are as powerful as some desktop models, software needs are seldom the same. Leviathan spreadsheets and feature-packed word processors are for the monster on the desk, not the midget in the briefcase. What the user on the move needs is a little of everything.

The people in Utah must have thought the same thing when they put together *WordPerfect Executive*, an integrated system of six individual applications tied together by a common shell, or interface. *Executive* includes a word processor, spreadsheet, phone directory, notecard filer, appointment calendar, and calculator.

The program is aimed squarely at laptop and portable computer users, those who need nothing more than simple versions of the comfortable standard applications. A desktop computer user would probably come away from *Executive* with disappointment. This is not an integrated program of hard-working applications with great range.

The appointment calendar, one of the best of the six applications, pro-

vides the basics and then some. The one-month calendar display on the left is balanced by the appointment or to-do list on the right. Alarms can be set to sound before each appointment (assuming the computer is on) and unfinished to-do items are automatically carried to the next day. That feature alone made me an appointment calendar addict, for I'd check the list first thing each morning to see what hadn't gotten done the day before.

WordPerfect Executive's word processor is a stripped-down version of *WordPerfect*, though it's not likely you'll get the two confused. The word processor in *Executive* offers the required text entry and editing functions but isn't really robust enough for more than short documents like letters, memos, and minor reports. Working with a long document is especially troublesome if extensive editing is necessary. Text block operations are not elegant, taking multiple keystrokes when two should be available for such things as deleting sentences and paragraphs. A minor, though frustrating note: The cursor is an underline character that's very hard to see on a nonbacklit laptop LCD screen. When I used *WordPerfect Executive* on a Toshiba 1000, for example, I continually lost track of the cursor when moving forwards and backwards through a file. (The solution was a public domain program called CURSOR.COM, which, when run at bootup, turned the cursor into a solid block that was much easier to see.)



WordPerfect Executive comes in both 5¼- and 3½-inch disk formats.

A plus is the included spell checker, which uses a 50,000-word dictionary. It often suggests spellings for unknown words and has an individual word look-up function which confirms your spelling. Heavy disk access while checking spelling, however, severely limits its usefulness when you're operating *Executive* on a battery-powered laptop.

The third major module is the

spreadsheet, perfect for keeping track of expenses on trips or for conducting minor number crunching. With 256 columns and 8192 rows, it's large enough for the jobs you're likely to tackle on a laptop. The spreadsheet offers 50 functions in several areas: arithmetic, calendar, financial, and logical. Calculation can be set to automatic or, if you prefer, can be done manually. Other features include graphing (bar charts only), sorting, and importation of *Lotus 1-2-3* worksheets (though a number of functions and capabilities of *1-2-3* do not convert).

Executive's other modules include a good phone directory, a passable notecard filer, and a calculator. Neither the phone directory nor the notecard filer—both simple file managers—can be customized. The fields in each record—including such things as first name, last name, business phone, home phone, and salutation in the phone directory—are immutable. On the up side, that means you can use the directory and filer immediately. On the down side, it means you can't change it to suit your own situation, but have to use what you've got.

WordPerfect Executive's missing link is telecommunications. Most other integrated systems—Microsoft *Works*, for instance—have at least elementary telecommunications software. It's hard to understand the omission, especially since *Executive* is aimed at laptop users. Although excellent third-party file-transfer software exists, many laptop owners move files from the portable to their desktop computer via a modem. The best you can do in *WordPerfect Executive* is to add your own telecommunications package to the shell's list.

Documentation, as in all *WordPerfect* products, is extensive. Three separate manuals—Setup, Learning, and Reference—document the software quite well. Installation and setup is straightforward, and the limited customizing you can do to each of the modules is clearly explained. The reference guide is excellent, but the tutorial manual, though more than enough for experienced computer users, won't be enough for beginners. Many of the system's features are only listed in the reference manual, thus making it likely that some users will overlook many of *Executive's* capabilities. Online help is always available, and it lists each module's features alphabetically or by function key.

WordPerfect Executive's greatest strength is its simplicity. Casual or first-time computer users (as many laptop owners are) will find this an easy entry

into the primary application categories. For extended use, however, other software—even other integrated systems—will prove more productive.

—Gregg Keizer

WordPerfect Executive

For . . .
IBM PC or compatible with 512K and DOS 2.0 or higher—\$295.00

From . . .
WordPerfect
288 W. Center St.
Orem, UT 84057
(801) 225-5000

Decisive Battles of the American Civil War, Volume One

I was always more fascinated by war games than engaged by them. The prospect of re-creating history intrigued me, but I was less intrigued by the time and effort taken by board games. And there was the mundane problem of keeping all those paper pieces in position—no mean feat in a house with a child, cats, and open windows.

The computer solved all of these problems. War games may take no less time to play on a screen than on a board, but it's easier to spread that time over several sessions. The machine keeps track of your pieces, accomplishes combat calculations, and deals deftly with storing the elements between sessions.

Australia's Strategic Studies Group (SSG) has produced some of the most sophisticated war games of recent years. Its entry into the Blue and Gray sweepstakes, *Decisive Battles of the American Civil War, Volume One*, is quite an accomplishment, even by SSG's high standards.

While the basic aspects of the game—control of armies, maps with various types of terrain—are similar to those of other games, the interface with which these elements are controlled is quite different. Using pull-down menus, players can point and click their way through six important confrontations between Union and Confederate forces: First Bull Run, Shiloh, Second Bull Run, Antietam, Fredericksburg, and Chancellorsville. As an added bonus, the game includes both a war-game design kit (Warplan) and an

icon editor (Warpaint).

After years of typing in strategic commands, I was at first concerned about the new interface. Its ease of use overcame my hesitation in a single session. Menus here provide quick access to a wide variety of functions; because of their clarity you're freed from the constant reference to the manual that accompanies many computer war games.

Simplicity of interface should not be interpreted as simplicity of gameplay. This is a complex simulation that figures in virtually every variable possible in Civil War combat. Players not only position their troops, but also determine the level of leadership—from cautious to heroic—that army leaders will display in battle. Those characteristics determine how well you lead your forces. In many ways, *Decisive Battles* is a game of leadership as much as strategy.



Here's the first menu screen in *Decisive Battles of the American Civil War*.

Strategic planning figures highly, though. At the start of a battle scenario, for instance, forces must be moved into position, objectives determined, headquarters and communications among brigades established. Position counts for a lot in this game, as it did in the nineteenth-century battles re-created here.

While the game can be played at a high level of historical veracity—communications with only those troops directly under your command and within range, viewing of only the enemy forces in your direct line of sight—SSG has provided some shortcuts for beginners. A Radio command gives you access to all of your forces, whatever their location; an Exposed command reveals all units on the map. A good tutorial based on First Bull Run is included in the manual, and is worth running through.

It's also worthwhile to lean heavily upon *Decisive Battles'* Map Walk feature. This command lets you march your cursor across the colorful and graphically elegant battlefield, revealing strategic information about each hex,

examining the various well-designed icons. You can discover which side controls a piece of ground, what the terrain is like, how many movement points it will cost to cover a stretch of territory, and so on.

Eventually, of course, your progress will be interrupted by an encounter with the enemy. When an engagement begins, you can choose to take a Map Walk and get the lay of the land, or to issue a command to your forces. An information panel lets you know the nature of the enemy troops—their battle readiness, numbers, and weapons. If your men are close enough, you can mount a full charge accompanied by a musket volley, a harassing skirmish, a steady advance, or a withdrawal.

As the course of battle progresses, its tide affects your men. Should your troops lose their cohesion, it's up to you to withdraw them to reserve positions where they can regroup and regain their spirit. Likewise, should you surprise the enemy and shake their confidence, your leadership is required to press your troops' advantage.

And so it goes, as the battles ebb and flow over the long hours of fighting. SSG has chosen to do something different with this war game, placing upon the players the burden of *command* rather than simply the responsibility for giving orders. The game can be played by two players, or by one player against the computer. Color and sound are excellent. The manual is clearly and carefully written, with plenty of examples of situations you're likely to encounter. The historical scenarios included are fascinating and well done; their sophistication may make you overlook the game design options included in *Warplan* and *Warpaint*, but these features are as fully realized as the rest of this handsome package.

— Keith Ferrell

Decisive Battles of the American Civil War, Volume One

For . . .
Apple II—\$39.95
Commodore 64/128—\$39.95

From . . .
Strategic Studies Group
Distributed by Electronic Arts
1820 Gateway Drive
San Mateo, CA 94404
(415) 571-7171

And . . .
Volume 2, which will take players from Gettysburg to the close of war, will be available later this year.

Outrageous Pages

If you're a Type A personality, you're going to have a tough time with this program. On the other hand, if you don't mind working with things until you get them right, *Outrageous Pages* may be for you. Presented by Batteries Included, *Outrageous Pages* is the next generation of graphics programs for the Commodore 64. By combining the qualities of *Print Shop* and *Newsroom* (not to mention granting you access to clip art from both programs), *Outrageous Pages* moves the 64 a giant step toward desktop publishing.

Using the 64 for desktop publishing will always be a daunting task because of the computer's limited memory. *Outrageous Pages*, however, is a tightly-designed program that brings it within our grasp. In method and appearance, it's like *GEOS*, using icons and windows to take you through its functions. These functions enable you to create newsletters, cards, certificates, and flyers—almost any conceivable project that requires printing text and graphics.

The program has six main functions. Each of these gives you complete control over your material.

The Filing System governs disk operations—the loading and saving of pages, fonts, cutouts, and patterns. This lets you save a portion of a page as a cutout to be used independently. You can create your own library of cutouts, use some from *Outrageous Pages'* disk, or access those from *Print Shop* or *Newsroom*. The Filing System also lets you select your printer driver.

The Image Editor lets you copy, flip, rotate, and stretch selected page areas. It also lets you magnify an area to edit individual pixels.

You can add text directly with the Text Processor or use files created with *PaperClip*, *Bank Street Writer*, or any word processor that produces ASCII format. The Text Processor also allows you to change the size of the font you're using, enlarging individual letters up to 64 × 64 pixels. You can alter spacing, modify one of the over 50 fonts provided, or even create your own font.

The Graphics Studio manages artwork. You can draw freehand or use computer-drawn shapes and patterns much like other drawing programs. You can design your own patterns and save them, too.

The Window System permits you to define areas smaller than the *canvas*



Outrageous Pages brings the power of desktop publishing to the Commodore 64.

(*OP* terminology for what's onscreen).

The Printer Manager controls printout. *Outrageous Pages* supports printers made by Commodore, Epson, Star, Panasonic, Okimate, NEC, and Gemini. It's worthwhile to make sure your printer is compatible, because in its present version, the program does not allow you to build your own printer driver, as you can with *PaperClip*.

With each of these functions so complete, you have a vast range of utilities to bring to your project. You'll be able to create an unending variety of newsletters, flyers, and so on.

With so much power and only 64K of memory, however, there's a lot of saving and loading. Even with two drives, it's a time-consuming operation. You work on the canvas, which is actually only about one-third of what is in memory. And that, in turn, is only part of a printed page.

This aspect of the program takes some getting used to since you must learn how to match different page portions to give your work a smooth appearance. This also means that as you complete one portion of a page and move on to the next, you must save what's in memory. Saving means disk-swapping.

Outrageous Pages comes on three double-sided disks. These include a program/printer disk, a fonts disk, a cutout disk, and three templates. (These predesigned templates represent a lot of work. They make it much easier to lay out your pages.) Be sure to back up the program. You'll need your own disk-copy program and either three double-sided or six single-sided blank disks.

For creating your own libraries, you'll need one disk each for fonts, patterns, and cutouts. (It's easier to find them if they're stored separately.) You could even design your own templates and put them on a templates disk. For every three pages you make, you'll need another disk. Of course, if you don't

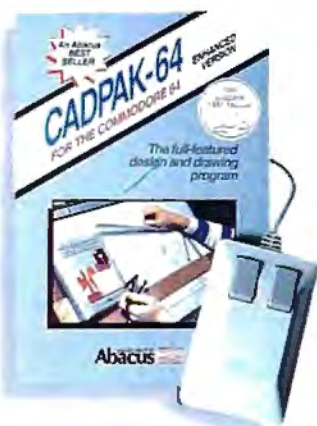
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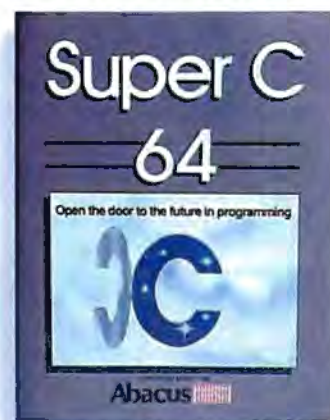
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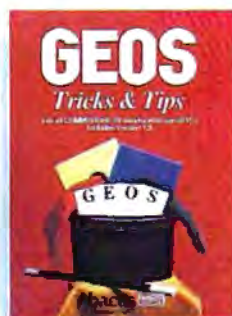
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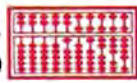


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REVIEWS

Equals, Greater than, Or, Not Equal), get rid of records or bring back ones you've removed, and import from or export to ASCII files.

Update and Report, of course, are the two most important functions. With Update you create new records and edit already existing records. Database formats are created in a free-form style: You select where you want fields to appear and what you want in them. Each database allows for three key fields that contain information you will want to specify for searches. The limitations for a database are 10,000 records, a maximum of 128 fields, and 4000 characters per field. With the Report function, you actually assimilate the data you've entered into a useful, readable form. *Eight-in-One* lets you view the reports on the screen or send them to the printer.

Eight-in-One's spreadsheet offers all the flexibility you're likely to need. At the very least, you can import spreadsheet files from, and export them to, *VisiCalc* and *Lotus 1-2-3* for more sophisticated operations. According to Spinnaker, the spreadsheet allows 30,000 rows, 10,000 columns, and 30 math functions. Everything I tried worked well—personal budget, research budget, war game calculations—and outputting data to the graphics program was painless and useful.

The Graphics component lets you use data from the spreadsheet or database to create bar charts, hatched charts, pie charts, exploded pie charts, line graphs, and shaded line graphs. Data can be imported by row or column, or you can enter it directly.

Communications lets you link up with other computers. This is perhaps the most limited individual component, mainly because *Eight-in-One's* only available protocol is XMODEM, and not all mainframes allow file transfer or program transfer with XMODEM (I need Kermit, for instance). But it features autodialing, key macros, and Tele-Video 920, DEC VT100, and IBM 3101 terminal emulation. For some reason, *Eight-in-One* uploads its own ASCII files better than it uploads ASCII files created with other word processors.

The manual is well organized and useful, but it's in dire need of examples. For that matter, so are the disks (*Eight-in-One* comes on three 5¼-inch floppies). Since the purpose of such a package is to introduce everyday users to a host of useful programs, tutorials and examples are absolutely necessary. Unfortunately, they aren't here.

If you're new to computing, or if

you're well-versed in only one of these applications, *Eight-in-One* will prove a very rewarding purchase. If you already have more elaborate application software, it will be less useful. The largest recommendation, though, goes to someone who is buying an MS-DOS machine for family or student use. *Eight-in-One* offers enough features to last most students through secondary school and well into their university years, and it's an inexpensive way to provide access to all the necessary computer applications. With it, Spinnaker has filled a definite need.

— Neil Randall

Eight-in-One

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Falcon

There's no doubt about it—like airplanes, flight simulators have come a long way. First there were biplanes. Then prop-driven private aircraft. Now, *Falcon* puts you in the cockpit of a rocket with wings.

Falcon, from Spectrum HoloByte, gives you the keys to a General Dynamics F-16A. Top speed, with afterburner blazing and a missile on each wing, is 1,350 mph, so hang on to your joystick for the ride of your life.

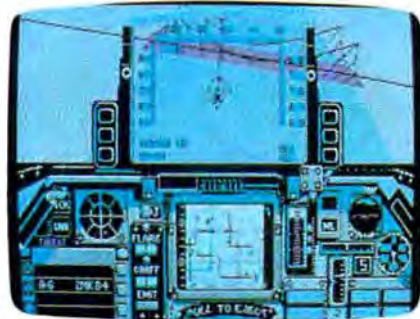
Your mission is to knock out various enemy targets. It begins with the duty roster, where you assign yourself a call sign, or name, to be used during your missions. The duty roster keeps records for as many as eight active pilots, listing the status (active, missing in action, killed in action, or busted, depending on the most recent mission outcome) for each.

Next, choose from five ranks ranging from first lieutenant to colonel. You can also select from a roster of twelve increasingly difficult missions. These range from the so-called Milk Run (bombing practice) to the deadly Double Dragon and the Grand Slam. You can even specify the maximum number of enemy MiG-21s (from zero to three) that

can be after you at any particular time.

Now arm your F-16 with the help of an onscreen, hi-res, clipboard-toting crew chief named Sarge. He supplies the weapons and fuel tanks you want after you've chosen them from an adjoining onscreen menu. Don't take too long to make up your mind. Other aircraft are taking off behind Sarge, and they may grab the last of the weapons while you make up your mind. Sarge will let you load your F-16 with all it can carry. But he'll issue a pretakeoff warning if he thinks the load you're carrying is too heavy. Too much weight drastically affects the handling of your aircraft, particularly in high-speed maneuvers.

At last, with mission assigned and plane ready, you climb into the fully instrumented, highly detailed cockpit. All the aircraft's controls are there, and all can be accessed from the keyboard. You can look forward, backward, left, and right. When looking ahead, you gaze through the Heads-Up Display, or HUD. This display is located directly in front of the pilot, electronically showing such elements as bearing, altitude, airspeed, and weapons readiness. During air-to-air combat or in the heat of a bombing run, F-16 jockeys don't have time to look around the cockpit reading various instruments. You won't have time, either, and HUD will soon become a very good friend.



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Another prominent feature is the cockpit's combined map/electronic display, or COMED, an instrument crucial to successfully completing your missions. In map mode, it shows your location on a map of the surrounding terrain. In radar mode, it indicates the position of the horizon and of any nearby enemy planes.

Falcon's comprehensive cockpit gives you complete control and tremendous realism—so much so that at higher ranks, extreme skill is required. To simplify the learning process, beginners

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should use one of the more forgiving lower ranks. For example, as a first lieutenant, you'll find it's impossible to crash your plane. You can literally dive straight into the ground at 500 mph and land perfectly when you get there—an interesting experience.

The tradeoff is that you accumulate merit points much more slowly at lower ranks—and those points are what it's all about. The number of points earned goes up drastically at higher ranks, but the risks go up too. Each increasing rank puts you in a more realistic simulation.

Realism means you're going to lose a few F-16s. To help you figure out why, *Falcon* offers two distressingly useful features at the end of a mission. One is a series of mission photos, which may include a shot of an enemy missile hit followed by one of you bailing out. At higher levels, where your demise is a distinct possibility, there's even a photo of the "missing man" formation being flown in your honor. Also available is a tell-all black box flight recorder. It shows, from three points of view, the flight path of your own F-16 as well as the flight paths of the enemy.

Falcon's F-16 can be controlled either totally from the keyboard or by a combination of keyboard and joystick (or mouse, on the Macintosh). You can also connect two computers together, via the two-player option, for dogfights between human pilots.

Falcon includes excellent documentation covering not only program operation but the performance characteristics of the F-16 as well. The manual is virtually a book in itself, clearly written and filled with fascinating details about this fighter. With its outstanding graphics, multiple rank levels, and extremely realistic control, this is one simulation you'll enjoy for a long time.

— Steve Hudson

Falcon

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The IBM version includes both a 5¼- and a 3½-inch disk.

Reader Rabbit IIGS

Reader Rabbit, from The Learning Company, is one of several worthy products that have recently made the transfer from the Apple IIe to the Apple IIGS computer. Debuting in 1986, *Reader Rabbit* quickly gained respect as an enjoyable education game built upon a sound learning base. Its move to the GS enhances the program's value by adding the power of speech.

The program is designed to aid in the development of early reading and spelling skills in children ages 4-7. However, seven-year-olds who have no discernible weaknesses in either reading or spelling will quickly tire of the program because it won't present enough of a challenge, and even a program that talks will become repetitive after awhile.

Thematically, *Reader Rabbit* centers around a Word Factory where your guide (the rabbit) shows the user how to sort words onto shelves, label boxes for shipping, and load a train with words for delivery. He'll even introduce young workers to his favorite card game, a variation of Concentration, involving matching letters, words, and pictures.

Educationally, *Reader Rabbit* utilizes over 200 three-letter words and 70 high-resolution pictures to reach its objectives of developing early reading skills, increasing vocabulary, improving spelling, and enhancing memory and concentration skills. The games that make up the package introduce these concepts one at a time and allow a certain amount of customizing to account for different rates of learning and varying ability levels among users.

Graphically, *Reader Rabbit IIGS* isn't noticeably superior to its predecessor. Because most of the pictures are of large objects, ultrafine detailing isn't necessary, so users familiar with the original version won't be greatly impressed by the new one. Smaller pictures used throughout the program, especially in the matching-game segment, are cleaner, more colorful, and more detailed than those in the IIe version.

The real improvement in *Reader Rabbit* lies in the use of sound in the GS version. Here both the program and the machine shine. The speech synthesizer employs digitized sound to make the program literally talk to the user. Excellent onscreen instructions, verbal and otherwise, make this program exceptionally simple to use; even young children, after becoming familiar with *Reader Rabbit*, should be able to use



Reader Rabbit helps develop reading skills in children ages 4-7.

the program without the aid of an adult.

The pronunciation of the words used is clear and concise. The voice doesn't sound like a sci-fi robot; indeed, it sounds more like a female Mr. Rogers. Children will find it pleasant and easy to understand, and the educational value of actually hearing the words as they work with them can't be overemphasized.

The mechanics of the simple learning games can be carried out through the use of either the keyboard or a joystick. Some games require the child to do no more than press the RETURN key or click the joystick button to make a choice; other games might employ the arrow keys or directional movement of the joystick to move a word or letter to a specific area. No refined motor skills are necessary.

Curiously, *Reader Rabbit* fails to make use of the most logical input device—the mouse. Pointing to something on the screen and clicking a button are simple acts for a child, and reduced to its most basic terms, that's the concept behind the mouse. For whatever reason, The Learning Company opted not to use it.

Other features are sure to delight young users. Sound effects (beyond the speaking) are pleasant, as are the short songs that accompany the aforementioned animation. Adults will like the short but comprehensive instruction book that comes with *Reader Rabbit*. It does an excellent job of explaining not only the directions for play but also the purpose behind the game.

Reader Rabbit IIGS, like the IIe version, is a solid program that removes the tedium, but not the benefit, from repetitive drilling. Hearing the words spoken on the IIGS is an exciting experience for a young computer user and is a strong learning aid, too.

Reader Rabbit IIGS requires an Apple IIGS with a 3½-inch disk drive and 256K. The program is copy-

protected with no way of purchasing a backup from The Learning Company. Disks damaged out of warranty can, however, be returned and either be repaired or replaced for the nominal fee of \$10.

—James V. Trunzo

Reader Rabbit IIos

For...
Apple IIos, 3 1/2-inch drive, 256K—\$59.95

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feel truly lucky or competent, you may choose to fight an entire campaign, which mixes several scenarios.

To start out easy and get the feel of command, you should choose the mission unfortunately titled "Stark Reality," a thinly-disguised simulation of the Persian Gulf incident involving the USS *Stark*. The difference here is that you know the Iraqi jet will fire on you, giving you a decided advantage over those involved in the actual incident.

You take command at the shipyard, the same place where you'll build task forces in more complex missions. Give the order to sail, and you'll find yourself facing a map of the mission area. Here you set such things as speed, course, alert status, and active or passive radar and sonar.

From the bridge, you control the ship and the weapons. If you're commanding a task force, you may cycle through the other ships in your fleet, taking the helm of each in turn. Knowing your ships is one of the prerequisites: It will do you no good to command a weaponless tanker during a firefight.

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launch helicopters from many of the warships. You see what they see, using the helicopters' radar or sonar for a wider view of the area; you can even the choppers' limited weapons if the opportunity presents itself.

In all this switching of viewpoints, you have several advantages over a real admiral, who must direct the course of a battle from one flagship and who, if that flagship is sinking, must physically transfer the flag (and himself) to another vessel. By contrast, your eyes are everywhere, and, if the need arises, you can simply teleport to another ship.

Besides the tankers or troop ships you escort, your force can be made up of cruisers, destroyers, frigates, and fast attack craft (the *Pegasus* hydrofoil is here). Since these ships are armed with different weapons, you'll want to think carefully about how to respond to the threats outlined on the mission board, and choose those vessels best equipped for the task at hand.

If you're carrying out solitary missions, the computer-assembled fleet will be the right one to use, but if you're fighting an entire campaign, a rather

complex point system will determine how many ships you can buy. Points are earned for accomplishing your mission before time runs out; points are deducted for damage sustained, for ships lost or run aground, and for firing at friends. If you run a perfect mission, you'll have a lot of points to spend on the next mission. Should you fail miserably, however, your next mission will be in the shortchange department.

Other missions besides "Stark Reality" include a Persian Gulf scenario called "Dire Straits," where you fight against a number of small powerboats darting through your fleet; a submarine hunt and a full-scale battle during the Falklands War; and another tanker escort in the Persian Gulf. You'll also find five scenarios dealing with World War III, each a bit more difficult than the last.

Though the games can be played almost entirely by joystick, I'd urge that you keep the quick-reference card handy and learn the keystrokes. Making a change from the keyboard is much faster (and leaves you less prone to error) when the action is fast and furious—as it certainly will be in every mission.

The documentation for *Strike Fleet* is very good, not only in teaching you how to use the program, but also in giving you an almost military grounding in the capabilities of your ships and the weapons they carry. It also gives you the same information about the various enemies you'll face.

Because they use the same split-screen targeting developed for *P.H.M. Pegasus*, the graphics are always good without being cluttered. And because the bridges of all the ships share a common configuration, it's easier to learn the game control. Although the notion of commanding a fleet of ships may seem daunting, it can be done. Really.

— Ervin Bobo

Strike Fleet

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KindWords

It's hard to believe *KindWords* is related to the Amiga's first word processor, *Textcraft*. The original working title of this program from The Disc Company was *Textcraft Plus*. A name change was certainly in order, however, because *KindWords* is a completely new and very capable WYSIWYG (What You See Is What You Get) word processor, free from the bugs that plagued the faulty-but-functional *Textcraft*.

Like *Textcraft*, *KindWords* does not open a Workbench window. Instead, the program opens a window on a custom screen, turning off the Workbench to conserve memory. Through the use of the program's Extra menu, however, you can reopen the Workbench—memory permitting.

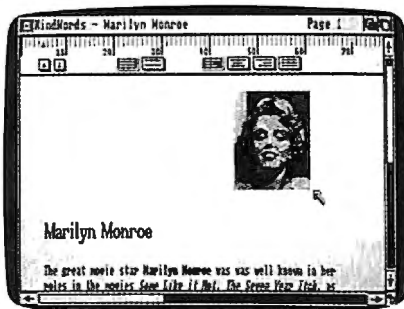
And this program uses a lot of memory. When the manual states *To fully utilize KindWords it is recommended you upgrade to 1 megabyte*, it means it. Although I used *KindWords* on a 512K Amiga to write this review, I must agree with the manual. Many of the word processor's features—spell checking, SuperFont printing, and opening the Workbench screen—are either slowed down considerably or simply do not work with only 512K of memory.

KindWords is easy to use. Scroll bars and aptly named menu options make learning the program a breeze. Formatting text—single spacing, double spacing, justifying text, and setting margins—are all chosen by selecting icons and moving sliders on a ruler that appears above the text. If you wish, you may turn off the ruler to see more text on the screen.

Speed is not one of this program's strong points. I have yet to be able to outrun the keyboard buffer, however, and compared to other multifont word processors, such as *VizaWrite*, *KindWords* is the fastest.

Three things make this program really stand out: fonts, graphics, and printer output. *KindWords* supports multiple fonts and font sizes. You must use the SuperFonts provided by *KindWords*—Roman, Superscript, Subscript, Foreign, and Symbol—as the program does not support any of the standard Amiga fonts. A call to The Disc Company's technical support revealed that the next version (1.3) of *KindWords* will support the Amiga's standard fonts.

Any IFF graphics may be inserted



IFF graphics can be imported into *KindWords* and then manipulated to the writer's content.

into a *KindWords* document. To account for the possibility of multicolor pictures, *KindWords* can display graphics on the screen in 4, 8, or 16 colors. Once inserted, you can crop, stretch, or shrink the image. By holding down the Shift key while resizing an object, the program automatically retains the picture's proportions.

KindWords is a winner when it comes to printing. Using the program's SuperDrivers, you can produce quality output of any of *KindWords*'s SuperFonts. Unlike the blocky looking letters produced by the Amiga Notepad, these characters are fully formed and smoothly shaped. To achieve such output, however, I was forced to borrow a friend's memory expansion unit, as the memory in my 512K Amiga was not enough to contain the SuperFonts and their drivers. Of course, you can always make printouts using your printer's built-in font or letter-quality mode.

A useful feature is the spelling checker. *KindWords* provides a 90,000 word dictionary that's called from a pull-down menu. With enough memory, this dictionary can be loaded into RAM, providing faster spell checking. Even with 512K, however, the checking time is certainly reasonable.

The first thing that I check when looking at a new word processor is how many ways I can select text. Of all the word processors that I've seen on the Amiga—including *WordPerfect*—*KindWords* performed the best. You can click, shift-click (press the mouse button while holding down the shift key), double-click, triple-click, and perform any of *KindWords*'s functions through use of the keyboard.

Shift-clicking selects text from the current cursor position to the position of the arrow pointer, saving you time dragging the cursor across the screen. I find it hard to use a word processor

without this feature. By double-clicking, you can highlight words. The triple-click allows you to select an entire sentence in one rapid succession of mouse clicks. Once selected, text can be cut, copied, cleared, or replaced simply by entering new text from the keyboard.

For those who prefer to keep their fingers on keys, *KindWords* offers a plethora of keyboard functions. All of the program's menu options—with the exception of font selection—are directly accessible through keyboard shortcuts. There are also a variety of extended cursor movements available from the keyboard, allowing you to zoom through your text without having to reach for the mouse.

Overall, the program's manual is clearly written and well organized. The documentation is not limited to the program's manual, however, since the program itself includes a Help menu.

Except for speed and memory use, *KindWords* is a superior word processor, offering enough options to satisfy the average user. If you need multicolumn support and the ability to perform simple math operations using numbers found within your text, you'll have to look elsewhere. But with headers, footers, auto page numbering, mail merging, search and replace, spell checking, and a wide variety of printer formatting options, *KindWords* makes a very capable word processor for the home or office.

— Randy Thompson

KindWords

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Tetris

"*Tetris* was invented by a 30-year-old Soviet researcher named Alexi Paszhitnov who currently works at the Computer Centre (Academy Soft) of the USSR Academy of Scientists in Moscow. The original programmer was 18-year-old Vagim Gerasimov, a student studying Computer Informatics at Moscow University."

So say the opening credits of the one of the most addictive computer

games this side of the Berlin Wall. Re-programmed for a variety of American computers by Spectrum HoloByte (the IBM PC version is reviewed here—other versions may differ slightly), *Tetris* is not the game to start if you have work to do or an appointment to keep. Consider yourself warned.

The premise is simple. Against the backdrop of one of nine interesting Soviet scenes, shapes made out of different block combinations fall toward Earth. Your mission? To rotate these shapes into positions which leave no gaps in the layers at the bottom of the pit. When a line is complete, it disappears. The shapes begin to fall more quickly when a particular number of lines disappear.

You can choose from ten levels of expertise and six levels of height. While the expertise levels control the speed with which the pieces tumble to the ground, the height levels control the number of layers already in the pit when you start your game. For example, choosing height number 4 randomly layers four rows of shapes at the



Tetris is an addictive game of strategy and skill.

bottom of the pit. Here's the catch: With four layers already filled when you start the game, your pieces have that much less time to be maneuvered and positioned before they reach bottom. Combine a high starting level with a fast speed, and *Tetris* is a challenge not quickly forgotten.

Not surprisingly, the higher the levels of speed and height, the more quickly you score points. Since your

score is primarily based on how quickly you can position a block as it falls, blocks falling faster over less distance can mean bigger scores... if you manipulate them quickly enough.

Shapes can be positioned through the use of a joystick, a numeric keypad, or specially selected alpha keys. A display on the upper left corner of the screen relates game statistics such as the current score, the total number of lines eliminated, and even which shape will fall next.

Function keys let you view the Help Menu, the number of times a specific shape has fallen (I was too preoccupied playing the game to worry about that), your present game level, and a descriptive phrase about the current background screen. (The backgrounds include Game Day at Lenin Stadium, Submarine Base at Murmansk, May Day Celebration in Red Square, and, my personal favorite, View of Earth from Salyut.)

But it's *Tetris*'s Escape key that can save the day. As implied above, this is a game you'll want to share with friends

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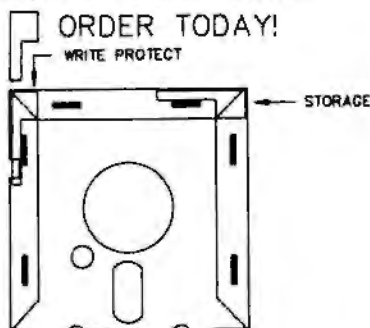
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and coworkers; however, we all know work is no place for an "I just can't say no" game like *Tetris*. Leave it to the Spectrum HoloByte to come to the rescue. If you're in the middle of a championship round and you hear the boss coming, a quick press of the Escape key displays a replica of a *Lotus 1-2-3* spreadsheet. Press the Escape key again, and the game's on!

My family and I have been playing *Tetris* for about two weeks now (we have several championships at stake), and we couldn't tell you what's been happening on our favorite television programs—we're currently glued to a different sort of tube.

—Lynne Weatherman

Tetris

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The Vendex HeadStart Turbo 888-XT

The HeadStart Turbo 888-XT computer from Vendex might well be called the IBM PC-compatible computer for the rest of us. If you have reservations about wading into the seemingly murky depths of the MS-DOS (Microsoft Disk Operating System) environment but want a PC-compatible, then the HeadStart system is an excellent choice.

By now, you've probably seen the Vendex television and magazine ads featuring professional wrestler King Kong Bundy: Bundy is in a wrestling ring with a Vendex HeadStart system, and within 23 minutes he masters the personal computer. No sweat.

What makes his job, and yours, so easy with the Vendex system is a menu-driven shell program that protects the first-time user from the realities of DOS until the ice is broken; in other words, you're given a head start on getting comfortable with DOS. Along with this simplified user interface is an interactive tutorial program, the ATI (American Training International) Skill Builder that provides an overview of

the system and hands-on examples of how to use the basics of your machine and its software.

The Vendex system is a hardware and software combination that offers everything you need to begin using the computer right away. The hardware includes three major pieces: a system box that contains the central processing unit (CPU), two disk drives, and a variety of ports (serial and parallel) for connecting peripherals; either a monochrome or color monitor with stand; and a detachable keyboard. Also included are the necessary cables and power cords to connect everything.

The CPU is based on the 8088-2 microprocessor, compatible with the IBM PC/XT and its peripherals and software. The microprocessor is a dual-speed chip, allowing you to switch from the standard 4.77 megahertz to a turbo speed of 8 megahertz. This means that you can run the computer at its normal speed for commercial software that requires it, such as games, or boost it to the turbo speed for faster responses on applications such as word processors or spreadsheets.

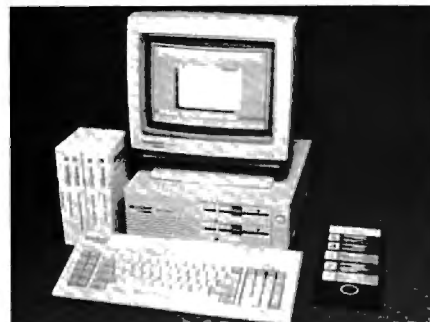
The computer comes with 512K of RAM (Random Access Memory), which can be increased to 768K with the optional Vendex memory expansion kit (\$99.95). The box contains two 360K double-sided, double-density 5¼-inch floppy disk drives (an optional 21-megabyte hard disk card is available from Vendex for \$599). Also included are a color card with monochrome, Hercules, and RGB color capability; a realtime clock with Nicad rechargeable battery; seven expansion slots, of which five are available; and the following ports: parallel printer, serial, bus mouse, game, and light pen.

The system we reviewed came with the Model M-888C color monitor, a 14-inch CGA-compatible RGB display with pop-on monitor stand that allows both up-and-down and side-to-side swiveling. Attached to the front of the system box is a cable that connects to the 84-key PC/AT-style keyboard, with separate numeric keypad, ten function keys, and a main keyboard with nicely sculpted keys. Vendex offers a 12-month warranty on parts and labor—another feature designed to relieve some of the worry for the first-time owner.

From a hardware standpoint, Vendex has put together an attractive package with a relatively small footprint (the amount of space the hardware takes up). The monitor and stand sit atop the system box, making the footprint an efficient 18½ inches wide × 25 inches deep

(including keyboard) × 19½ inches tall.

To make this system immediately useful, Vendex has wisely included a wide array of software on five disks: MS-DOS version 3.2, the Vendex HeadStart operating environment, Microsoft GW-BASIC, the ATI Skill Builder tutorial, the *Executive Writer* word processor, the *Executive Filer* database program, and the *MyCalc* spreadsheet. This combination of software helps make the Vendex a system you can use immediately.



The Vendex HeadStart system comes complete with computer, monitor, keyboard, and software—a boon to the beginner.

The first thing you'll see when you open the large Vendex box containing the system unit, keyboard, and manuals is a four-page color flyer with a bold red STOP sign printed on the front and back. Inside the flyer is a 21-step storyboard with drawings and instructions that take you from unpacking the main box and the monitor box to viewing the HeadStart operating environment menu screen. This is an excellent step-by-step guide to getting started. It took just over 20 minutes, following the instructions, for a beginner to unpack the system components, connect all the cables, insert the proper disk, and access the HeadStart operating environment. It's difficult to imagine a less threatening introduction to a computer in the MS-DOS world.

Once you have the system up and running, you can immediately choose the ATI Skill Builder option. For those who are unfamiliar with MS-DOS, this interactive tutorial is a nicely structured step-by-step overview of the basics. For those with more than a passing knowledge of MS-DOS, the ATI system will prove largely unnecessary.

Beyond the ATI program, Vendex also includes a nicely packaged array of printed support. In fact, there are more than 1,700 pages of documentation in

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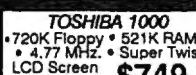
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four paperback volumes. The documentation for the three major software applications, for instance, is solid and thorough. The applications themselves are full-featured programs which fit in with the Vendex concept quite well.

The Vendex HeadStart System delivers what it promises: a complete MS-DOS computer system that's both easy to learn and easy to use. The planning that went into developing this hardware-software package took into account the needs of beginners in every area.

There are thousands of new computer users entering the MS-DOS environment every month in businesses, homes, and schools. And there's every reason to believe that the Vendex HeadStart System will continue to be a very popular choice that will help smooth out the bumps on the MS-DOS road.

— Selby Bateman

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Invented some 4,000 years ago in China, go is still one of the most popular games in the world. Fabled Japanese generals like Nobunaga and Hideyoshi studied it assiduously and brought go masters with them on marches. Samurai warriors carried the game into battle and, when the bloodshed ceased, hunkered down over the go board and resumed play. At one time, go boards had a long cavity on each end, placed there, we're told, to receive the blood of defeated tournament players.

In some ways, go resembles chess. Both are complex games of strategy based on military action. Both demand intricate forethought. Both are solely games of skill. And in both, taking opposition pieces is important, but not the ultimate goal.

But go also differs significantly from chess. Chess simulates a battle; go, an entire war, with many fronts and actions. Chessmen move across the

board; go stones stay put. Chessmen take enemy pieces by landing on them; go stones surround them. The goal of chess is battle-oriented: to seize the other king. The goal of go is campaign-oriented: to enclose the most territory.

The rules of go are far simpler than chess, even simpler than hearts or blackjack. The go board is a grid with 19 lines running vertically and 19 lines running horizontally. You place your stones—circular tokens of gleaming white or black—one at a time on the grid intersections. As the stones accumulate, you try to fence in territory while fending off capture.

That's all there is. But go's simplicity lies only in its rules. Go tactics are rich, elaborate, and often weirdly subtle. You try to throw *nets* over rival pieces. You pursue them up *ladders*. Again and again, you see formidable blocks of stones vanish with a few well-placed moves as the advantage flips from one side to the other.

This remarkable game has now appeared on the Macintosh. It is a significant achievement, since go is even harder to program than chess. (A go board can hold up to 361 stones, and in the middle stages, it offers far more possible moves.) Moreover, it has arrived in an excellent implementation: *Go* for the Macintosh.

This software has almost everything you'd want. It lets you play against a person, the program itself, or an individual via modem. The computer can play another computer or a telephone competitor. It lets you save games and print out board position.

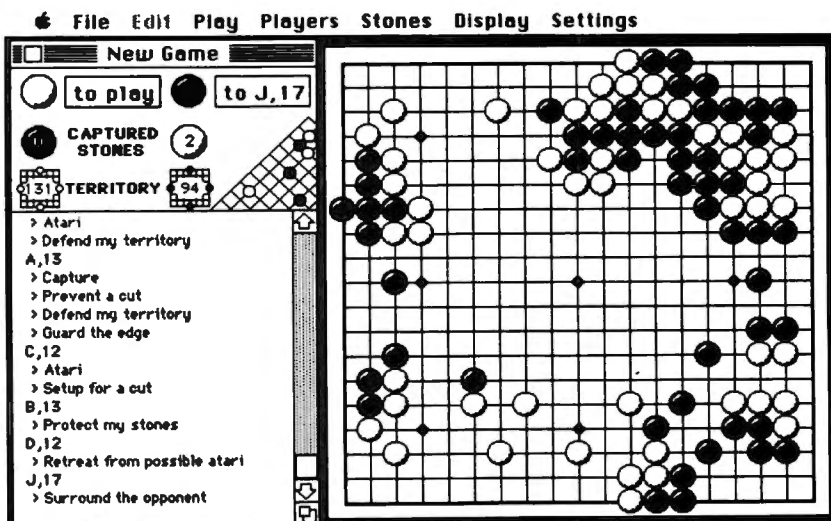
Go for the Macintosh is ideal for the beginner, as it should be. Few people in the U.S. play go, and you may

not know anyone who can teach you. (Learning it from the computer also sidesteps the phase of comic ineptitude before a friend.) The software comes with an online tutorial in *Guide* hypertext format (not *HyperCard*), which lays out the basics of go and takes you through interactive examples. The program also explains some elements of strategy, but can hardly address it all. For further enlightenment, I recommend Richard Bozulich's *The Second Book of Go*.

Go's display is excellent. It shows the board in either two or three dimensions, gives luster to the black stones and shadow to the white, and pleasantly replicates the click of the stones as they touch down. On the left of the screen, the program presents the reasons for its moves, if you like. It displays the grid from 6 × 6 up to the standard 19 × 19. Grid size matters because, at first, 19 × 19 is an immense white sea in which you can easily feel lost and, soon, clustered by enemy stones. The 6 × 6 is much more manageable.

The software lets you retract moves all the way to the start, so if you make a mistake and feel its effects only later, you can go back to your error, study it, and replay from there. You can change sides at any time in the contest. For deeper analysis, you can have the program number stones in the order played, an important ability. Finally, you can handicap the computer both classically, by giving yourself crucial positions at the outset, and electronically, by limiting the prowess of the software.

You may not need to. The only real drawback to the program is its relatively low ceiling of ability. It has been rated 18 kyu, beginner level in the elab-



Black has only a temporary advantage in this round of the ancient game of Go.

orate hierarchy of go rankings. The fault lies not in the program, but in the complex nature of go itself, which requires much more computer power for expert play. However, if you are a beginner, like me, you will find this software an able teacher you might occasionally beat. I prefer it that way. A game that always clobbers you quickly loses its charm.

This is a great program—instructive, challenging, and ultimately bewitching.

— Dan McNeill

Go

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Microsoft Word 4.0

When the IBM PC version of *Microsoft Word* appeared four years ago, people stood up and took notice. Everyone realized that *Word* was ahead of its time in conception. Unfortunately, it was slow and a little quirky. Since the program's introduction, Microsoft has frequently improved *Word*, adding impressive features with each new release. In its latest version, *Word's* reality has caught up with its original ambition, making it one of the fastest, most powerful word processors available for the PC.

Microsoft Word has a staggering array of features, including an integrated spelling checker, thesaurus, and outline processor. And it operates in several video modes: text, normal graphics, and—with a Hercules or EGA card—90-column X 43-line super-graphics mode. Other features include macros (both off-the-cuff and programmed), windows, an *undo* command, support for a massive number of printers, *full* mouse support, and much more.

The *Word* package contains nine disks—one disk each for the program, speller, thesaurus, and utilities, plus two disks for printer drivers, and three learning disks. Written documentation weighs in at more than a thousand pages and includes a 7½ X 9-inch,

three-ring bound manual, a spiral-bound reference, a pocket guide, a sampler, a printer reference, and three keyboard templates.

Despite the formidable size of *Word*, the installation process is automated and simple, taking less than ten minutes on a hard disk, somewhat longer on floppies. Fifteen minutes after opening the package, you'll be ready to start using the program. Learning is simplified by two things: *Word's* excellent interactive tutorial and the program's instant, online Help. The tutorial is also available from inside *Word*, so you can return to a lesson to refresh your memory without leaving the program.

The interactive tutorial is thorough and excellent, and includes versions for learning *Word* with the mouse or with keyboard-driven input. Both the tutorial and Help options have references to the *Word* manual for those who want more information on any topic.

As you might expect with a program as powerful as *Word*, you won't learn every feature in an afternoon, but you can learn most of what you need to know in about an hour—especially if you use a mouse, which makes *Word* easier both to learn and to use.

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Word features line drawing and dynamic paragraph borders that are useful for placing spreadsheet data in a document.

Word works a little differently than other word processors; learning this program will be simplified if you can get in the *Word* groove right away. For example, most word processors have a *cursor*. Not *Word*. *Word* uses what it calls a *highlight* or *selection*. The distinction may seem trivial, but it's an indication of *Word's* orientation to command structure. With *Word*, you select a section of text and then do something with it or to it.

For example, to execute a macro using most word processors, you first tell the program that you want to run a

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macro; then you tell it the macro's name. With *Word*, you type the name of the macro right in your text, and then inform the program that the name you just typed, or selected, is the name of a macro you want to execute. *Word* is consistent and logical in its approach, but it may take some getting used to.

As mentioned earlier, *Word* has several video modes that you can specify with command line options when the program is invoked. The default mode is called *text*. In this mode, *Word* uses your video's normal screen to show bold as bright and all other modes as underlined.

Text mode is faster than the two graphics modes, but the graphics screens offer a visual feast. If your computer has a high-resolution graphics card—such as Hercules or EGA—and an appropriate monitor, *Word's* graphics modes can show italics as *italics*, bold as bold (not just bright), and *Word's* other video modes—small caps, underlined, and double-underlined—exactly as they appear when printed.

Even more impressive is *Word's* super-graphics mode, which displays 90 columns by 43 lines with enhancements—italics, bold, small caps, and underlining. Many applications are hampered by the normal 80 × 25 screen, and for a number of users, the super-graphics mode alone makes *Word* worth its price.

In addition to offering a choice of video modes, *Word* can be configured to an unprecedented extent. You can use a window border—almost a necessity with a mouse—or eliminate it for a super-clean screen. You can have command menus shown at the bottom of your display or you can suppress them. Color is also easy to change to suit your preferences. And these options are not just chosen at installation time and frozen in stone until you want to go to the trouble to alter them. They're always available from inside *Word*, with the program remembering your last settings and loading them the next time it's used.

One special feature of 4.0 is *cursor speed*. Among the complaints about earlier versions of *Word* was that the cursor was too slow, slogging along as if it didn't have any place special to go. With the new version, *Word's* cursor is so fast you'll probably need to use the program's built-in cursor-speed control to *slow the cursor down*. In fact, *Word* 4.0 has the fastest cursor I've seen in any text editor or word processor. It's more than twice as fast as *XyWrite's* or *WordPerfect's* (both of which are about the same speed). And *Word's* cursor

flies in both text and graphics modes. Since the most important feature in determining a user's perception of the speed of a word processor is cursor speed, this is a significant improvement.

Another impressive feature is the improvement in the keyboard-only operation. *Word* was one of the first IBM PC products to support mouse input, and since its release, *Word* has been easy to use with a mouse, but a little awkward with strictly keyboard input. *Word* 4.0 corrects this problem by continuing to offer the best mouse support of any PC word processor and by incorporating a new, improved keyboard command structure that streamlines keystrokes for most operations.

For advanced users, *Word* has a dazzling array of features: style sheets (which give you the power to instantly change all the formatting options of a document), footnotes, indexing, table of contents construction, multiple overlapping windows, custom printer driver creation, and more.

If you gather that I'm enthusiastic about *Word*, you're right. It's a remarkable combination of power, configurability, and ease of use. And *Word* is one program you're not likely to outgrow. Although you'll have it up and running in 15 minutes, you'll still be discovering useful features years after opening the package.

— Clifton Karnes

Microsoft Word 4.0

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Focal Point

Some people claim that a tidy desk or office is the sign of a small mind. Don't believe it. That's something the hopelessly messy fabricated to comfort themselves.

On the contrary, everyone I've ever met has been trying, in one way or another, to finally *get it all together*. Everyone is in a constant battle to get

organized against the great cosmic law firm of Chaos, Decay, and Entropy.

Now that we have computers, the effort to get organized has been cranked up as we move our To Do lists from 4 to 8 to 12 megahertz and beyond. The latest entry in the order-out-of-chaos race is *Focal Point* from Activision, a commercial stackware product that works with *HyperCard* on the Macintosh. It's billed as The Ultimate Organizer, and, after you've played with it awhile, you'll begin to believe that the subtitle may be right on target.

If you've missed all the hoopla about *HyperCard*, you need to know that this new software program from Apple Computer is currently taking the Macintosh market by storm. It has been called a software erector set, a new operating system interface, a natural language programming environment, and a hypertext breakthrough. At its simplest level, *HyperCard* is a limitless stack of cards full of text and/or graphics that can be linked in virtually any fashion and called up at the press of a mouse button or a key.

Focal Point works within this *HyperCard* environment to present the user with 18 different card stacks for scheduling, tracking, remembering, and cross-referencing a wide variety of business and personal tasks. Individually, these stacks are useful; taken together, with their many interconnections, they are fast, flexible, and efficient.

In brief, *Focal Point's* components include: a Daily Appointment Book for hour-by-hour scheduling and notes; a To Do list; a Monthly Calendar, covering each day for up to five years; a Directory and Dialer for finding and dialing telephone numbers; Incoming and Outgoing Phone Logs, to track your contacts and how long each call lasts; a general Notes area; a Deadlines file for your work; Project Records covering project information subtopics; and separate files covering Proposals and Bids, Client Records, Client Meeting Records, Vendor Records, Expense Reports, Automobile Expense Records, Vendor Meeting Records, and Time Sheets.

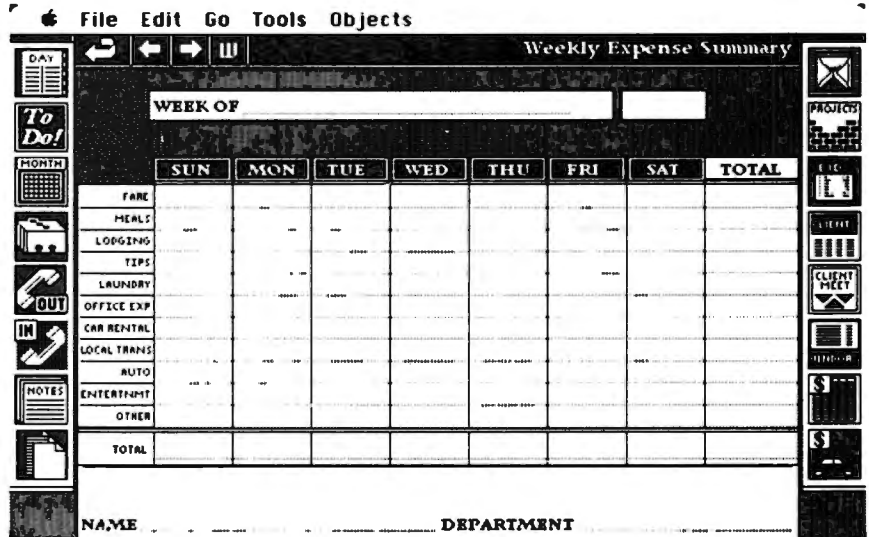
The key element in making all of these varied files really useful is the fact that there are links among most of them that save time and effort. No matter what stack you want, move the mouse cursor to an onscreen button, click, and you're there. You can have access to 16 of the 18 stacks instantaneously, and you can configure your *Focal Point* stacks so that you have the ones you want at your fingertips. You can even enter information in some sections and

REVIEWS

know that this data will automatically be included elsewhere within *Focal Point*. For example, your Client Records information is linked to six other areas of work, such as Deadlines, Time Sheets, and Bids and Proposals. Entries in the Monthly Reminder field of your Daily Appointment Book are automatically entered in the To Do list and the Monthly Calendar.

Overall, the functionality of each of the stacks is exceptionally good. And there are many little touches that add value. Can't remember telephone area codes? The area code search function, inside the telephone card, is excellent. With the Directory and Dialer, you not only can sort and automatically dial, you can search quickly for virtually any combination of letters.

Printing information from *Focal Point* is handled in the same way as in *HyperCard* itself—and that's a fairly limited feature at this point. You can print individual cards, an entire stack, the text from a stack, and also mailing labels. Suffice it to say that while the printing functions are limited, they're not enough of a problem to warrant avoiding the product.



Click on any of the icon-like buttons at the left or right, and you zip to another part of *Focal Point*.

The *HyperCard* program code within *Focal Point*, made up of individual scripts, was deliberately left unlocked so that enterprising *HyperTalk* programmers could go in and customize any and all of the stacks. If you want

to alter *Focal Point* or *HyperCard* scripts, you'll need to become thoroughly familiar with *HyperCard* and its *HyperTalk* programming language.

Focal Point is ideal for the Macintosh owner who's using the computer

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frequently every day. The most useful and convenient aspects of the program reveal themselves when you're able to constantly update your records and to use the program so often that getting around becomes second nature. For those using a Mac in a business environment, *Focal Point* can become just that: a focal point for all of your contacts, plans, schedules, records, and reports throughout the day. If you're out of the office and away from your computer, obviously *Focal Point* loses some of its usefulness.

For those who use their computer only once or twice a day, *Focal Point* won't be nearly as convenient as paper and pencil. No one wants to have to look up directions in a manual or access a help screen whenever an occasional note needs to be taken.

But *Focal Point's* limitations are minor, especially for frequent Mac users. In the neverending battle to get and stay organized, *Focal Point* is a victory worth celebrating.

— Selby Bateman

Focal Point

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And ...

Three other commercial HyperCard stacks from Activision are: *Business Class* (\$49.95), *City to City* (\$49.95), *REPORTS!* (\$99.95)



Toshiba 1000

The Toshiba 1000 is an MS-DOS laptop designed to go head-to-head with the Tandy Model 102 (a slimmed down Model 100). The beauty of the Model 102 is that it provides all the tools many people need to do useful work while on the go. One big drawback to the Model 102, though, is that it's not always easy to integrate the work done on the road with an MS-DOS machine back at the office.

While the Model 102's programs are easy to use, they are limited in power and don't work like their MS-DOS counterparts. For several years, manufacturers have tried to produce a worthy

MS-DOS-based competitor for the Model 100/102, but few have even come close. With the arrival of the Toshiba T1000 and its 768K memory expansion, the Model 100 has met its match.

The T1000's most important characteristic is that it's strictly a *consumer product*. While other Toshiba laptops are designed for power users, the T1000 is unabashedly common. What it lacks in speed and glitz, with its 80C88, 4.77 MHz processor, the T1000 makes up



The Toshiba T1000 laptop PC weighs in at just 6.4 pounds.

for in its intelligent design and compactness, weighing in at under seven pounds. The T1000's standard features are just that: 512K of random-access memory, NiCad battery, AC adaptor, RGB color and composite monochrome output in addition to the LCD display, a 25-pin Centronics parallel port, a nine-pin RS-232C serial port, and an external disk drive port for connecting an optional 5¼-inch floppy disk drive.

Two other standard features are especially important, setting the T1000 apart from the vast majority of other laptops currently available: MS-DOS 2.11 is included in ROM (Read-Only Memory) chips inside the computer, and a 160-byte, nonvolatile random-access memory makes it possible to save a CONFIG.SYS file.

While the base price of the T1000 is among the lowest in its class, the machine becomes much more valuable with the 768K memory expansion card. The expansion card makes it possible to boost RAM up to, and even above, the 640K limit. That's great, but the real virtue of the 768K memory card is that it can be configured as a nonvolatile "hard" ramdisk. This means that the computer treats the expansion card memory as if it were a disk drive. Since the drive is memory rather than a physical disk, the hard ramdisk is very fast.

The T1000 contains a configuration program, called SETUP10, which greatly simplifies using the laptop's spe-

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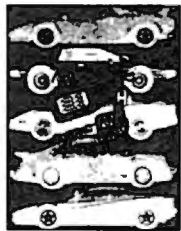
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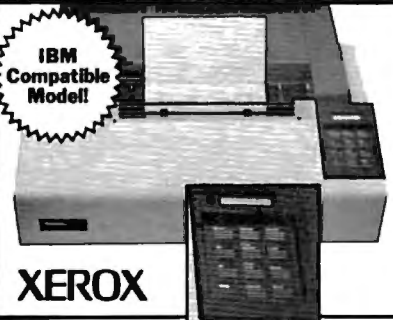
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REVIEWS

cial features. SETUP10 contains several useful options for customizing the computer to your needs: You can store a special RAM CONFIG.SYS file, determine from which of the actual or virtual drives the computer should boot, select the communications and printer ports, choose display and keyboard options, and configure memory. The options associated with memory allow selection of the port address for expanded memory, the size of expanded memory, the size of conventional memory, and so on. With the information provided in the manual and the SETUP10 program, most novices will be able to understand and manage the laptop's special options.

The T1000's hard ramdisk may be formatted to boot under DOS 3.2 if the user prefers, and there is still adequate room to store the core files of one or more application programs. The hard ramdisk makes it possible to set up the T1000 to boot up in *WordPerfect*, for example, each time the computer is turned on. With the data disk in the single 3 1/2-inch floppy drive, the T1000 can provide access to the main *WordPerfect* program, speller, and thesaurus; and it can leave room for a reasonable amount of your text files.

Many of those considering the purchase of a desktop clone would do well to weigh the advantages of the T1000. The T1000 could easily become a standard on campus, at the press table, and on airplanes in the years to come, since it brings together all the elements of the original Model 100—convenience, price, and usability—into one easy-to-carry package that runs MS-DOS software just like the computers at work.

The Toshiba T1000 is the tortoise among all of the rabbits in the laptop race. While its keyboard and screen are no match for its higher-priced competitors, its common-sense engineering makes it a strong contender, worthy of consideration for anyone who wants a reliable electronic notebook for his or her ideas.

— J. Blake Lambert

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in the August
COMPUTE! . . .

Homeward Bound. If home is where you want your office, catch this feature article on working at home—who's working at home, why, and how you can join them. And if you're already at home, there are plenty of tips for equipping your office and staying in touch with corporate politics.

Time for Toddlers. Preschoolers need software, too, and David Thornburg ("Impact" columnist and contributing editor) describes when and where computers are appropriate for young children, and what programs find favor with toddlers at the keyboard.

Help Yourself. HelpWare is our newest software category, software that improves everything from your IQ and cooking to your career and love life. Evaluations of the best and newest self-help software point out the programs to head for when you want to make a better you.

Buyer's Guide. Preschool software is the focal point of this month's buyer's guide. Scores of toddler-appropriate educational programs are listed for IBM, Apple, Commodore, and Atari personal computers.

Reviews. In the August issue of *COMPUTE!*, you'll find reviews of the new products of interest. We've scheduled looks at such packages as

- Space Quest*
- Echelon*
- Where in Europe is Carmen Sandiego?*
- PFS: First Choice*
- Microsoft Works*
- Photon Paint*
- Designasaurus*
- The Golden Spike*
- Tag Team Wrestling*
- ComputerEyes*
- and more.

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And our regular features. Of course, you'll find columns by David Thornburg, Orson Scott Card, David Stanton, and Arlan Levitan in the next issue, as well as "Letters," "New Products!," "Editorial License," and "News & Notes."

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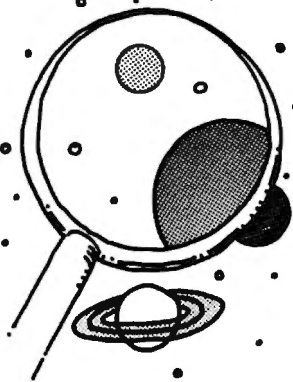
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discoveries

DAVID STANTON



Interactive Software That Captivates Children's Minds Makes Learning a Breeze, Not a Chore, Says the Peterbilt Principle

It's been drizzling for hours. The windshield-wiper metronome pounds out monotonous time.

He's been on the road since early morning. Ten hours of driving already, but he must make Omaha tonight, so he presses on, reading more maps, glancing again at the gas gauge. It wouldn't do to run out here.

"Trucking's a tough business," he mutters to himself.

The powerful diesel engine roars on, punctuated by the rhythmic thud of highway cracks passing beneath 18 heavy wheels. The competitive challenge, the thrill of meeting goals against the odds, those are the rewards that drive him on. Most of all, though, he revels in his knowledge of the country. No one knows the U.S.A. quite like he does. From Miami, Florida to Bangor, Maine—from Norfolk, Virginia to Seattle, Washington, he's been there.

"No one knows more about the country than a trucker," he muses.

For now, he's forgotten history class. There's only the truck. Yes, he'll have to stop for English 7 in a few minutes, but at this moment he's out on the road and he's in charge. What more could a seventh grader want?

The ability to capture a child's mind and involve him or her completely in the learning process is the greatest strength of educational computing. Properly designed educational software demands a student's attention. Like the perfect private tutor, it adjusts to each individual's abilities without criticism or condemnation. Like a doting parent, it remains infinitely patient. Like the family dog, it's always ready for action but holds no grudges when ignored. Like a best friend, it never tattles.

But the benefits of computing don't come prepackaged with the hardware. Alone, computers and software can do little. Only in concert with concerned and involved people—parents, teachers, or just friends—can home computing work its magic.

Those who feared computers would become a substitute for personal contact had it all wrong. Today's best software inspires people to work together, to share information, and to cooperate to achieve a common goal. Rather than limiting horizons, it expands them. If parents and children together can study map-reading skills and geography, while imagining themselves playing a game, so much the better. If they can travel to imaginary places and cope with imaginary problems while enjoying every minute of the

process, who cares if it's a game?

People learn best in an interactive environment that draws them so completely into the joy of experience that learning becomes an incidental byproduct rather than an oppressive purpose. Thus, in honor of Didatech's *CrossCountry USA*, I propose a memorable (I hope) name for this not-so-new-or-profound but too-often-forgotten truth—The Peterbilt Principle.

Since its release, *CrossCountry USA* has become so popular that the company now offers several similar trucker simulations including *Crosscountry Canada*, *Crosscountry California*, and *Crosscountry Texas*. Last month we discussed Brøderbund's classic *Where in the World is Carmen Sandiego?* (available for most home computers). Carmen Sandiego can also lead you around the U.S.A. (*Where in the USA . . .*) and Europe (*Where in Europe . . .*). Each provides hours of educational fun and demonstrates educational computing at its best.

Whether or not you plan a real-life trip this summer, geography simulations add meaning to the study of faraway places. In addition, you'll find plenty of additional travel-related software suggestions elsewhere in this issue.

But you don't necessarily need specialized software to involve the entire family in trip planning.

Why not write a letter to the Chamber of Commerce in the city you plan to visit? The writer will improve his or her word processing skills, and the family will receive helpful information about important tourist attractions in the area. Who knows? Someone might even want to publish a newsletter to highlight the best and the worst of your travel experiences. Creating a database of towns, restaurants, and motels that you visit might be fun. If you're traveling outside the U.S., why not collect foreign coins? Databases are great for keeping track of collections.

Family trips provide innumerable opportunities for learning. Some things just cannot be taught as effectively in school. Whether or not you have a home computer, a bit of planning and thought beforehand can double your pleasure, double your fun, and double the educational benefits. Why not give it some thought? □

David Stanton can be contacted via CompuServe (72407,102) or by mail at P.O. Box 494, Bolivar, New York 14715.

continued from page 8

(Mindscape), and Bill Stealy (MicroProse) managed to liven things up. It may not have been the Oscars, but as one unidentified observer noted, "It's all we got."

The awards themselves illustrated how far the Macintosh has come, for Mac software captured 16 of the 26 awards, while the recipients of the Andrew Flugelman Award, presented to programmers who had made a significant contribution to the community, were creators of Macintosh programs (Flugelman winners were Bill Atkinson of *HyperCard* fame and the programming team which created *PageMaker*).

But like the awards in the movie biz (ask Stephen Spielberg about this one), SPA awards don't always go to the most popular or the best-selling software. Left out of the fun were such hits as Microsoft's *Excel* for the PC, Electronic Arts' *Chuck Yeager's Advanced Flight Trainer*, and Epyx's *California Games*. — GK

DeskMate Mates Mac-like Look to MS-DOS Machines

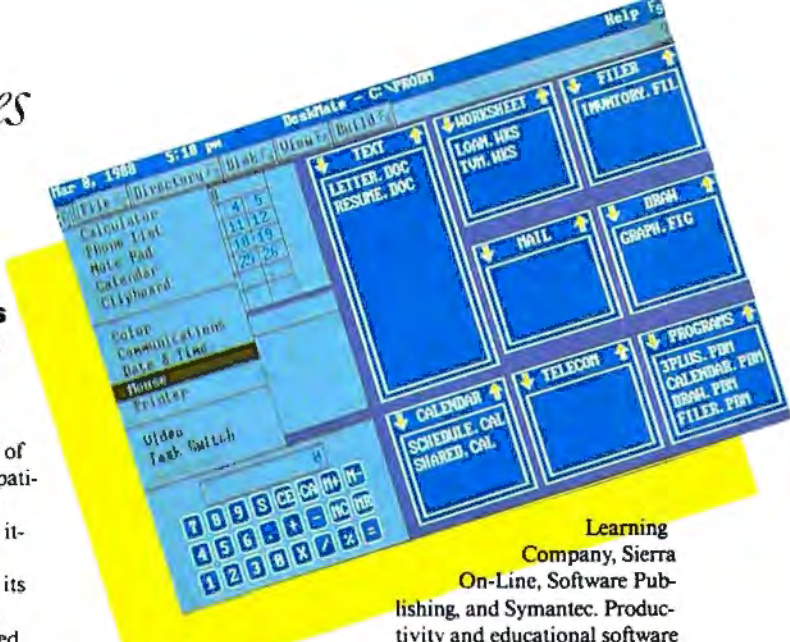
Tandy Corporation, maker of inexpensive IBM PC-compatible computers, has kept its *DeskMate* user interface to itself for the past four years, bundling the software with its machines or putting it into some models' ROM. Offered in two versions—one text-based, the other a graphics-intensive look that uses tiled windows and menu selections—*DeskMate* was one of the hottest topics of conversation at the Software Publishers Association Spring Symposium (SPA) in Berkeley in late March.

During a month which saw Apple bring suit against Microsoft and Hewlett-Packard for alleged copyright infringement of the Macintosh's graphics interface, Tandy's announcement that it was basically giving *DeskMate* away was welcome news to software developers. Several publishers announced that they were lining up behind

the *DeskMate* banner. Some said that they would have *DeskMate*-compatible versions of their MS-DOS programs ready as early as this summer.

Tandy is licensing *DeskMate* to third-party developers at no charge, and has explicitly said that the license comes without any strings. Along with the license, Tandy is making available what it calls the *Tandy Core*, a group of assembly language routines which make it much easier to write *DeskMate*-compatible software.

Some of the publishers hitching a ride on *DeskMate* include Brøderbund, Electronic Arts, First Byte, Intuit, The



Learning

Company, Sierra

On-Line, Software Publishing, and Symantec.

Productivity and educational software will be the first brought to the *DeskMate* environment, it seems, with such packages as Intuit's *Quicken*, a financial management program, and Sierra's *HomeWord* word processor being good examples.

DeskMate's proponents hope that it can bring the same commonality, the same "look and feel" to MS-DOS software that the Macintosh interface has brought to that machine's programs. When software shares common features—when all programs use the F1 key for online help, for instance—then learning time is cut and moving among applications becomes much easier.

It's possible that Tandy, with its marketing muscle and line of low-priced machines for the home user, can bring some sense to the MS-DOS world. And as some of the SPA attendees noted, it's about time.

— GK

And the Winners of the SPA Excellence in Software Awards Are . . .

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Best Creativity Program
Best Simulation Program
Best Program for Higher Education
(Reality Technologies)
Best New Use of a Computer
Best Home Learning Program

Best Utility
Best Educational Program
Best Business Productivity Program
Best Entertainment Program
Best of the Best

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Softwhere?'s first service



is locating software that meets a user's particular needs. To take advantage of the location service, you simply tell Softwhere? exactly what you want the software to do and what kind of computer equipment you have. The firm then searches its database of more than 27,000 commercial, shareware, and public domain sources to find the right product for you. If Softwhere? is successful in the search, you'll get all the necessary information you need to acquire the product yourself. The charge for this service is \$69. If Softwhere? can't find a product to meet your needs, there's no charge.

Softwhere?'s second service is a bargain hunter's delight. The company maintains a list of the top 50 software packages (based on the Softsel Hot List) along with the

sources for the best prices. Its *Bargain Report* is published every two weeks and sells for \$19. (Online editions for Dialog and Delphi are in the works, with fees of \$2 or \$3 planned for the service.)

According to Softwhere?'s Deepak Puri, "Prices for a product can vary as much as \$200. On the average, Softwhere?'s *Bargain Report* can save people \$40-\$50 per purchase."

— CK

Disney Fans Boot Up at Home

Mickey may not have asked the questions, but Disney World polled people on computer ownership nonetheless.

Not surprisingly, visitors to Disney's Epcot Center—the electronic world of the future—are above the norm

when it comes to computers. Nearly one-third of all Disney World visitors have a home computer, Mickey and his friends found. That's clearly above the national average, which is less than 20 percent.

Respondents from the Northeast are most likely to have a computer in the home—32 percent have one in the house. The least likely owner comes from the West,

the poll showed.

IBM PCs or PC clones are more popular than other machines—28 percent of the respondents who own a computer have one that uses MS-DOS. There's a tie for second, with Apple and Commodore computers (neither broken down into separate models) each represented by 21 percent of the computer owners.

— GK

Out of the Dugout, Onto the Field

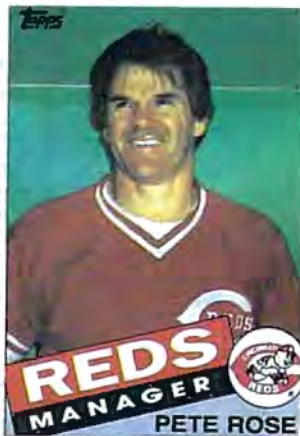
Pete Rose pitching? No, not from the mound, from a press release. He's pitching a new baseball simulation program called *Pete Rose Pennant Fever*.

The major league baseball hit leader has teamed up with Gamestar, the sports software division of Activision, to promote the new product. Rose's participation in *Pennant Fever*'s development has provided the game with his special flavor of baseball: his philosophy, his playing style, and his strategy. The game challenges players to guide an expansion team to the league championship.

"I want this game to put you right on the field rather than in the dugout," Rose said. "Because the real difference between winning and losing is not in what you know, but in what you do. Statistics don't mean a thing when you're standing at the plate facing a 90-mile-an-hour fastball."

As Gamestar describes *Pennant Fever*, computer players are standing on the field instead of sitting in "great seats" somewhere north of Alaska.

Pennant Fever allows sports fans to hit fastballs, steal bases, catch fly balls, and



pitch—without balking. Players also act as field managers, calling pitches and plays, and controlling lineups and substitutions. As *General Managers*, players draft team members while controlling expenses. Rose's own game strategies will be available in the program.

Gamestar plans to release the game for MS-DOS and Tandy personal computer systems in the midst of baseball season, August. A version for the Commodore 64/128 is scheduled for release in November.

— HA □

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//// // // // **■** *conversations*

John Roach, Tandy's CEO and chairman, is proud of pointing out that his company has been in the personal computer business just about as long as anyone. The first Tandy machines came out within a few weeks of the first Apple computers, well ahead of the IBM PC. Over the past decade, Tandy has kept pace, releasing computers that span the MS-DOS marketplace, from entry-level systems to state-of-the-art 386 machines. Lately the company has expanded into software, with the release of its *Professional DeskMate* for the entire MS-DOS market.

For close to a decade, Tandy's operations have been guided by John Roach, a businessman who has more than a small share of vision and determination, leavened with a large dose of salty humor.

We visited Mr. Roach in his Texas-sized office in downtown Fort Worth recently, and laughed and listened our way through the sorts of strong opinions one would expect from the head of one of the world's biggest personal computer manufacturers.

IBM's Prospects and Strategy

It's really hard to know where IBM's headed—for us or for IBM. The best news of the reorganization [IBM's] is that right now everybody's trying to grab a lifeline and hold on. They'll be in that mode for awhile.

But as I've said over the years, you don't ever want to make an elephant mad. A mad elephant is hard to beat. My sense is that IBM is now mad.

They've taken a lot of flak in the media, and rightly so. They would like for the world to think that PS/2 is great, and yet the world's not sure that PS/2 is great. Why is the 'greatest hardware known to man'



John Roach, CEO of Tandy Corporation

Windows on John Roach

Keith Ferrell



widely discounted, and now, 10 to 11 months later, sold at almost ridiculous discounts? They bragged about shipping a million units by November—well, hell's bells, if you didn't *plan* to ship a million units last

April, you couldn't ship a million units by November. That was already in the game plan . . . which tells you that it's not market-driven, but that it's IBM-driven.

The biggest marketing errors they can

make, like they did on the PCjr, is flooding the market with product. The PCjr was a successful product. The problem was that it only sold a few hundred thousand a year. Anybody else would love to have a product that sells a few hundred thousand a year. But that's a disaster when you plan to sell a million, million and a half a year.

IBM has a great reputation for being a market-driven company, but I'm not sure they're letting the market drive their product right now. Why, if you own Model 25s and 30s, and the 25 is known not to be selling very well, do you announce that you're going to put 286s in all those boxes?

I don't know anything about marketing, and I don't know anything about merchandising, but I damn sure wouldn't go around if I had a warehouse full of something and say I'm going to do something different. And then they say, "That's nothing—we're going to put 386s in everything." They've got diarrhea of the mouth.

The thing that they're achieving, though, is that they're clearly just taking up all the space on the shelves. You can't even walk through some of these stores for all the blue boxes, so you don't have any room for any other color boxes. Computer stores buy IBM because they have to, and they buy Apple because they're selling it, and everybody else, with the possible exception of Compaq, can go to heck.

Since we don't have all those in our stores, we don't have to worry about it.

Apple
Apple's always been a formidable competitor. They're doing a great job. Really, in the 32-bit world, they're better positioned in many respects than the MS-DOS world is right now, and they're taking good advantage of it.

While there's a number of people who think it would be a good idea, Apple has made it very clear that they don't have a high level of interest in the clone world or compatible situations.

I'm not going to say we're *not* going to do it. We sell an Apple II-compatible board for the PC, and we sell a fair number of them.

Home Market Denied by Apple Head John Sculley

Let him deny it. He's the only other person that's well-represented in the home market, and if he wants to abandon it, it's all right with me.

I don't think it's a market to be shied away from. We sell an awful lot of computers into homes.

Tandy in the Business Market

We've not been totally happy with the way we've penetrated the large account, *Fortune* 500 market.

At times, I've wondered why you'd want to penetrate that market in the first place. Those are the guys who want the biggest discounts, and every salesman in town can find the tallest buildings, so it's fraught with problems. We continue to do nice pieces of business there and have some ideas about how to increase sales.

The small- and medium-sized business is very important to us. We're really organized to make money selling one at a time; if you sell more than one you're ahead of the game.

We've sensed there's been a large home office market for some time. It goes a little bit beyond computers for products that people buy from Radio Shack. Telephone answering machines and some of the other

products we sell, are often used in the home office. Bernie Appel, Radio Shack's president, has said that we'll be in the fax business before this year's over.

There's a market there, and it's a nice market—it's a huge market. But I go to these electronics shows and see the emphasis that Japan, Inc. and some of these people are placing on this market, and it's not quite that big. Some of these people are barking up the wrong tree.

Market Share

For the last two years, according to Infocorp statistics, our unit sales and Apple's unit sales have been in almost a dead heat. During the December quarter, retail, their [Infocorp] statistics indicate that we sold 34 percent of the units that were sold at retail. We sold more than IBM and Compaq combined.

Research
We do our research in lots of places. We've got several floors [in Fort Worth] doing development work in the computer area. We have development groups that are associated directly with some of our manufacturing plants, and we have three major development groups in the Orient.

We're doing a lot of things in the U.S. That's a good buzzword at this point—apple pie, and all that stuff. But you've really got to be a world-class manufacturer to succeed, because the infrastructure is important. There's a good infrastructure for building microcomputers in this country: plenty of design engineers and technicians, plenty of semiconductor suppliers, plenty of technical expertise to provide the assistance that you need.

But put on your stereo receiver hat. There's not many engineers, there's not any special parts or parts suppliers to help you. You can build one almost anywhere in the Orient easier than you can build one in the U.S. So while we'll be opening a minimum of three manufacturing facilities in the U.S. this year, we're also expanding our activities in mainland China, putting more into Korea. We do about the same amount of automation in the Orient as we do in the U.S.

DeskMate
Professional DeskMate is a user-friendly shell, if you will, that completely isolates you from MS-DOS. You get no A prompt, blink-blink-type requests.

Instead, you get a number of very easy-to-use options. The conventions are similar to the Mac or *Windows*. In a networking sense, whether you've just got two computers tied together via the RS-232 [serial port] or they're tied together via EtherNet [a high-speed network], you use the same user-friendly interface.

It gives you a shell where you can have our program or somebody else's programs ready to go.

I think *DeskMate* will establish a user interface on the lower end of the market. It only takes about 100K of memory. Something like *Windows* takes forever. OS/2, *Windows*, *Presentation Manager* are exciting things, but—my word!—you need a desk full of memory to be able to run the things. The significance is not the size of the computer but that you're really talking about \$5,000 and up machines.

There's an awful lot of people in this world who would like to have computers they can easily use without spending that much. You'll see us doing more things of this type in our product line as time goes along, all aimed at making computers a lot easier to use. Not just a little easier—a lot.

The Challenges of Running Tandy

We've got a very easy business.

We get up in the morning, and the only thing we have to do is figure out how to beat IBM, Apple, AT&T, and Japan, Inc. □



levitations

Tax Prep Software Only Makes It Easier to Put Off Filing Until the Last Minute

continued from page 92

of the billion-dollar litigants involved, the case has inspired an incredible amount of press coverage. Everybody has an opinion on who or what is Apple's "real" target, since a cursory look at Apple's charges shows that they seem to lack substance. Given that much attention, I suppose it was inevitable that the press itself would become polarized into two warring factions.

There have been charges that the real target of the Apple suit is IBM and that Apple hopes to delay the introduction of their Extended Version OS/2 operating system by muddying the legal waters. The most bizarre statement I've read came from a well-known columnist who portrayed Apple as a pack of scurrilous price-gouging knaves, contending that "Microsoft, Hewlett-Packard and, of course IBM with OS/2 and *Presentation Manager* . . . are nearly ready to give the world what it's been waiting for: reasonably priced personal computers with good mouse/icon/windowing user interfaces."

Is this guy talking about the same OS/2 and *Presentation Manager* that I'm thinking of? The last time I checked, the sloth-like performance of the *Presentation Manager* version of OS/2 will make a \$5,000, 80386-based PC with three to four megabytes of memory de rigeur for OS/2 *PM*. Let's not forget the \$800 for the Extended Edition of OS/2 itself, either.

I believe that everyone has misinterpreted the intent of the Apple/HP/Microsoft debacle. I have it on good authority that Apple's corporate psychics (a holdover from the Steve Jobs days) recently detected traces of malevolent beings from another galaxy monitoring this planet. According to one of these rare California mediums, the onerous aliens are sniffing and snuffing out the presence of life forms that could evolve into any sort of threat in the future. Apple's actions and the rumored IBM PS/2 clone legal proceedings scheduled for later this year are really part of a concerted effort to convince the extraterrestrials that the earth harbors no intelligent life forms.

Personally, I'm as tired as the next guy with the legal tangles that stall the advancement of new computer software and hardware. It will likely be years before all of the issues raised by the Apple/HP/Microsoft suit will be resolved, and the only ones likely to benefit are corporate lawyers.

Since the entertainment value of the Apple suit has been just about played out, why not settle the whole thing out of court? During their last convention, members of

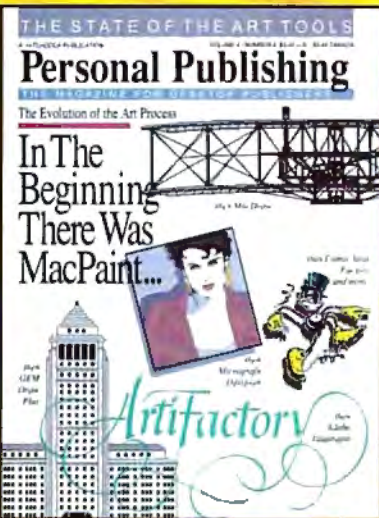
the Software Publishers Association talked about involving the Association as a mediator in binding arbitration between the litigants. However laudable the concept may be, the SPA is regarded by many industry watchers as being too close to the issues at hand to be a truly impartial arbiter.

Why not get a totally neutral body that has abundant experience in conflict resolution to bring an end to the debacle? Get an organization that has a proven track record in bringing contentious parties together for the resolution of grievances. No, I'm not thinking of the National Labor Relations Board or the American Arbitration Committee. I'm talking about the WWF—the World Wrestling Federation. Although WWF president Vince McMahon hadn't returned my call as we went to press, I've already received widespread support (my kids think it's a great idea) for the concept of *WrestleMania 0101*.

The wrestling-microcomputer connection has been a matter of record since King Kong Bundy became the official spokesperson for Vendex computers. The whole Apple/Microsoft tangle bears an amazing similarity to the relationship between Hulk Hogan and André the Giant; once ardent supporters, now mortal enemies for a reason that no one can fully comprehend. Think of the expanded possibilities for press coverage: A horde of correspondents trails Bill Gates in training as he's whipped into fighting trim by trainer Randy (Macho Man) Savage. John Sculley would surely have to counter that with his own intensive conditioning program, bringing Rowdy Roddy Piper out of retirement to be his corner man.

The attendant publicity and hype approach fever pitch as the day of the match approaches. Bill Gates and John Sculley dolls join G.I. Joe and He-Man on the shelves of toy stores across America. The arch-rivals continue to taunt one another at satellite-linked concurrent press conferences held in Cupertino and Seattle. The two vow to body-slam each other until they can't tell an icon from a DOS command line.

I can't predict the victor of the match, but one positive thing will arise from the smoke and ashes of the ring: As a result of the successful resolution of the conflict, computer manufacturers will replace their PR flacks with WWF managers. Being cornered at a trade show by Bobby (Weasel) Heenan or Jimmy (Mouth of the South) Hart will be a lot more entertaining than getting full-nelsoned by the smiling synthohumanoids currently in fashion. □



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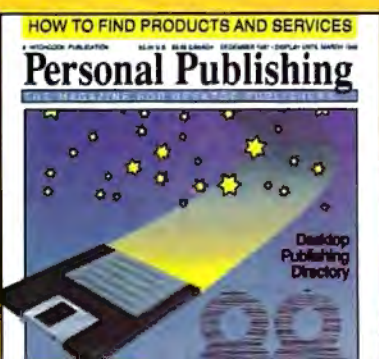
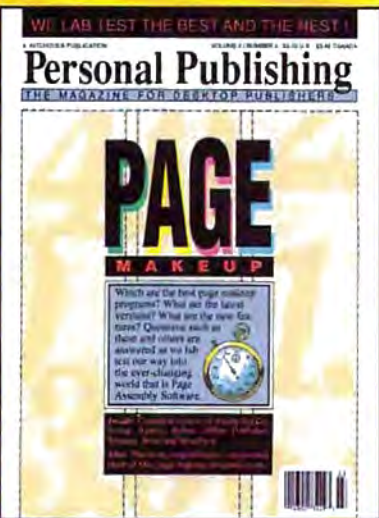
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levitations

ARLAN LEVITAN

Well, it's April 15 and I've been staring at the ceiling for a couple of hours now, trying to decide whether to attack my income tax return or this month's column. Both are due today, and at 4 a.m., each seems fraught with a bewildering number of choices. However, given the fact that I'm already four days past deadline and my editor has started to make noises that sound like a pit bull terrier, I've decided to let the 1040 wait until later. Besides, I can look forward to standing in line during a raging thunderstorm with a couple hundred other under-the-wire loonies at 11:59 p.m. outside the post office.

Even if I decide to dive into the two-foot pile of receipts and forms I collected last year, I've got a dozen or so tax programs for the various computers littering my office, each program purporting to be easier, more complete, and more up-to-date than the rest. One even seems to be modeled after the IRS's toll-free question line; it gives me the wrong answer a little over half the time and bases my tax rate on sunspot activity and the winner of the last race at Hialeah.

To be perfectly fair about it, tax preparation software has simplified things by making it easier than ever to rationalize putting off filing until the last minute. After all, everyone knows that there's a minimum of four new releases of each program between January and April. Don't we owe it to ourselves and the government to wait until the last minute and make sure we've got the most bug-free version? How would you like to file early and find out three months later that the program you used had a few tiny mistakes in it—mistakes that sent a flock of IRS agents knocking on your front door?

At the beginning of last year, I resolved to make the tax process a bit less painful by computerizing our budget so we could easily track tax-deductible items. Like thousands of other well-intentioned computer owners, I purchased a whiz-bang money management program to automate expense- and income-tracking. After a couple of months of faithfully entering every debit and credit, the program dutifully informed me that I was out of money at the end of every month. I knew that without the help of a computer. The computer *did* detail exactly where the money went, something I found infinitely more depressing than my prior state of blissful ignorance. The program did allow us to enhance our deductions for the year—we donated it to our local library.

One thing we learned from our in-depth

financial analysis was that the dismal economic condition of scores of hobbyists is directly and indirectly related to their computers. Many computer owners overspend simply because they fail to include the cost of "payback" items in their equipment budget. You've all been through the procedure: No sooner do you set up your latest computer toy than your mate or significant other materializes an item whose equivalent value is always just a few bucks less than your purchase.

I'm convinced that my wife and most other computer widows and widowers subscribe to an "insider" newsletter that relates computer equipment to popular household and personal items. The current exchange rates are probably something like:

Entertainment software = one pair of shoes
Amiga 500 = four-panel Chinese lacquer screen
Amdek CD-ROM player = 4 × 6 foot Persian rug
Compaq 386 Portable = Henredon Rittenhouse Square dining room set

The process does have value, since it tends to limit your computer purchases through the technique of MAP (Mutually Assured Poverty). Once both sides have stretched their resources to the limit, the disarmament process begins. Both parties promise to sell off those items they really didn't need in the first place. As the sell-off progresses, the cash reserves grow until we think of new items to purchase so that we'll be able to decide once again in the future that we really didn't need them in the first place.

Most computer companies used to spend the majority of their time producing the things that we can't live without today, but will be able to live without tomorrow. But if recent events are any indicator, many may be devoting more energy to slugging it out in the courtroom than developing new products.

Last March, Apple Computer stunned the microcomputer world by filing a suit charging Microsoft and Hewlett-Packard with unfair competition and copyright infringement. According to the Apple suit, *Microsoft Windows* version 2.03 and H-P's *Windows*-based *New Wave* user interface violate Apple's copyrights on their Macintosh computer's visual displays. Microsoft, in an exercise of legal courtesy, countersued Apple.

While it's tough to sympathize with any

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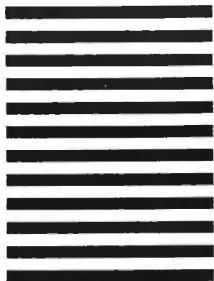
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