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SILICON GULCH GAZETTE

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Nippon Semicon Has Yen to be Chipper

SANTA CLARA — Despite a softness in the economy, Japan's productions of integrated circuits (IC) this year should exceed the 1.75 million units manufactured in 1979, according to Robert Silin, director of consulting services for Bank of America's Hong Kong-based merchant bank BA Asia Ltd.

Addressing the fourth annual forecast dinner of the Semiconductor Industry Association in Santa Clara, California, Silin said it appears likely that Japan will again repeat its strong export performance in 1980.

Last year Japanese exports rose more than 100 percent in terms of value, while increasing 63 percent in unit terms — statistics which reflect a rapid decline in prices, he explained.

"Exports will rise over 60 percent in value and about 50 percent in unit terms," said Silin, author of the BA Asia study "The Japanese Semiconductor Industry 1980." In 1979 the U.S. accounted for 22 percent of all units shipped abroad by Japan, a pattern that Silin said is continuing this year. "Although first half-year data suggests that the trend has been slackening due to weaker prices," he pointed out.

The BA Asia consultant told the 700 American Semiconductor Industry representatives attending the dinner that — despite a sluggish economy and saturated demand in some market sectors — the Japanese IC Industry would probably continue spending money on expansion. "If past experience is any indication," he said, "economic downturns in Japan do not lead to significant downturns in capital expenditures."

Silin's comprehensive study for BA Asia, published last May, documents total 1979 investments by Japan's top ten producers at 109 billion yen, a 67 percent increase over the previous year. "This will rise again in FY 1980 to about 140 billion yen," Silin predicted, "up about 28 percent. In fact," he added, "I would suggest that the non-captive market in Japan has been expanding more quickly than market size."

Silin said he expects the share of IC products that Japanese manufacturers will ship to the United States this year to remain stable at about one-quarter of total production. The remainder will go to

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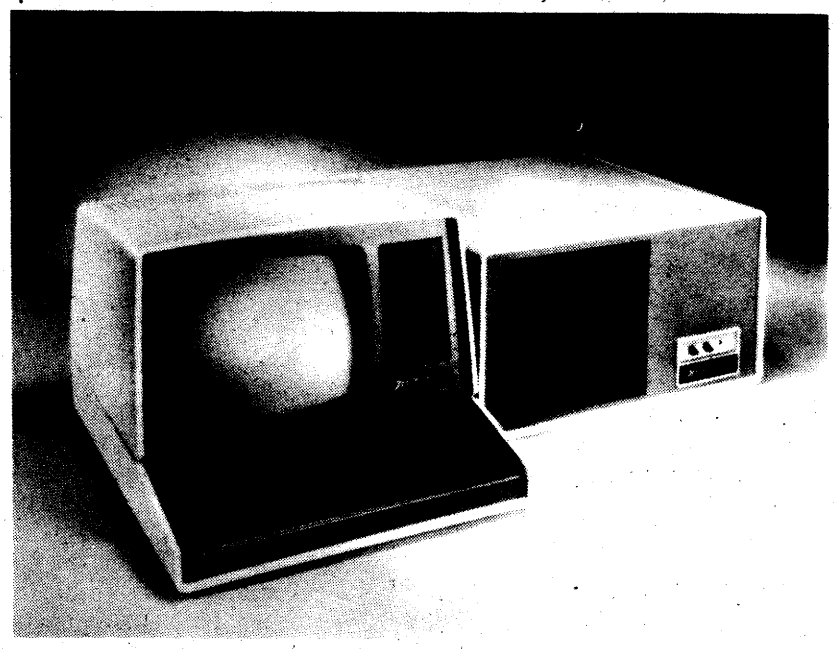

Zenith Enters Micro Market

Zenith Data Systems' first 8-inch, dual-sided, dual-density floppy disk system, the Z-47 (shown at right). Designed for use with the ZDS Z-89 microcomputer system (left), the Z-47 can provide up to 2½ million bytes of data and program storage when used with the ZDS microcomputer built-in 5¼-inch disk drive. Allows operating system and program disks to be run at the same time for faster, more efficient data access, providing greater flexibility for a wide variety of business and professional applications.

The new Z-47 also provides: average data access in 191 milliseconds; new software capabilities, including both CP/M and HDOS; easy data transfer between 8-inch and built-in 5¼-inch disks.

For more information, write or call, Zenith Data Systems, 1000 Milwaukee Avenue, Glenview IL 60025, (312)391-8181.

Standard & Poor to Show Stockpak at 6th Faire

Standard & Poor's Corporation, the Wall Street data analysts, will feature its new microcomputer-based stock analysis program at the 6th Computer Faire.

According to Phillip A. Ellenberg, S&P Marketing Manager, personal computer owners can now combine the expertise of Standard & Poor's with the latest analytical methods of Wall Street to help them buy and sell stock, and to manage their portfolios.

S&P's new four-diskette software package, called STOCKPAK, provides a wide variety of S&P-generated screens. These screens, plus the ones users generate, allow the personal computer owner to duplicate the professional investment strategies used by the financial community.

The S&P diskettes are available through Radio Shack outlets and are designed for users of TRS-80 computers.

The four elements of STOCKPAK are:

Portfolio Management System (Diskette 1) contains the software for the maintenance and control of a portfolio, or a simulation capability for any group of securities to be evaluated.

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Report Writer System (Diskette 3) creates customized reports of stocks meeting user-selected criteria, along with additional pertinent information from the data base.

Demo Data Base (Diskette 4) contains a 900 common stock data base of the most widely traded stocks, with 30 vital financial items on each of the companies. Optional monthly updating is available.

STOCKPAK costs $49.95 at Radio Shack outlets. An annual subscription to the monthly update service is $200. The service is available through an order form in the software kit, or by mail or phone order, directly from Standard & Poor's, 25 Broadway, New York NY 10004, (212)248-3374.

Micro Slots for Small Change

Van Nuys, CA — Summit Distributing Company announced today that, subject to formal approval by the New Jersey Casino Control Commision and Division of Gaming Enforcement, it has received an order for approximately $1.5 million for the purchase of Summit's new microprocessor-controlled slot machines. These slot machines will be installed in the proposed Playboy Casino in Atlantic City scheduled to open in early 1981.

Summit Distributing Company is a joint venture owned by Summit Systems, Inc. (OTC-SLOT), and Elsinore Corporation (Amex-Elsinore).

Summit's first sale of its microprocessor slot machine conversion package was to the Four Queens Hotel and Casino in Las Vegas and Club Cal-Neva in Reno, which totalled approximately $1.2 million. The Nevada Gaming Commision has granted its approval of the product and installation is currently under way.

Delicious Digital Dialogue

Jim C. Warren, Jr.

To please the palate of today's discriminating digitizer, we offer a mixed brew of facts, rumors, and (probable) fiction, fermented in our mountaintop still atop the beautiful, brown-aired Santa Clara Valley — where silicon grows and ripens under the watchful eye of vulture capitalists.

RUNNING IN CIRCLES

We have recently purchased one of the new Diablo 630 daiseywheel terminals through Micro Age of Phoenix. It's delightful! Unlike the previous daiseywheel we had (not a Diablo), the designers did a number of things right in this terminal.

The first noticable feature is that it works . . . consistently. We plugged it in, turned it on, and it's been running — without failure — ever since. There are plush features like a temporary-advance button which causes the paper to advance so the user can read the copy that would otherwise be hidden by the print wheel. When the button's released, the paper obediently backs down to its original position.

Then there's switch selection of

continued on page 4

Credit Card Micros

The future for credit cards with built-in microprocessing computers will be examined in a study recently proposed by Battelle Memorial Institute.

According to Richard J. Darwin, who heads electronic fund transfer research at Battelle's Columbus Division, these "memory cards" could revolutionize payment and transaction systems. They could be used, for instance, by industry, government, retail stores, libraries, or hospitals for payment services, record management, ticketing, or inventory control.

Developed in Europe, the wallet-size credit cards contain microprocessors or other electronic circuits with built-in memories and logic functions. Capable of replacing cash and other forms of payment methods in a secure way without using large computer networks, the cards soon will be introduced in pilot marketing projects in Europe.

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Family Reunification Tries to Get It Together

Would you like to be part of a 4000 micro/mini computer network around the world, at no cost? Try this for size.

Various agencies (U.N., etc.) are trying to 'find' people. These are 'Boat People' who fled the Vietnam area and are now someplace around the world.

Family Reunification Services is an agency that tries to find them by means of sorting/matching through small lists of names, via computers.

The data comes to you in the form of a list (you have to key information into your system), a tape or via phone. Choice is yours.

Interested?

Drop them a line for details, indicating system, etc. you own: Family Reunification Services, 7203 Huntercrest Road NW, Calgary AB, Canada T2K 4J9.

Data Processing Jobs on the Up & Up

The three job titles most in demand today are all in data processing, according to a new survey.

The survey asked heads of the management-level personnel agencies that comprise National Personnel Associates, a network of 237 agencies in 145 cities, to rank job titles that increased in demand in the past six months.

Of 106 occupations listed, survey respondents identified programmer as the number one job in demand. Number two is systems analyst. Number three is electronic circuit design engineer, the person who designs the circuitry of computers and other equipment.

Respondents ranked mechanical engineer, the person who maintains and suggests improvements on computers and other machinery, as fourth in demand. This was followed by technical salesman, cost accountant and electrical engineer.

Survey respondents also supplied reasons for the increased demand for data processing people, the background employers look for and advice for computer employees who want to further their careers.

"The increased demand for computer personnel was caused mainly by the perfection of the micro-processor," said Robert C. Rourke, President of National Personnel Associates, who also heads Dealy-Rourke Personnel, Nashville, Tenn. "The micro-processor made computers available to many new businesses, such as car dealers and attorneys, and the use of computers grew rapidly when companies realized how much they could cut costs."

The demand for programmers increased with the growth of service bureaus that hire them out to companies that need projects completed in short periods of time, according to Lanny Brown, Vice President, Bossler & Associates, Inc., Topeka, Kansas.

A B.S. in computer science is a real plus on an applicant's resume, according to survey respondents, but Rourke pointed out that an Associate's degree in data processing carries a lot of weight, unlike many other A.A. degrees.

"Programmers with 2-5 years experience have a strong hiring advantage over recent graduates," said Clive Holloway, Director, Holloway, Schulz & Associates, Vancouver, B.C. "Companies are looking for people who can become immediately productive."

Programmers who can manipulate different computer assembly languages, like cobol or fortran, and who have developed a background in general management information systems are particularly sought after, reports Jean Fitzgerald, Manager, Godwin Personnel Services, Inc., Lake Charles, Louisiana.

Rourke advises programmers to go from programming to systems analyst to management. "The sky's the limit in advancement because employers like a programming background," he says.

Rourke also recommends that programmers get experience with manufacturers because they offer higher salaries than do service employers, like insurance companies, and provide a better jumping-off point for further jobs. The ideal first job is in a business-applications program that includes payroll, inventory, accounts receivable, etc., he says.

He adds, "Large manufacturers will also provide experience with large systems, such as the IBM 370's or an opportunity to become a part of the growing telecommunication and data communication systems."

Lastly, Holloway said that a programmer should keep in touch with developments in mini-computers and micro-processors. He should subscribe to at least two technical journals and spend at least 2-3 hours a week reading on advances in computer technology.

Proceedings Paper

Starship Simulation's Stellar Stimulation

For thousands of years, people have looked at a clear night sky and wondered how it would feel to leave this planet and travel out into a sea of stars.

What would it really be like to be a part of the crew of a galactic cruiser? With the use of computers, within the context of a complete sensory environment, Marin Computer Center is creating an opportunity for people to find out.

Through the auspices of a grant from the San Francisco Foundation, Marin Computer Center has been putting together a full-scale, operational bridge of an interstellar vehicle. At the 5th Computer Faire, David and Annie Fox described the why, what, who, and where of the Starship Simulation Project.

The underlying philosophy of this simulation, they said, "is that all life forms are intrinsically worthy of respect. It is unethical to destroy either these life forms or their creations. The ship has a wide range of technological devices, but no *weapons*. There will always be at least one or two workable alternatives to the use of violence. For example, if the players viewed the *enemy* as someone whose goals conflict with those of the Starship, then the conflict might be resolved by discovering a way to expand the Starship's goals to INCLUDE those of the *enemy*."

5th Faire Proceedings Useful and Available

If you'd like a record of what took place at the Conference Sessions of the 5th Computer Faire, it's available to you in *The Best of the Computer Faires, Volume V:* Conference Proceedings of the Fifth West Coast Computer Faire.

The book's 251 pages contain 44 articles, divided into 17 special interest sections. These include subjects like Tutorial for the Novice, Artificial Intelligence & Micros, Computer Games & Computers in Education, Low-Cost Computing for Education, Medical Computing, Business and Low-Cost Computing, etc.

Each book is approximately 8½" X 11", perfect-bound, in printed stiff paper covers.

Some back issues of proceedings for previous Computer Faires are still in print.

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the Gazette staff

Editor: **Mitchell J. Strucinski**
Advertising: **Will Brown**, **Steve Baker**
Production: **Vicki Rupe**
Past Visionary: **Guy Wires**

the Faire staff

General Staff: **Jim C. Warren, Jr.**
Exhibitor Coordinators: **Marguerite Brosing**, **Sarah Candelario**
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May Your Memory Bubbleth Over

Wellesley, MA — Those of us who have been waiting to see whether bubble memories were going to join plated wire and planar thin film technologies in the memory graveyard can be reassured by the new study issued by Venture Development Corporation entitled *Bubble Domain Memories II: A Strategic Analysis*.

The study notes that unexpected problems in producing this new technology have wreaked havoc with intended price cuts originally scheduled by leading bubble memory producers, and have stunted industry growth.

However, the study points out a silver lining. The bubble memories that are in the field are performing beautifully in commercial applications. Technical problems have been confined to production. Once shipped, the bubbles continue to work. Many would-be users are only waiting for prices to decline. VDC predicts that this time spokesmen for leading producers of bubbles will be right about price reductions.

VDC believes that bubble memory shipments will increase from $18.4 million in 1980 to $226 million in 1985, an average yearly increase of 65 percent.

The first major applications have been in areas such as numerical control of machine tools where dust and chemicals in the atmosphere make moving magnetic media unsuitable, and in portable terminals where resistance to shock is important.

VDC believes that small computers and word processors will be increasingly important applications. As prices of bubble memories decrease with larger volumes and more experience in producing bubble domain memories, the use of bubbles will shift from specialized areas such as adverse environments to more general memory applications.

The VDC report points out that competition among bubble makers will be as much, if not more, a matter of offering the best ancillary integrated circuits in convenient packages as in offering the bubble memory device itself.

Most companies offering or about to offer bubble packages are semiconductor companies, including Motorola, Texas Instruments, National Semiconductor, and Intel. Only Rockwell International, among those supplying bubbles or about to, does not specialize in semiconductor manufacture.

Two leaders in bubble memory research, Bell Labs and IBM, do not sell components on the open market.

Venture Development does not believe that floppy disk producers will feel a serious impact from bubbles because the bubble media is not removable at low cost. Bubbles will be able to replace one of a pair of floppy disk drives where large amounts of data are not required or where removability is not desired. Fixed head disk drives will be displaced by bubbles when the price drops to the area of 15 millicents per bit, probably in 1984.

For further information regarding this report, please contact Edward A. Ross, Senior Consultant, Venture Development Corporation, One Washington Street, Wellesley MA 02181, (617)237-5080.

How the Net Works and the Data Flows

Writing of "The Emerging Personal Computer National Information Utility Network," in the *Proceedings* of the 5th Computer Faire, Ron Jacobson pursues an historical and critical approach to the subject by reviewing the characteristics of some systems operating in the world today, and by trying to establish criteria for the systems of tomorrow.

Jacobson, of the San Francisco State University Broadcast Communication Arts Department, believes "our society is in transition, moving from a service- to an information-oriented economy. Within sight is mass usage of a public information utility network, where data flows from host computers into the home computer terminal as freely and easily as water flows from the kitchen faucet. The possibilities of such a communications system are tremendous, the consequences staggering. What is at stake is a revolution of our sensibilities and the way in which we live our lives."

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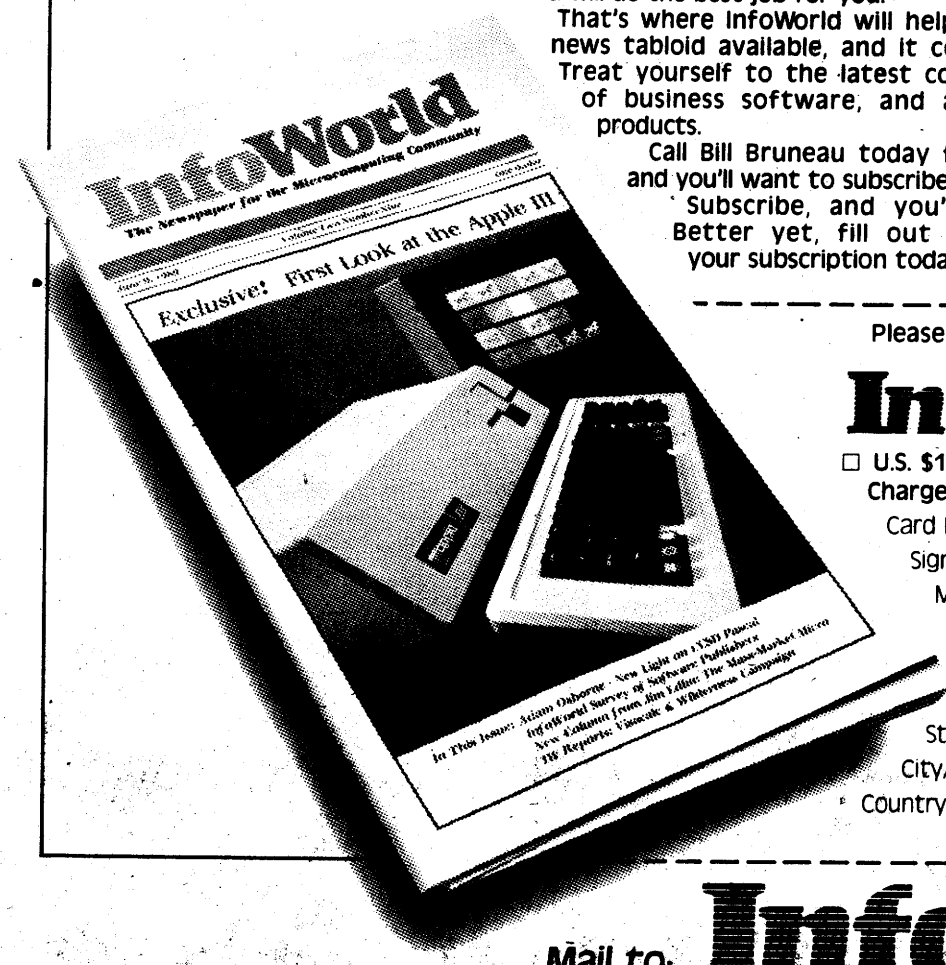

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Take Credit for Attending Computer Faire with Class

Courses scheduled in connection with Computer Faire.

Two short courses — "The Computer Faire and More: A Practical Introduction to Personal Computing" and "Computers for Education" — will be given in San Francisco by UC Berkeley Extension in connection with the Sixth West Coast Computer Faire in April.

Both courses are planned to help participants get the most out of the Faire, offering guidance on what presentations should be most valuable and what equipment to examine. Sessions scheduled before, during and after the Faire provide an opportunity for preview and subsequent evaluation of presentations and exhibits.

"The Computer Faire and More" is intended for people who have little knowledge of computers and will offer a general introduction to the subject with discussion of current and future applications. Emphasis will be on microcomputers.

This three-session non-credit course will meet from 7 to 9 p.m. Friday, April 3, at the UC Extension Center, 55 Laguna St. (off Market); from 8:30 to 10:30 a.m. Saturday, April 4, at the Computer Faire in the Civic Auditorium, 99 Grove St., and on Sunday, April 5, from 1 to 3 p.m. at the UC Extension Center.

Topics and speakers are:

•April 3: What is a computer?, what computers can and cannot do; present computer applications of use to the general public — speakers include Jim Warren, president of Wireless Digital, Inc., Palo Alto, and chairperson of the Computer Faire.

•April 4: Current uses of computers and how they do what they do, including an introduction to programming with a demonstration on a personal computer; what to look for in computer products — Richard Milewski, editor in chief, "InfoWorld," Palo Alto.

•April 5: Panel discussion of Faire exhibits with opportunities for questions and answers about product capabilities and specific applications of interest to course participants — Joan Lasselle (course coordinator), technical writer at Hewlett-Packard in Cupertino, accompanied by Jim Warren and Richard Milewski.

The second course, "Computers for Education," will explore classroom and other educational applications of low-cost personal computers. Academic credit may be earned.

The course will meet from 7 to 10 p.m. Thursday, April 2, at the UC Extension Center, 55 Laguna St. (off Market), and from 6 to 9 p.m. Friday and 5 to 7 p.m. Sunday, April 3 and 5, at the Faire in the Civic Auditorium.

Topics include classroom computing activities, specific applications for elementary and secondary schools, comparisons of available low-cost computing hardware and software, and sources of materials that can be used with a computer.

Course instructors are LeRoy Finkel, business education teacher at San Carlos High School and author of several books on Basic, and, William Wagner, mathematics teacher at Mountain View High School. Guest speakers will include Joanne Koltnow, computer consultant in Palo Alto.

Registration fee for each course is $85, which includes admission to the Computer Faire. For further details and enrollment forms, call 642-1061 in Berkeley or write to UC Extension, 2223 Fulton St., Berkeley CA 94720.

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Word Processing Is Evaluated

All About Word Processing Software, a new report from Datapro Research Corporation, compares 90 software packages designed to handle a variety of word processing tasks.

This 50-page report presents a general description of the overall capabilities of each package, plus the name of the vendor; computer model and processing requirements; operating system requirements; source language or compiler; source listing availability; master file sequencing; purchase and rental pricing; maintenance and documentation training support, and the number of users.

All About Word Processing Software, reprinted from *Datapro Reports on Word Processing*, is available for $15 per copy from Datapro Research Corporation, 1805 Underwood Blvd., Delran NJ 08075.

Proceedings Paper

Seeing What Ain't: Motion as Illusion

Motion illusions have fascinated the public at least since 1867, when Milton Bradley patented an animation toy called the Zoetrope or "Wheel of Life."

One of the earliest motion picture machines was made by Plateau, a Belgian vision scientist, in 1833. His device, the stroboscope, consists of a sequence of still pictures printed on a disk which are viewed as they spin behind a series of slits. He gave a prototype to a countryman, Quetelet, the founder of statistics, who eventually gave it to Michael Faraday. Shortly thereafter the stroboscope and related animation devices were widely sold as parlor toys for the children of Victorian intellectuals.

In the later half of the nineteenth century, the German scientists Helmholtz, Mach, Wundt, and Exner were among the first to make precise measurements of apparent motion. Exner's method was to present two separate successive electric sparks and ask observers to judge the order of presentation. His device is a forerunner of one of the most widely used instruments in vision research, the tachistoscope.

In "Seeing Motion with the Mind's Eye," Sam Hersh writes about contemporary applications (a smart tachistocope), the Phi Phenomena, and how the extraordinary ability of the mind to see motion where none exists is the basis for animated visual displays. For example, if two neighboring figures are successively flashed, the figures appear to move smoothly from one position to the other when the time interval between the flashes is between 30 and 200 msec. Many related phenomena can be demonstrated and investigated using an inexpensive video processor instead of standard electromechanical instruments which are less versatile."

DIALOGUE

continued from page 1

just about every type of daisey-wheel available — 88 character, 96 character, 10-pitch, 12-pitch, proportional spacing, metal wheels, plastic wheels, etc. The terminal's reasonably easy to program, the ease being more than slightly facilitated by generally readable documentation.

The forms tractor is a solid unit, works reliably, is easily attached and detached, and automatically engages/disengages the friction-feed under appropriate circumstances.

We are delighted to offer this public note of a well-designed computer peripheral — all the more delighted after previous experiences with less adaptable and/or less reliable units.

CP/M KORAN

While we are reporting on products well done, we want to pass along favorable comments we have received regarding Sybex' new CP/M Handbook. It is a paperback handbook for which we have often heard pleas. Though it reportedly has the occasional inaccuracies inherent in the first edition of a technical reference book, several of our friends who are new CP/M users have extolled its values with considerable fervor. Apparently, it matches, in documentation, the high quality of the default-standard microcomputer operating system that it documents.

SCHLUMBERGER SEEKS INTELLIGENCE

The French-based conglomerate, which earned its original wealth making oil drilling equipment, continues to stick its venture-finger into the electronics industry. A coupla years ago, it acquired Heath. More recently, it nonchalantly bought up Fairchild. (Rumor has it that, once when one of its divisions was having some trouble with a VAX from Digital Equipment Corp., a Schlumberger high-up in France called a DEC high-up in Massachusetts and allowed as how DEC better get that VAX fixed, or he'd go out during his lunch break and buy DEC.)

Anyway, now that they have bought Fairchild, Schlumberger is

please continue on page 6

NIPPON

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other markets, mainly in Asia, he continued.

To compete effectively with Japanese producers, Silin told the American industry experts, it is insightful for U.S. semiconductor companies to consider setting up operations in Japan. Despite such deterents as stringent pollution laws in Japan, start-up expenses of about US$25 million and high operating costs, Silin said that having production facilities in Japan allows foreign companies to operate within the Japanese market much the same as do Japanese firms.

The Speech Prosthesis CRT Menu: Yes, We Have No Forked Tongue

"Alphabetical Versus Graphotactic CRT Page Layout of Letters for a Versatile Portable Speech Prosthesis (VPSP)" by Carol Simpson, discusses the results of a linguistic human-factors study of alternative layouts for CRT menu pages, and applications of the results to the design of single-switch communications aids.

A major developer of VPSP, Carol notes, "The VPSP is a working prototype that is at this time being used to collect data essential to improving the human factors of its design. The present system has demonstrated its feasibility. The current phase of the project is a comparative evaluation of alternative design principles with actual users."

The Versatile Portable Speech Prosthesis (VPSP) is an on-going project to develop a wheelchair-portable speech synthesis system capable of unlimited vocabulary and message construction, and designed to simplify message construction for the user.

This simplification was achieved via two methodologies. Linguistic analyses of language structure were used so as to limit the number of items the user must choose from at any point in the message construction process. Limiting list size will reduce search time for humans as well as computers. Additionally, a single switch (one bit) user input requires that the system automatically present the user with successive alternatives, until the user uses the switch to say "yes" to one of the alternatives.

The fewer alternatives, the faster, on the average, the system will arrive at the item the user wants. To this end, rules of syntactic and graphophonotactic constraints on choices for selection were incorporated into the system logic. Linguistic human factors experiments were also conducted to determine which of several alternative design principles produce the fastest visual search times for words and for letters used in message construction.

DISTRIBUTE FREE *GAZETTES* TO FRIENDS & ASSOCIATES

The Computer Faire would be pleased to ship you any reasonable quantity of *Gazettes* you wish to request, for distribution to your friends, professional associates, and fellow employees. These are available without cost; the Faire will pay all charges, including UPS shipping fees.

Just write or call and tell us (1) how many you wish to receive, and (2) where to ship 'em (it must be a street address: UPS is prohibited from delivering to a P.O. Box).

Typically, a *Gazette* will include a variety of information of general interest, as well as – of course – all the details of the forthcoming West Coast Computer Faire. Call or write:

Computer Faire
333 Swett Road
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(415) 851-7075

British Magazine Sponsors 3 Tours to 6th Computer Faire

Britain's *Personal Computer World* magazine is organizing three different tours for it's microcomputer readers to see the 6th Computer Faire.

Each tour assures the British visitor will be in San Francisco "for the duration of the Faire, which must be the biggest micro-dedicated show in the world," the tour promoter states.

"Lounge on Santa Monica Beach, visit the first-ever computer store, or maybe even take a peek at Hollywood. Follow this with a few days in San Francisco, visiting the Computer Faire, and possibly pop down El Camino Real to Silicon Valley," he continues.

British and European attendees have come to the Faire before, but this is the first time they can attend as part of a vacation tour package that focuses on the Faire.

Faire Pre-registration Available in March

Advance pre-registration forms for the 6th West Coast Computer Faire will be available in March from participating local computer retailers, clubs and bookstores.

With the pre-registration form completed, attendees can avoid box office lines and related inconveniences.

Look for announcements in *Silicon Gulch Gazette* or at your local Computer Faire pre-registration outlet.

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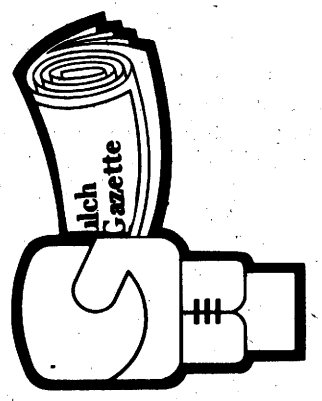

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Through Provision for a Terminal Condition Stanford Anticipates Healthy Communication

[Adapted, with permission, from the Stanford Observer.*]*

Within five years, computer terminals will be as pervasive as telephones at Stanford University.

By the end of this decade, telephones and terminals will be merged.

So predicts Ed Shaw, director of Stanford's Center for Information Technology.

Already, information technology is "outpacing the University's ability to manage it," he believes.

The rapid growth of personal microcomputers suggests that, in the future, "students and young faculty will be coming here with a plug looking for a socket" to gain access to Stanford's information system, he observes.

Human and financial factors will be more important than the technology itself in determining how well the coming changes are incorporated into academic institutions.

"Stanford is well ahead of most other academic institutions on the administrative side in trying to understand information technology and bend it to our uses.

"We have University officers, from the president and vice-president on down, who are willing to deal with technology effectively by initiative, rather than simply reacting to it."

Shaw praises Engineering Dean William Kay's initiative in making microcomputers available to individual faculty as a "watershed" decision.

"He's nine months ahead of me, as usual," Shaw says. "Putting tools in the hands of people who have to manage them is a great way to encourage learning."

Electronic Mail

The University's new electronic mail system links 80 senior level managers. Designed as a one-year experiment, it lets participants pick one of two terminal types.

President Donald Kennedy has a terminal in his office, most of the vice-presidents are having them installed, and deans may share the system this fall.

From an organizational standpoint, terminals can both centralize and decentralize operations—sharing information and decisions rapidly up, down, and among individuals or departments.

One purpose of the terminals-for-managers program is to determine what functions appear most useful to executives over a trial period of one year.

More than half the telephone calls placed aren't completed because the line is busy, the desired person isn't available, etc. That's no problem on a computer.

As a participant, Shaw says the "electronic mail" system combines the impact of a phone call with the clarity—or deliberate vagueness—of a written memo.

For administrators, the two biggest barriers to use of terminals are fear of looking stupid—"just sitting there and not knowing what to do," Shaw says—and fear of doing something wrong, like wiping out the payroll tapes or destroying gift records.

Shaw knows both fears personally. Years ago, he panicked when he couldn't "log off" his system at the end of the day.

"I didn't want to ask for help; I was the officer in charge," he recalls. "I was supposed to know. It was personal agony."

"I wanted to turn the damn thing off, but I feared it would keep billing me all night."

"Finally, I did turn it off."

"Later I learned that the Stanford system has a fail safe feature, designed for power interruptions. When you turn it off, it logs off; if you're doing anything at the time, it saves it for your return."

Games are the approach used to help beginners get over their fear of inactive computers. Participants in the terminals-for-managers program, like thousands of their predecessors at Stanford, may find themselves playing backgammon, checkers, or chess late at night, when there's time on the computer.

Within a year, Shaw expects managers will have a choice between lower cost systems, with reltively few "help" commands, and the more forgiving kind now offered. The cost might be $200 per month for the former, $250 per month for the later, which requires more computer capacity.

Problems of Change

Information technology changes both administrative and secretarial jobs. Shaw now originates and revises most of his own copy, while his secretary becomes the editor and manager of his office information system. "Somehow her terminal spells better than mine," he smiles.

Once installed, however, a system's uses may be expanded.

One time-consuming secretarial task which can be programmed on computer, for example, is making arrangements for conferences.

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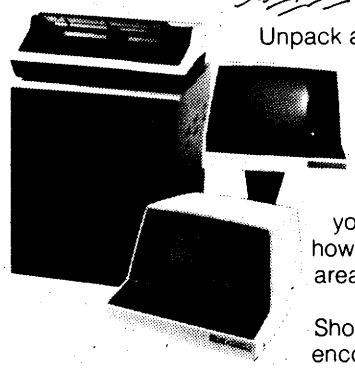

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DIALOGUE

continued from page 4

apparently making a reasonably big move into artificial intelligence — pragmatic and theoretical — operating through Fairchild. They have just hired a whole mob of potent AI hackers formerly with SRI International (the old Stanford Research Institute). These include Peter Hart, the past Director of SRI's AI Center, Marty Tennenbaum, Harry Barrow, and Dick Duda. They've also grabbed SRI's Michael Heathman (no kin to Heathkit) to manage their computer systems.

Wonder if they hope to apply AI to multinational oil ventures — you know, like undersea exploration, seismograph data analysis, evaluation of Mexican banks routes for political donations, etc.?

REMEMBER SUPERFOONLY?

While we are mentioning DEC and AI, we must monger Foonly rumors.

Some years back, Stanford's Artificial Intelligence Lab was disturbed by DEC's diligent refusal to develop a PDP-10 with warp drive. The lilting LISPers of AIland were displeased by the plodding pace with which their antique DEC KA10 PDP-10 system processed parentheses.

So, John McCarthy, Potentate of the Lab, turned his gnomes loose on designing their own faster-than-light PDP-10 emulator. Characteristic of the straight-laced, conservative Stanford academic community, the proposed machine came to be known as Superfoonly (well, maybe there's a wee difference between Stanford's AI crowd, and the Stanford Business School to which Ronnie has turned for much of his more competent advice and expertise).

FOONLY FOUNDED

However, due to the fickle frailty of federal funding, the AI lab never found the loot to build their dream machine. So, in 1978, Chief Foonly Fanatic David Poole and friends spun off from the AI Lab and founded Foonly, Inc. to do what the U.S. Government and Stanford University couldn't do (well, maybe it's just that they didn't want to do it).

They got an order for a Superfoonly (less excitingly denoted the 'F-1') from Triple I, the exotic computer graphics mob in southern California — also disenchanted DEC-10 consumers. Built out of 10K ECL logic and running 200% to 400% faster than DEC's KL10 (and mega-rabbits faster than the AI Lab's old KA10), it sold to III for a mere $500K or so.

[Note: A KL10 with comparable facilities — memory, mass store, etc. — will cost about $1 million or so.]

TYMSHARE BYTES

Foonly founders then scaled down their design, created their F-2 and F-3 (using 2900-family bit-sliced bipolar components), and

please continue on page 8

Users Rate Over 10,000 Installed Teleprinters In Datapro Report

"All About Teleprinter Terminals", a recently updated report that presents a summary of user experiences with 10,657 installed terminals, is available from Datapro Research Corporation. The 40-page report, reprinted from the September supplement to "Datapro 70", also contains detailed specifications and prices of 125 teleprinter terminals from 50 vendors, compiled in 26 pages of easy-to-follow comparison charts that will aid the prospective buyer in selecting the right teleprinter terminal.

Despite the inroads made by display terminals, teleprinters continue to constitute a large and viable segment of the interactive market. "All About Teleprinter Terminals" addresses the pros and cons of teleprinters versus alpha-numeric display terminals; the tradeoffs between impact and non-impact printers, printer types and trends, and the makeup of the teleprinter industry and its anticipated growth.

Detailed results of the user survey show how 285 users rated their teleprinter terminals for ease of use, keyboard feel and usability, print quality, hardware reliability, maintenance service, and overall satisfaction.

Copies of "All About Teleprinter Terminals" are $15 each and available from Datapro Research Corporation, 1805 Underwood Blvd., Delran, NJ 08075, (609)764-0100.

The Japan Microcomputer Club Has a Computer Faire Orientation

Japan Microcomputer Club, representing 3,000 members, will again occupy an exhibit booth at the 6th Computer Faire.

The club's participation in the 5th Computer Faire was its first overseas exhibit.

With 15 branches throughout Japan, the club maintains an extensive activity schedule. It has exhibited in every show sponsored by the Japan Electronic Industry Development Association since 1977.

In addition to publishing *Best of Micom Circulars, Japanese Edition* (an English language version of the club's monthly newsletter), club members collaborate in editing *MICOM*, a popular microcomputer magazine.

The club has also sponsored group visits to the 3rd and 4th Computer Faires. These were usually combined with tours of nearby computer-related sites.

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Proceedings Paper

ANIMAL Can Draw Out The Beast in Your Computer

ANIMAL (ANIMAtion Language used in creating animated scenes in color on a personal computer) is discussed by Jim Blum, Computer Automated Graphics' president, in his *Proceedings* paper.

ANIMAL provides commands for creating animated scenes, running them in real time, and saving and retrieving them from diskette. (A scene consists of one or many individual frames which are run sequentially to create animation.)

One of the draw commands Blum describes is PAINT, a continuous drawing mode that has no prompts. Dots (pixels) are placed on the screen where and whenever the stylus is held down and moved across the BITPAD. This gives the effect of a paint brush being moved across the screen. This mode will continue until a point outside the display area is selected.

The PAINT mode provides the creator with maximum self-expression, and is used when none of the other draw subcommands can create the desired shape or form. PAINTING takes a little practice, Blum states, but once learned, it becomes a very powerful tool. Besides animation, PAINTING may also be used to create exciting modern art.

A REMARKABLE MAGAZINE

David Ahl, Founder and Publisher of Creative Computing

creative computing

"The beat covered by Creative Computing is one of the most important, explosive and fast-changing." —Alvin Toffler

You might think the term "creative computing" is a contradiction. How can something as precise and logical as electronic computing possibly be creative? We think it can be. Consider the way computers are being used to create special effects in movies—image generation, coloring, and computer-driven cameras and props. Or an electronic "sketchpad" for your home computer that adds animation, coloring and shading at your direction. How about a computer simulation of an invasion of killer bees with you trying to find a way of keeping them under control?

Beyond Our Dreams

Computers are not creative per se. But the way in which they are used can be highly creative and imaginative. Five years ago when **Creative Computing** magazine first billed itself as "The Number 1 magazine of computer applications and software," we had no idea how far that would take us. Today, these applications are becoming so broad, so all-encompassing that the computer field will soon include virtually everything!

In light of this generality, we take "application" to mean whatever *can* be done with computers, *ought* to be done with computers, or *might* be done with computers. That is the meat of **Creative Computing**.

Alvin Toffler, author of *Future Shock* and *The Third Wave* says, "I read **Creative Computing** not only for information about how to make the most of my own equipment but to keep an eye on how the whole field is emerging."

Creative Computing, the company as well as the magazine, is uniquely lighthearted but also seriously interested in all aspects of computing. Ours is the magazine of software, graphics, games and simulations for beginners and relaxing professionals. We try to present the new and important ideas of the field in a way that a 14-year old or a Cobol programmer can understand them. Things like text editing, social simulations, control of household devices, animation and graphics, and communications networks.

Understandable Yet Challenging

As the premier magazine for beginners, it is our solemn responsibility to make what we publish comprehensible to the newcomer. That does not mean easy; our readers like to be challenged. It means providing the reader who has no preparation with every possible means to seize the subject matter and make it his own.

However, we don't want the experts in our audience to be bored. So we try to publish articles of interest to beginners and experts at the same time. Ideally, we would like every piece to have instructional or informative content—and some depth—even when communicated humorously or playfully. Thus, our favorite kind of piece is accessible to the beginner, theoretically non-trivial, interesting on more than one level, and perhaps even humorous.

David Gerrold of *Star Trek* fame says, "**Creative Computing** with its unpretentious, down-to-earth lucidity encourages the computer user to have fun. **Creative Computing** makes it possible for me to learn basic programming skills and use the computer better than any other source."

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At **Creative Computing** we obtain new computer systems, peripherals, and software as soon as they are announced. We put them through their paces in our Software Development Center and also in the environment for which they are intended - home, business, laboratory, or school.

Our evaluations are unbiased and accurate. We compared word processing printers and found two losers among highly promoted makes. Conversely, we found one computer had far more than its advertised capability. Of 16 educational packages, only seven offered solid learning value.

When we say unbiased reviews we mean it. More than once, our honesty has cost us an advertiser—temporarily. But we feel that our first obligation is to our readers and that editorial excellence and integrity are our highest goals.

Karl Zinn at the University of Michigan feels we are meeting these goals when he writes, "**Creative Computing** consistently provides value in articles, product reviews and systems comparisons . . . in a magazine that is fun to read."

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Proceedings Paper

Travel Standard & Leave The Busing Compatible

The personal or home computer has often been mentioned in conjunction with the concept of overall management of home environmental control and monitoring systems, home entertainment, and information systems. One of the factors inhibiting wide acceptance and realization of this concept is the fact that connecting to control and monitoring points of the home environmental systems is a complicated and costly process.

"The concept of the Home Bus Standards Association provides an optimum approach to eliminating the economic and organizational inhibiting factors," says Robert Richardson, SRI International Consumer Electronics Department Director.

Richardson's paper, "Home Bus Standards Association, What is it and What does it Mean?" appears in *Volume V* of *Best of the Computer Faires*.

"The Home Bus Standards Association (HBSA) is a non-profit (IRS501C3) membership organization for the purpose of establishing a widely accepted set of communication protocols, allowing all household electrical devices to interact as part of a modular intelligent network, using powerline carrier digital packet radio transmissions," Richardson states.

"The consumer benefits of a Home Bus system include direct savings from reduced energy consumption, inproved personal safety, and the convenience of remote and automatic control and monitoring of every system in the home.

"These benefits can be provided at little or no additional cost to the consumer, due to the recent advances in microelectronic technology combined with high volume production of standardized *Bus Compatible* components suitable for use in a broad variety of applications.

"HBSA's objectives are to serve as a neutral focal point for development of an industry-wide monitoring and control signal language, and to provide fundamental public education informing consumers about the advantages of having Home Bus-type technology," Richardson writes.

He believes that HBSA is needed because no current organization covers the diverse spectrum of products potentially benefitting from bus compatibility: appliances, heating and air conditioning equipment, home entertainment devices, utility meters, the telephone, lights, locks, alarms, and so on.

"Through HBSA," Richardson observes, "the central nervous system of the computerized home of the future can be quickly defined, thereby facilitating the linkage of advanced technology's capabilities with immediate public needs."

Hunting the Headhunters

by Bill Baumann & Stephanie Buchholz

Between five and ten times in our lives, we are faced with looking for another job.

We haul out the old resume from the dusty files it's been in for the last few years. We groan at the thought of rewriting it and conclude that with little change it will suffice for another go at the job market. We pick up a copy of the local Sunday newspaper to begin the weekly task of scanning the ads for possible openings.

And we begin to ask ourselves questions. Am I underpaid? What's my real market value? Who can best make use of my talents? Where will I fit in?

After sending out copy after copy of our updated resume, and getting no results other than polite letters from personnel departments stating they have no current openings or getting time-consuming interviews for jobs we are not interested in, we begin to wonder where to turn.

We get professional help with legal or medical problems, so why not with finding a new job?

Professional recruiters (sometimes fondly known as headhunters) are people who are empathetic of other people's needs, who know the job market and can guage the job-hunter's abilities. To do this they usually meet the job-hunter in person and candidly and honestly assess his/her skills, background and desires (complete information is necessary to do a complete job...remember, garbage in=garbage out).

A good recruiter will also communicate what he/she can do for the job-hunter. This service includes:

- *Confidentiality
- *Career counseling
- *Marketing the job-hunters skills by
  - -rewriting the resume
  - -defining and contacting appropriate hiring managers
  - -presenting the job-hunters background in a positive and honest way
- *Setting up interviews
- *Advising the job-hunter on interviewing techniques
- *Addressing and advising on discomforts and concerns such as:
  - -salary
  - -the commute
  - -growth opportunity
  - -unclear communication
- *Helping the job-hunter maintain a clear focus during the job search
- *Helping negotiate the salary and conditions of employment.

A good recruiter will perform these activities in the interests of serving both the job-hunter and the employer.

Remember, a good recruiter will support you during the job search. He/she will keep your best interests in mind. If you are currently working with someone you are uncomfortable with, or who is pushing you to make a decision in his/her interest instead of yours, address that with them. If that doesn't work, realize there *are* other recruiters with whom you can work.

Now that you know what a technical recruiter can do for you, the next time you are considering changing jobs, talk it over with a professional recruiter. Forget about rewriting the old resumé. Forget about scanning the local paper for ads. Forget about the polite rejection letters. Delegate the task to a professional.

In future issues we plan to address various issues regarding job hunting. They will include: when to look for a new job; interviewing techniques; resume writing; and some of our noteworthy personal experiences. If there are any topics you would like addressed, please contact us.

Bill Baumann and Stephanie Buchholz, are consultants with OMICRON, a San Francisco peninsula professional recruiting firm which serves a broad spectrum of the computer industry ranging from hardware and software vendors to corporate data processing departments. Bill, works with hardware people, and can be reached at OMICRON, 710 Lakeway, Suite 280, Sunnyvale CA 94086, (408) 245-7300. Steffi, who works with software people, can be reached at OMICRON, 525 Middlefield Road, Suite 120, Menlo Park CA 94025, (415)328-6150.

Proceedings Paper

Compute Or not

Why should a small business use a computer? What are the alternatives? How can the pains and the costs associated with computerization be minimized?

These issues are dealt with in simple terms, oriented towards the prospective novice computer user, in a paper presented at the 5th Computer Faire by Byte Shop Computer Stores' founder and president, Paul Terrell, and Compumax president Thomas Bun.

An innovative approach is described, based on a set of computer programs that come in a form completely ready to use, yet can be understood and set up rapidly, with minimal restrictions and great ease of change and extensions of the particular requirements of an individual business.

DIALOGUE

continued from page 6

peddled about ten of 'em to Tymshare. A system with 256Kx36 RAM, a 160MB Winchester, 800/1600 BPI tape drive, 16 terminal lines, and the Tenex operating system costs around $98K . . . and runs about 75% faster than a DEC KA10 (and a third as fast as a KL10). The price isn't exactly competing with a TRS-80, but, TRS-80 software doesn't quite compare to a Tenox OS, either. As Albert said, it's all relative.

SOON – A FAMILY FOONLY

More pertinent to our readers is the fact that the Poole pool, joined by others — including Jay Lowe as General Manager — are working on an 'economy' model, the F-5, to be available around April, 1981. This wondrous machine will run the full-blown Tenex operating system (and support all the grandchildren of LISP, so beloved by the 'intelligence' community), and will cost around $40K with 128Kx36 main memory, 40 MB or so of disc storage, and supporting about four users. (It was originally designed to fit on four PC cards in a breadbox, but it's grown, somewhat.)

When asked about a computer costing a fraction of the F-5 — i.e. a personal computer — Jay said, "We're not ready to talk about that product, yet."

Oh yes, Foonly, Inc. is also projecting April, '81 availability of their F-4, said to be about 70% as fast as a DEC KL10. It'll fit into a single 19" rack, and will include the hardware hooks to allow the addition of a cache memory as its owners inevitably outgrow the basic machine. It will be priced around $150K.

None of these are exactly within the budget of your everyday family-of-four, but they're an order-of-magnitude or more, less expensive than the ransom the AI community has traditionally paid to the Maynard moguls. (And, they may be just in time for the grant-consuming AI folks, given our President-elect's demonstrated tradition of getting the funding for higher education.)

FOOVISION, ET AL

There are a coupla final tidbits of interest regarding the Foonly folk.

Their macines all use the same bus (called, the F-bus). They are offering an exotic graphics subsystem — FooVision, a chunk of hardware and software that plugs in to the F-bus. It runs via DMA, has its own megabyte of memory, and outputs RGB for a standard color monitor (and may soon output NTSC for your friendly local teevee). The support software allows the user to run color via a color map, or run gray-scale black and white, or run 1-bit/pixel for a high resolution 1000x1000 display. All this costs $10K or less, and Foonly futurists say they are working towards SmallTalk-like graphics support.

Along with planning April, '81 availability of the F-4 and F-5,

please continue on page 10

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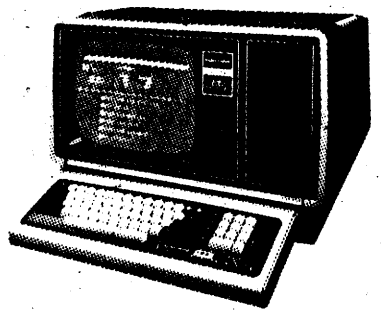

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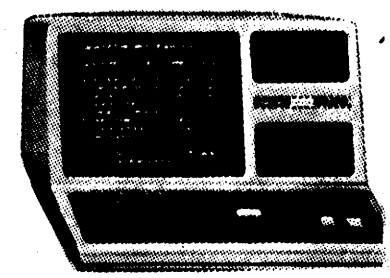

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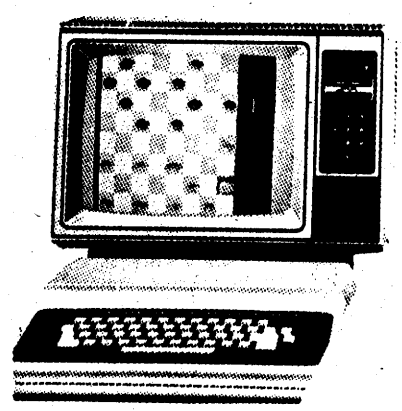

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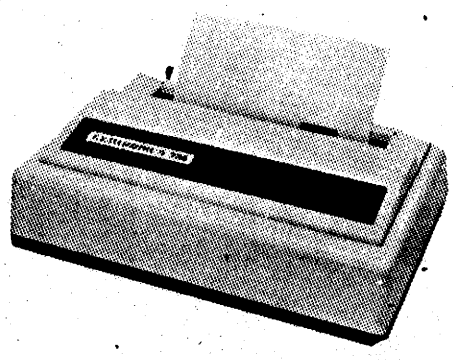

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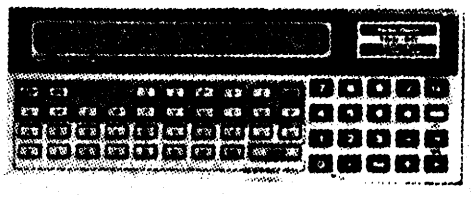

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Are You Game?

Electronic Systems now has a fully assembled unit that includes: 2 game paddles, interface, software, speaker, power supply, full documentation including: schematics, theory of operation, and user guide; plus 2 games on disk (pong and starship war). A contest to write the best program for this will be announced later. Now available for $79.95 part no. 7922C from Electronic Systems, P.O. Box 21638, San Jose CA 95151, (408)448-0800.

Proceedings Paper

Trumpeting the Advances of Computer Music-Making

The number of people able to do computer music has expanded greatly with the introduction of personal computers, freeing the field from its previous limitation to a few, large, expensive studios. Techniques and commercial products have been developed for shaping the four basic parameters of a musical sound: pitch (what frequency is the note?), timbre (harmonic content; like a flute, or something harsher?), duration (percussive, like a drum, or continuous like an organ?), envelope (initial attack, sustain while held, decay at end).

The techniques range between two limits: from making sounds in software only, to doing it all in hardware.

In a talk at the 5th West Coast Computer Faire, Richard Higgins of the University of Oregon Physics Department, surveyed recent developments in electronic music (polyphony, microcomputer control, dynamic keyboards, and digital sound generation), and new techniques in digital music development systems (additive synthesis, FM or phase modulation timber, and digital filter music). He described a number of recent advances which are familiar to synthesizer music performers but unfamiliar to personal computer users.

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A Comprehensive report writer for DIBOL that runs under RT-11, RSTS/ E, CTS 300, CTS 500, DBL & TSX is available from ABC Computers, Inc. The DIBOL report writer is capable of creating any report a user might desire using information stored in existing DIBOL data files.

"The report writer can save days of programming," says Karan Kauppila, president of ABC Computers, "It will work in conjunction with any DEC DIBOL program and will generate custom reports in minutes." "Businesses always want special reports and anytime you go into a program to make changes you risk getting bugs. The report writer works externally against the DIBOL programs using a dictionary to produce the reports and eliminate the possibility of errors."

States Kauppila, "I know of one business installation running a typical Accounts Receivable - Order Entry/Inventory system that generated a finished salesman's price book in 10 minutes. That same report would have taken a programmer 2 days to code, compile, and debug."

The ABC report writer works with Standard DIBOL Sequential files as well as ISAM files. It is capable of doing reporting on "selected" items such as accounts whose amounts are "greater" than a fixed amount, or customers whose names start with "B" or are located in the state of "COLO". Reports can be stored for future recall and updating.

For further information contact: Karan Kauppila, ABC COMPUTERS INC, PO Box 7529, 500 Tonopah, Tahoe City, CA 95730, 916-583-5562.

DIALOGUE

continued from page 8

Foonly is also expecting to offer a local networks option at the same time. It will probably be based on the Xerox/DEC/Intel Ethernet protocols, but there is still some chance that they will adopt the IEEE standard — if it exists by the time they need it.

Last, but not at all least, all of the Foonly machines have a writeable control store, and include the hardware and software to support user-modification of the microstore. They use about a quarter of the microstore for their PDP-10 emulation, leaving plenty of room for user mistakes. Additionally, they allow multiple microstore contexts. Thus, for instance, a single Foonly machine could be running PDP-10 code in one context, PDP-11 code in another, a lightning-fast P-code executer in another, and an 8080 emulation in another (or maybe an IBM 1620 emulator?).

MASSACHUSETTS WEST

Foonly has potential for being the next stage of DECompetition inflicted on downtown Massachusetts by Californiacs.

First, of course, northern California's semiconductor houses and the microcomputer manufacturers they supply have made major inroads in DEC's old-time small computer and data-acquisition/process-control markets.

Then there was DEC's LSI-11. DEC went to Western Digital in southern California to get their LSI-11 chip-sets. Western is, thus, the only company that has a DEC-granted license to manufacture a CPU with some features that DEC attorneys claim belong exclusively to DEC. Now WD peddles their chip-set to Orange County's Alpha Micro. And Alpha Micro remicroded it to run 2-5 times faster

please continue on page 12

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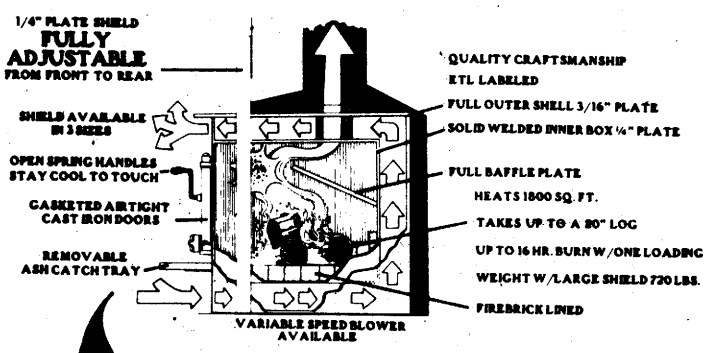

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The site will be San Francisco's Civic Auditorium and Brooks Hall, the largest convention facilities in Northern California.

In addition to the 6th Computer Faire, scheduled for April 3-5, 1981, future dates are:

1982 March 5-7
1983 March 2-4
1984 March 21-23

So remember to save your next three Springtimes for San Francisco — and the Computer Faire

Microcomputers in Education will Make the Grade

San Jose, CA — From 1980 to 1985, the combined retail value of microcomputer shipments to educational institutions will well exceed $1 billion. This dynamic market segment will more than double its share of the total market for microcomputers during this period, with the sharpest increase occurring within the next three years, according to an analysis of the educational market for microcomputers released by Creative Strategies International (CSI), a California-based market research and consulting firm.

The educational microcomputer industry, as defined in this study, encompasses fully-configured microcomputer systems priced under $15,000 and marketed to educational institutions in the United States. Through direct mail and interview surveys, CSI has documented the diversity of applications in the educational microcomputer market, including instruction in computer programming, computer fundamentals, computer-assisted instruction (CAI), educational administration, and research. Even with substantial sales into educational environments, present market saturation remains low.

CSI expects the continued rise of retail prices for fully-configured systems through 1982 due to the increasing use of peripherals and educational software. Unit price will fall slowly for the balance of the forecast period, as component prices continue to decline. Currently, peripheral sales are rising more rapidly than software or system sales because of the growing use of floppy disks and printers. By 1985, one-half of all microcomputers destined for educational settings will use floppy disks.

Microcomputer technology presently competes against several other technologies in the educational market, including traditional educational tools, time-sharing systems, and mini- and large-scale computer systems. Recognition of the mistakes and faults of these competing technologies will be crucial to the success of microcomputers in educational settings.

Supply of adequate software has historically been poor, and especially in the predominant classroom segment, success will hinge on the ablility of the vendor to provide extensive, high-quality educational software. With accelerating market growth, and the emerging trend of educational users toward the purchase of many systems at a time, the educational software market continues to attract many new microcomputer firms. The intensified concentration on educational applications software will undoubtedly have profound effects on the educational microcomputer industry.

While complementing the teacher and the textbook, the microcomputer will to some extent replace them in the classroom. This, coupled with the opportunities of a new market, continues to draw educational publishers into educational software development and marketing. Their entrance into this market will significantly impact the industry — stimulating further software development and subsequent further sales, and providing the impetus toward even more widespread educational microcomputer usage.

While new firms are continuing to enter the market at a rapid rate, providing microcomputers, computer peripherals, and software, the markets for the lowest-priced microcomputers are currently dominated by Apple, Commodore, and Radio Shack. However, they are under direct attack by firms like Atari.

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We made our reputation with our Mapper systems. One year ago we told TRS-80 Mod I owners that they could have standard CP/M, 8" drives, compatibility with the Mod II, the ability to transfer files from TRSdos to CP/M or run Newdos80, the TRSdos compatible operating system, with 8" and 5" drives all on line at once. Most of the readers said "too good to be true" and it was only the slowly spreading word (plus some excellent reporting —see August Byte column by Jerry Pournelle) that convinced you it worked.

Here we go again! **A field-proven, fully integrated accounting package with self-instructive documentation for $350.000.** Too good to be true? A General Ledger which has been running in the real world long enough to shake out the bugs and has sold for many times our price of $100.00. Too good to be true? Ok, if we have to, we can wait for the word to spread. But just to get the ball rolling—let me give you the particulars:

REQUIREMENTS:
Computer — 48K z80/8080
Printer — 132 columns
Video — 80x24 or 16x64 w/scrolling
Storage — 2 disk units 250 kbytes each
Language — Microsoft Basic
O/S. — CP/M

BENEFITS: This is not another re-write of the Osborne packages but a professionally produced and marketed set of accounting software originally produced for the Mits/Altair machine. It has been tested and debugged in actual use. It comes with sample data and a manual designed for self-instruction. They are thoughtfully designed, interactive programs with clear prompts for ease of operation. Source code and documentation to aid in customization are also included.

INTERESTED? Write or call for our free brochure. It may sound too good to be true, but we've heard that before. Risk a stamp—our Mapper customers were glad they did.

Too good to be true?

*CP/M is a TM of Digital Research. TRS-80 is a TM of Tandy Corporation.

Proceedings Paper

Videotapes

Recorded video instructional programming may be combined with interactive computer programs and presented to students via computerized videotape. If desired, the perfected programs of instruction may be transferred to the videodisc as that technology becomes useful.

The interactive training system, CATI (Computer Assisted Television Instruction), makes use of existing videotapes or newly created video training material. Movies, slides, stills or video-camera pictures are recorded on videotape, usually with a small video camera. The videotape machine is interfaced with a microcomputer. The microcomputer is then programmed to find desired segments on videotape and display them on the same screen used for presentation of computer data.

The CATI system, developed by Robert Whitney and his son, David Whitney, gives the instructional programmer the tools with which to shape interactive video programs from existing or new videotapes which may then be presented directly to students with the same equipment.

Robert's paper, "How to Produce Random Access Videotapes, Videodiscs and Other Intelligent Wonders with Your Microcomputer," provides an explanation, description and demonstration of the CATI interactive instructional system. It appears in *Volume 5, The Best of the Computer Faires.*

Final Word on Word-Processing Software

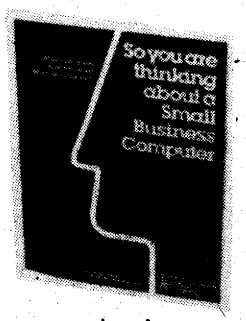
Small Systems Group has begun publication of a series of in-depth product evaluation reports. The first of these reports, "Word Processing on Personal Computers", is now available.

The report introduces personal computer word processing with sections on software, hardware and applications. It continues with general descriptions of four programs: Auto Scribe, Electric Pencil, Magic Wand and Wordstar. These are compared on quality of documentation, ease of learning, editing power and formatting power. In making the comparisons, 159 features were analyzed, and the final section tabulates and discusses these in detail.

Single copies are available for $10.00 ($12.00 outside of North America) from the Small Systems Group, Box 5429, Santa Monica, CA 90405. California residents must add 6% tax.

READ THIS BOOK BEFORE YOU GO TO THE FAIRE...to make your time there much more productive

So You Are Thinking About a Small Business Computer



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We have over 20 years experience in the computer field and have been publishing since 1963.

Proceedings Paper

Are the Shapers In?

"We in the *intelligent machines* industry are unavoidably among the shapers not only of tomorrow's world, but probably what will become of mankind itself," claims Entecon Corp. president Don Perry Dunlap.

"Perhaps," he continues, "that is important enough for us to pause a moment in our efforts at creating the means of achieving the future and contemplate what we really want the ultimate fruits of our labors to be."

Don's paper, presented at the 5th Computer Faire, takes a perspective and a few bases for formulating some choices that may become increasingly significant in guiding the directions of our work and innovations in the future.

Robert Jastrow has written in *Time Magazine* "The computer initiates life like an electronic monkey. As computers get more complex, the information gets better. Finally the line between the original and the copy becomes blurred. In another 15 years or so — we will see the computer as an emergent form of life. Human Evolution is a nearly finished chapter in the history of life — a new species will arise out of man. Only a carbon chemistry chauvinist would assume that the new species must be man's flesh and blood decendents, with brains housed in fragile shells of bone. The new kind of intelligent life is more likely to be made of silicon."

Don states, "It is my intention to challenge Dr. Jastrow's contentions and put them in a broader perspective. Not on the grounds of their possibility or even their so-confidently-prophesied inevitability — I contest them purely on the grounds of desirability."

Proceedings Paper

Speak Easy and Carry Someone Else's Software

The KYDE TYME Project in the San Juan Unified School District in Sacramento, California, and the CHIPS Project at California School for the Deaf in Berkeley, California, are funded to develop a computer-assisted instruction author language for the microcomputer. The language is to be easily usable by the novice teacher in CAI.

The authoring system necessitates no programming expertise on the part of the teacher and literally walks the authoring teacher a step at a time through building a student curriculum, and the authoring system makes full use of the graphic capabilities of the Apple computer.

The *author language* is complete and running, and Ted Perry of the KYDE TYME Project describes it in the Computer Faire *Proceedings*. Included in the author language program are: teacher authoring program, student presentation program, graphics development program, graphics library program, and data management program.

DIALOGUE

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than LSI-11, expanded the instruction set, added a potent TOPS-10-like time-sharing operating system (including an assembler that is 99.99% source-code compatible with PDP-11 code), and is in direct competition with DEC's lower-middle PDP-11 line.

Now, along comes Foonly to butcher on DEC's PDP-10 market. We could daydream about this leaving DEC with nothing but their high-end PDP-11 line, which may come under attack from the 16- and 32-bit micros, most of which are forthcoming from northern California chippies . . . uh, chip houses.

'INTELLIGENT MACHINES' COVETED

While we're on Stanford's artificial intelligence community — for a long time, now, I've been meaning to mention a conversation I had, some time ago, with Ed Feigenbaum.

Professor Feigenbaum chairs Stanford's Computer Science Department and is a major artificial intelligence researcher. Among other things, he worked closely with Josh Lederberg (the daddy of modern genetics) when Lederberg was chairing Stanford's Genetics Department, developing one of the first really pragmatic applications of AI research — a system to automatically accept the output from a mass spectrometer and, from it, deduce reasonable hypotheses regarding the causes of those mass spec readings. Essentially, that system performed practical inductive scientific reasoning.

To our conversation: I had started a newspaper to serve the microcomputer community, and had named it the *Intelligent Machines Journal*. I had also been teaching a CS class at Stanford. I hadn't seen Ed for some time, when, one day, we passed on the stairway. I said, "Hi", in greeting. To this, he replied, "You have done a dastardly thing."

Assuming that he was joking about something, I smiled and responded, "Oh, what's that?"

He said my misdeed was the *Journal*. Still assuming he was joking about something I did not yet understand, I continued smiling and asked how my *Journal* was a dastardly deed.

It was only after some dialogue, standing there in the middle of the stairway, that I realized he was absolutely serious — he was quite seriously displeased with my choice of title for the publication. With some heat, he opined that I had (undesirably) preempted the use of the phrase, 'intelligent machines', implying that I had perverted it to a totally inappropriate meaning. When I finally realized that he was completely serious and sincerely displeased, I was so surprised that I couldn't offer a coherent response. All I did was to request that he write an editorial

please continue on page 15

Law Journal Issues Paper-Call

The Computer/Law Journal has just issued a "Call for Papers "for a special two issue set entitled *Law and Information Policy* to be published in early 1981.

"The 1980's will be the decade in which governments throughout the world codify the laws under which the information industry will have to live for the next century," noted Michael Scott, Editor-in-Chief of the *Journal*. "We hope this special issue will be must reading for every policy maker in this important area, as well as corporate executives and attorneys involved in the information process."

Papers are being sought in all areas of the information process, from the legal aspects of fact-gathering, to information storage, retrieval and transmission. Topics of interest include, *inter alia*, privacy, protection of data bases, Viewdata and similar systems, transborder data flow, access to government data bases, cryptography, and the antitrust aspects of the telecommunications industry. Articles addressing the international aspects of information law and policy will be of particular interest.

Guest editors for these special issues are Dr. Jon Bing and Professor Selmer of the Norwegian Research Center for Computers and Law. Authors interested in submitting papers for these issues should write Dr. Bing at the Norwegian Research Center for Computers and Law, Oslo University, Karl Johans Gt. 37, Oslo 1, Norway, or to Michael Scott, Editor-in-Chief, *Computer/Law Journal*, 530 West Sixth Street 10th Floor, Los Angeles CA 90014.

Proceedings Paper

Now's the Time for Creative Communication

"Two-way CATV systems have been in existence in this country for at least fifteen years and yet, until recently, there have not been any strong, two-way, interactive service offerings," says Mark Cummings, broadcast and communication arts professor at San Francisco State University. "There have been satellites. First, government satellites, then commercial satellites — Western Union, RCA, and AT&T — but there are no two-way interactive program.

"There are many new communication media, but they are generally inaccessible for general home or office use," he continues. "Telephones, telex machines, acoustic couplers, and data access arrangements are most commonly used. What is missing, is a universal, home/office terminal device — a low-cost terminal device that would be as prevalent as the telephone, and would have the following capabilities:

"Accept alphabetic input and display, accept numeric input and display, color graphic input and display, motion video input and display, audio input and output, soft-copy storage (i.e., erasable storage such as a tape), hard-copy output, access to computing power, two-way communication capability (providing audio/video and data communications), ability to translate between audio, video and data."

In summarizing his Proceedings paper ("The Electronic Sandbox"), presented at the 5th Computer Faire, Professor Mark Cummings concludes:

"We are entering a period of dynamic change, based on technological advances in micro-electronics and communications technologies. The magnitude of these advances has to a large degree unvested the interests that have maintained the status quo, thus creating a plastic environment, an *Electronic Sandbox*. This period will be relatively short-lived. Soon new interests will become vested and the patterns built in *sand* will become locked in *concrete*. Now is the time for creative play; for experimentation with new alternatives; and for choosing those alternatives which will foster a more humanizing, more socializing and more democratic society.

Proceedings Paper

Busing at Home

In 1973, an interdisciplinary research team at the University of Southern California began a study of the technological feasibility and societal impacts of a concept called *telecommuting*. This coined word refers to the use of telecommunications and computer technologies to serve as a partial or total substitute for the daily trip to work.

At the time the study was performed, personal computers did not exist. The technology the research team was concerned with at that time was generally that of mini computers and larger systems. The subsequent introduction of the concept of distributed processing and of personal computer technology, as well as the appearance of several other trends — such as continued threats of major reductions in the availability of petroleum in the U.S. — make it appropriate to reexamine the issue of telecommuting in the light of contemporary conditions.

Jack Nilles, University of Southern California Interdisciplinary Programs' Director, makes such a reexamination in his paper, "Telecommuting via the Personal Computer."

"Several major factors and trends in contemporary society are acting continually to increase the desirability of telecommuting for several types of workers," says Jack.

Proceedings Paper

Easy Operation of The Operating System

"Using a computer should always be easier than NOT using a computer," says Tony Bove of Sybex, Inc.

In his paper, presented at the 5th Computer Faire, he describes methods of teaching an operating system to "naive users,' and outlines typical operations in a system using CP/M (and the latest MP/M) as models.

Tony says, "If you walked into a stereo showroom with your own cassette, you could easily manipulate any of the controls on the latest and most expensive cassette recorders. You should also be able to walk into a computer store and operate an operating system. You should know what to look for in a system, and know what kind of application programs would fit well with a particular operating system.

"In this paper I have simply demonstrated how to teach an operating system to ordinary people. If you are a total beginner to computers, you should be able to understand and even TEACH the fundamental operations of a system like CP/M."

72 Reasons to Buy a Heathkit®

1 The Heath Company is the only major manufacturer in the computer industry with an exclusive charter to serve the home user and hobbyist. Five products planned for these markets during the 1980s were described in the November 1979 issue of Buss: The Independent Newsletter of Heath Co. Computers. They include a bus-oriented computer not restricting the user to a particular microprocessor.

2 Heath Co. is selling the source code of its HDOS disk operating system — including BASIC and an 8080 assembler. User enhancements of HDOS have already started appearing in Buss.

3-71 Sixty-nine suppliers of hardware and software for Heathkit® computers and Zenith Data Systems were listed in revision 1 of the Buss directory of vendors providing independent support to Heath® owners. Price of revision 1 plus revision 2 of this directory is $7.50. It's included free with a subscription to Buss.

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Best of the Computer Faires

Conference Proceedings of the

West Coast Computer Faires

[1]

THE BEST OF THE COMPUTER FAIRES, VOLUME I
Conference Proceedings of the 1st West Coast Computer Faire

Section	Pages
Banquet Presentations	18
Tutorials for the Computer Novice	16
People & Computers	14
Human Aspects of System Design	9
Personal Computers for the Physically Disabled	7
Legal Aspects of Personal Computing	6
Heretical Proposals	11
Computer Art Systems	2
Music & Computers	46
Electronic Mail	5
Computer Networking for Everyone	14
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Residential Energy & Computers	2
Computers & Systems for Very Small Business	4
Entrepreneurs	6
Speech Recognition & Speech Synthesis by Home Computers	14
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Implementation of Software Systems & Modules	14
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Bus & Interface Standards	17
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[2]

THE BEST OF THE COMPUTER FAIRES, VOLUME II
Conference Proceedings of the 2nd West Coast Computer Faire

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[5]

THE BEST OF THE COMPUTER FAIRES, VOLUME V
Conference Proceedings of the 5th West Coast Computer Faire

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Low Cost Computing for Education	21
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Medical Computing	11
Business & Low Cost Computing	26
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Personal Communications & Microcomputers	26
Unusual Microcomputer Applications	5
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Proceedings Paper

No SOFTDOC Hard-Sell, The Sharing's Infectious

"Although computers have been utilized for health care applications for two decades, for a number of reasons widespread acceptance among clinicians has been disappointingly slow," writes Dr. James Gagne. "The introduction of new microcomputer hardware, though clearly capable of supporting sophisticated medical applications, is not likely by itself to lead to a surge of medical computing," he says in Volume V of the Faire *Proceedings*.

"The primary problem has been the indiscriminate throwing of masses of computer technology and software at a medical problem by those without an intimate understanding of the clinical process. By contrast, successful medical applications are most likely to stem directly from health professionals who have an interest in computing and who are willing to share their products with others.

"Datamed Research has formed SOFTDOC, a medical software exchange club. Interested physicians and other health professionals are invited to donate CP/M-compatible or UCSD Pascal source-code medical programs on eight-inch, flexible disks, in return for a free disk volume full of such donated software. Others will be charged a minimal fee per disk. Additional services related to medical software, such as compilations of user evaluations of commercial products, will also be offered."

Dr. Gagne evaluates the history of medical computing, discusses the problems of the past, and offers suggestions for the creations of succussful medical software.

Proceedings Paper

Datamed Services For Pascal Users

"The UCSD Pascal language system is one of the most sophisticated microcomputer software systems available today," says Dr. James Gagne, Datamed Research president.

"Because of the ease with which one can write and maintain high quality programs of most types, from systems software to business applications to games, it is becoming increasingly popular. Already a number of other Pascal implementations have appeared for microprocessors, though none so complete. The UCSD system promises to be the vanguard of an enormous interest in Pascal in the coming decade."

In "A New, Minimal-Cost Software Club for Users of UCSD Pascal," James describes a service of Datamed Research for users of UCSD Pascal.

James briefly reviews the features of UCSD Pascal, discusses the existing Pascal Users Group and why this Datamed Research service is required, and describes the philosophy and logistics of this new software sharing group.

DIALOGUE

continued from page 12

addressing the issue, promising him that I would publish it.

Well, he never wrote the editorial, and — though I often thought of it — I never got around to writing about the incident . . . until now.

My first response — and a continuing one — is that I was saddened and frustrated for having upset a person for whom I had a great deal of respect, regardless of how unintentional it may have been. It was even more disturbing to think that I had similarly incurred the disapproval of other major domos in the AI community . . . people with whom I had previously enjoyed a warm acquaintanceship. Thus, to Ed, and to others whom I may have displeased, I herewith offer my public apology. In naming my obscure little periodical, I certainly had no thought of encroaching on the domain or rights of the AI community, a community for which I generally have considerable affection and respect.

Yet, as I thought about it at the time — and as I think about it, now — the sexologist's slogan comes to mind: 'Use it or loose it.' For a long time, the AI community has been content to remain a group unto itself, aloof from the mainstream of computer users and computer applications . . . and certainly distant from public view. All too rarely do the leaders and competent researchers in the AI community choose to mingle with the larger computer community and address the multitude of significant real-world problems faced by real-world computer users. If AI folk wish to lay claim to 'intelligent machines' within the wider computer community, then I encourage them to communicate with and share with that community.

They have a great deal to share, not the least of which are the concepts and problem approaches reflected in such systems as Feigenbaum's mass spec system, Alan Kay's Smalltalk system, and McCarthy's hand-and-eye research, to name a very few.

To competent AI folk, I say, please . . . take the time and energy to come out and share with the larger community of which you are a part. Write some tutorial articles for some of the major periodicals, detailing AI concepts and techniques. Speak at broader-than-AI professional conferences, and perhaps even some not-so-professional conferences such as the Computer Faire. Give the wider community of users and practitioners more information about what you are doing and how you are doing it . . . and establish solid possession of "intelligent machines" by using the phrase and widely explaining your understanding of its meanings and ramifications. (As far as the phrase is concerned, you have another chance at it. I sold *IMJ* to *ComputerWorld*, and CW's Pat McGovern chose to rename it, *InfoWorld*.)

A Rainbow of Apple Applications

A brand new catalog has just been released by Rainbow Computing Inc., one of the country's first retail computer stores. The new 102-page book is claimed to be the largest collection of software and accessories for the Apple Computer ever assembled. One glance through its pages is bound to impress potential Apple owners with the computer's versatility, Rainbow states.

Included in the catalog are hundreds of programs of all types: business applications, education and science, games, languages, demos, and utilities. Also described is a wide assortment of accessories such as music and speech synthesis, appliance control, other interface cards, add-on memory, printers, and manuals.

The catalog is free, and available now. Just write or phone Rainbow Computing, 9719 Reseda Bl., Northridge, CA 91324, (213) 349-5560.

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CP/M for 16-bit 8086

Pacific Grove, CA — Digital Research, the originator of the widely used CP/M operating system for 8080/Z80-based microcomputers, and the MP/M multi-user operating system, has introduced CP/M-86, an operating system for Intel 8086/8088-based microcomputers.

CP/M-86, the first of Digital Research's sixteen-bit products, is a high-performance, single-user operating system designed to take advantage of the 8086's address space and speed, while expanding upon the facilities of standard CP/M. The file format of CP/M, release 2, has been retained for compatibility. CP/M-86 can also function as a slave node in a CP/NET network.

As with previous versions of CP/M, logical and hardware-dependent portions of CP/M-86 are modularized for ease in configuration. MP/M-86 and PL/I-86 will follow the introduction of CP/M-86. For more information, contact Harold Elgie at (408)649-3896.

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A New Movie?

reviewed by Jim Warren

Have you heard about the latest adventure movie? It's titled *ESC from ASCII*, and stars Charles Bronson as an outlaw nicknamed, "The Assembler." Bronson helps a character named Tab to escape from a terrible prison in the middle-eastern country of Os.

It seems the country's ruler — known, of course, as the Wizard of Os — intercepted Tab in a high-speed interchange and locked him up without hope of release. What's worse, prison rules concerning special characters such as Tab required that, when he was sent out to the exercise ring, he had to take eight steps for each single step the regular characters took. (This was due to an old prison protocol, naively designed to force everyone to march in orderly columns.)

The movie opens with Bronson relaxing a bit at a Nevada horse ranch occupied by 300 baudy women. We must say no more, however, lest we be too graphic about the plot.

Is the movie exciting? You bet your sweet bpi it is!

Proceedings Paper

Using Personal Computer to Get Started in Business

Many people are looking at the microcomputer, and playing with the idea of quitting their secular jobs and going into business for themselves with their micro.

Tony Severa dropped out of the nine-to-five job market to go into business for himself in 1978. He opened Tony's Data Service in Vacaville, California, in March of that year. He has since started a new software company for the Apple computer for beginning owners, called Apple Orchard.

"Thoughts While Waiting for the Cavalry to Rescue Me," is the title of Tony's paper, based on a talk given at the 5th Computer Faire, describing life in the wilderness, and survival tips.

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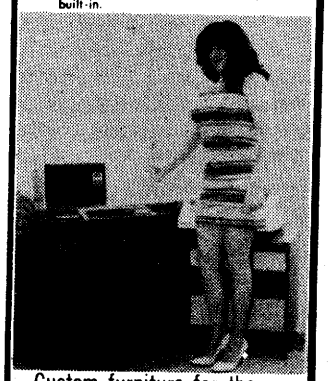

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Proceedings Paper

Medic Discusses Microcomputer Medical Applications

"We are at the beginning of a decade which will see computers enter most phases of our daily lives. Inexpensive and easy-to-program *appliance* computers are now available for small business and home use. There are many possibilities for their application in the medical office," writes Dr. Mark Spohr, of Medsoft.

Dr. Spohr relates several applications in his paper "The Computer in the Practice of Medicine: an Overview," presented at the 5th Computer Faire.

The computer's skills, says Mark, "lie in the areas of data collection, storage and manipulation. It performs repetitious and tedious tasks without tiring. Computers offer physicians increased organization, efficiency, and productivity. Better management improves the quality of patient care, and reduces medical costs," he says.

"Estimates of physician time spent on maintaining medical records range from 25% to 35%. Administrative functions occupy yet more time. These tasks are necessary. By performing them more efficiently, they require less time. This allows more time for patient care. Quality of patient care increases, while record keeping, administration and management costs decrease.

"The large data storage and manipulation capabilities of the computer can be used to our advantage in making decisions. Differential diagnosis routines, treatment protocols and drug interactions are potential areas of use. In addition, the interactive capabilities of the computer can make programmed learning a reality for patient and physician."

Consumer Warning

[We published a warning similar to this, a year or so ago. Due to multiple recent examples, we feel we must again publish this warning.] If you wish to ship something and have it delivered rapidly – at least to the Computer Faire –

DON'T SHIP TO US

BY FEDERAL EXPRESS

Example: On Oct. 30th, a southern California company shipped us an envelope-package via Federal Express. We, in northern California, finally received it at 3:10 pm on Nov. 3rd . . . *four days later.* (Personnel were at the Faire office every day from Oct. 30 through Nov. 3rd.)

Example: On Nov. 12th, another southern California company shipped another envelope-package to us via Federal Express. We (still located in northern California, and with staff again on-site every day) finally received it Nov. 17th . . . *five days later.* (Sadly, this was a company who, in our phone conversation, we had explicitly warned to use UPS and avoid Federal Express, because we had ample experience with UPS successfully delivering from southern California to us within 48 hours.)

Now, it's not like we are out in some distant wilderness. We're 20 minutes from San Francisco International Airport, 25 minutes from downtown Palo Alto (home of such obscure companies as Hewlett-Packard, Xerox PARC, etc.), and 40 minutes from such backwoods communities as San Jose and San Francisco.

Yet, they said that we are "outside of their immediate service area." It makes us wonder who is inside their service area. (Geee – we don't remember seeing any mention of these limited service areas in any of those classy, entertaining, prime-time national TV ads that have so popularized Federal Express. To us – and probably to our clients – those ads clearly imply that they provide their rapid delivery regardless of the delivery address, at the least, to any address in a major metropolitan area such as the San Francisco Bay area.).

In fairness, we should report that – after we published the last statement of this kind (so we could be sure we reached our client community) – we received a courteous and concerned call from FE's President out of Tennessee. He allowed as how they were doing the best they could, and gave us his personal phone number to call, should we encounter further problems.

However, (1) we have this problem with most of the shipments we receive via Federal Express, (2) we are not particularly inclined to want to phone him, each time we are expecting another FE shipment, so he can assure that we will receive prompt delivery, and (3) in most instances, we couldn't even phone him, since we don't know that someone is going to ship to us via Federal Express, exercising the mistaken opinion that delivery to us will be prompt and timely.

We think Federal Express should tell its shippers when a destination is outside of their service area, and warn them that delivery under those circumstances may not be as prompt as FE's advertising implies. E.g., with Express Mail, USPS tells you the communities to which it will guarantee 24-hour delivery.

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The Faire has expanded its exhibit area to include more micro-booths (for low-budget computer craftspeople) and more regular booths. While they last, all exhibit space is available on a first-contracted, first-assigned basis.

For information on what's left and how to most quickly contract for it, call 'Git (Marguerite), or Sarah -- the Faire Exhibitor Coordinators -- at (415) 851-7075.

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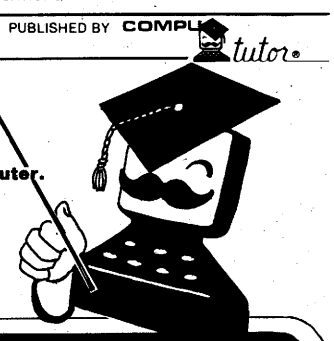

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consumer warning

Bits Bites the Dust?

Jim C. Warren, Jr.

[Though the vast majority of mail-order companies serving the personal computing community are reliable and reputable, there have been occasional failures or rip-offs precipitated on this community via mail-order marketeers.

Every time this problem has been discussed in industry meetings, the media have been adamantly encouraged to provide information to their readers regarding questionable operators. We are following those pleas, now.]

Bits, Inc., a mail-order book dealer last known to be operating out of Peterborough, New Hampshire, appears to be such a questionable operation, to wit:

They had a phone number of (603)924-3355. As of November 6th, that number "has been disconnected."

They had a toll-free number, (800)258-5477. It has been changed to (800)528-6050.

That toll-free number is answered by an individual's name. The person answering had to look up something when asked about Bits, Inc. (rather than immediately recognizing the company's name). She could not give us the name of Bits' manager; could not connect us to Bits' management; and was obviously trained to do nothing except take phone orders for products.

She did say that we could reach Bits, Inc. by calling (603)924-3356. When we tried that, we found it to be "temporarily disconnected."

FOR SALE. VITICULTURE & ENOLOGY COLLECTION. Books, pamphlets, advertising leaflets relating to wine-making and grape-growing. Some works in French. California Viticultural Commision, UC Davis Agricultural Experimental Station publications, etc. Includes large group of bootlegers trade cards ca. 1925-30. Create an instant reference library. Mitch's Archives. 155 Yale Road, Menlo Park, CA 94025 (415)324-4574.

PART-TIME TYPIST. Need part-time typist to transcribe dictation from tape cassette. Mitch. (415)324-4574 eves.

Whatever Happened to Datacast?

Jim C. Warren, Jr.

Oh blush; Oh cringe! It is still not organized. The technology works. Initial feasability field tests were successfully completed long ago.

There is a Moseley subcarrier generator sitting about three feet from me, appropriately modified to inject digital signals into an FM subcarrier, just waiting to be plugged in to some warm and friendly FM transmitter.

The production version of the receiver has been designed and breadboarded. The protocols have been roughed out (though not detailed). The editorial software (for the transmitter end) and the basic receiver software has been outlined sufficiently to see that it is little more than a few man-months task per unit to allow being operational in a useful manner.

Technical staff have been located and are readily available sufficient to carry out the initial hardware and software development and field support.

A company – Wireless Digital – has been incorporated in California to pursue this venture.

All that needs to be done is 84 Variations on the Theme of the Great Business Hustle – contracting with broadcast license holders for lease of a subcarriers, contracting with information providers (wire services, newspapers, publishers, government sources, etc.), setting up offices, hiring and supervising personnel, getting the rather minimal start-up capital necessary (about $200K), etc.

And that's where the holdup comes: I'm eager to finish the systems design and implementation – that's what I do by profession and by personal inclination. And, I know exactly how to do the bootstrap promotion (I'm good at promoting something that I believe in, e.g. the Computer Faires), but doing the Business Bump & Grind is, to me, a total bore. So, Datacast is not yet in operation – held up for absolutely no reason except the unpleasantry of doing the business hustle.

I have been approached by several business groups, however – from Dallas, Toronto, and Boston – so, perhaps it will get under soon. Most certainly, it will happen sooner or later . . . regardless of whether I do it, first, or someone else does it.

[For those who are not aware of Datacast: Datacast is a system I first proposed in June, 1978, to broadcast information in digital form via FM subcarrier, the medium currently used primarily for transmission of background music services such as Muzak. Information proposed to be transmitted includes news wires, stock & commodities wires, real estate listings, theatre schedules, community bulletin board information, electronics components wants & availabilities, judicial slip opinions, airline schedules, buy & sell advertising . . . you name it. Field tests proved that we could transmit the equivalent of about 2500 newspaper pages per 24-hour period. Receiving it in digital form means that it could be automatically scanned for items of interest to the recipient – specified by keyword combinations – and those items could be automatically saved, catalogued, summarized, etc. in manners limited only by the imagination and recipient and the capabilities of the (programmable) receiving machine. The key features of the system are (1) mass information distribution via FM broadcast rather than wire or cable, (2) hetrogenius mass user community, (3) simple programmability of the receiver by the user (e.g. keyword specification), (4) lowcost mass storage on the receiver end (e.g. tape cassettes), and (5) absolutely minimal implementation in hardware (so the system can be improved as it matures, via software changes, without obsoleting equipment in the field).]

WANT ADS

The Silicon Gulch Gazette *will accept want ads for publication in future issues. 50,000 distribution is guaranteed for each edition. 100,000 distribution is guaranteed for each issue.*

SGG *is published 4 times each year. The next issue will be published in two editions; on February 16 (Eastern edition) and March 16 (Western edition). Copy deadlines are February 11 and March 11, respectively.*

Want ads must be paid for on the basis of number of words in the copy. A "word" is defined by SGG *as a phone number or any alphnumeric group delineated by a non-alphanumeric character.*

The classified ad rate for want ads is $1.00 per word, with a $25.00 minimum.

Payment must accompany the typewritten ad copy. Ads and payment must be sent to: Silicon Gulch Gazette, *333 Swett Road, Woodside CA 94062.*

LEGAL SERVICES
COMPUTER LAW/BUSINESS LAW
Serving San Francisco Bay Area. Attorney at Law with 10 yrs. technical background in Computer Systems. Initial consultation without charge. Out-of-office appointments arranged. Lawrence Norton. (415)579-1259.

COMPUTER HISTORY BUFF wants any and all early, original printed or written materials relating to electronics research at Moore School, University of Pennsylvania ca. 1940's, especially "Project PX", "Project PY", "Annie", "Eniac", John Mauchly, J. Presper Eckert, etc. Particularly interested in original correspondence, journals, memoranda, technical instructions, schematics, and office records. Also looking for early computer hardware/software. Equally interested in War Department research reports and computer research in other locations ce.g., Iowa State. Write or phone Mitch Strucinski, 155 Yale Road, Menlo Park, CA 94025 (415)324-4574.

Wholesale Prices to Dealers & Computer Club Members. Eg. Paper Tiger number 460, $1077. Anadex DP9500/1, $1275. Microline 80, $555. Centronics 737, $780. Diablo 630, $2160. NEC 5530, $2241. Epson MX80, $CALL. Atari 800, 24K, $782. Vector Gr., $CALL. Lex Modem, $124.50. Word Star, $293. Call for Price Sheet! Patio Computer Sales Co. (213)762-0020, 11:30 a.m. to 4:45 p.m., PST.

Custom Designed Wood Computer Cabinets built to your specifications. Write Larry Dean, Box 537, La Honda CA 94020, or call (415) 747-0846 evenings & weekends.

Proceedings Paper

Breaking into Technical Writing

"Technical writing is one of the easiest fields to get into, and one of the hardest to stay in," says Sharon Rosa. Why easy to get into? Because there is a crying need in the microcomputer industry. Every week another company wakes up to its need for good, technical communicators. Why hard to stay in? Because it is demanding, exacting; because the results of your work will be out there for all the world to see (and for your boss to see). If you're a dud, it will show. But if you are competent, conscientious, professional — then Silicon Gulch can be a technical writer's El Dorado," she says.

In her paper, "Breaking into Writing for the Microcomputer Field," presented at the 5th Computer Faire in 1980, Sharon covers the following: what does it take?; the writer's background; getting started; presentation; security versus freedom; advantages and disadvantages from captive employment and free-lancing; how much can one earn?; and marketing yourself.

Micro PL/Is Expanded by Digital Research

Pacific Grove, CA — Digital Research, designer of the first version of PL/I implemented for microcomputers, announces the release of Version 1.3 of the PL/I-80 Programming System.

Included in the new version is the ability to compile several external procedures in a single compilation, as well as features designed to enhance commercial processing with PL/I-80.

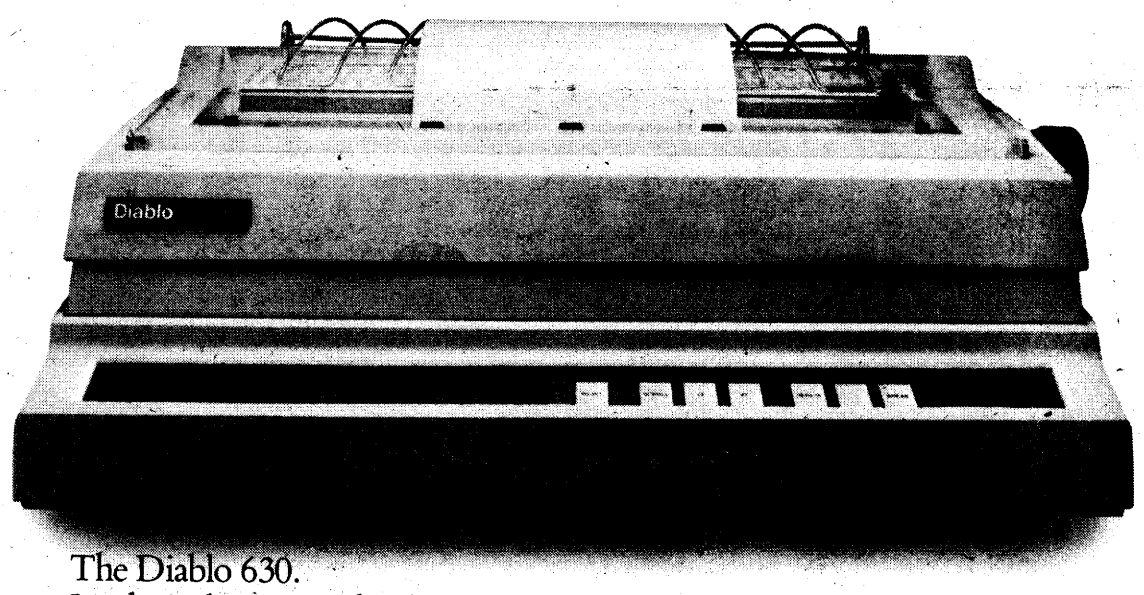
Picture specifications are included for use as format items for editing numeric data on output, in a Put Edit command. Also, an extensive Supplement to the PL/I-80 Applications Guide has been added that details the use of the PL/I-80 Programming System in Commercial Processing.

The Supplement is a guide to the use of PL/I-80 arithmetic in commercial processing, including the use of the data types Fixed Decimal and Float Binary, and the use of several PL/I-80 Run-time Library subroutines. Version 1.3 also includes library facilities to aid converion from float binary to fixed decimal arithmetic.

The Supplement is illustrated with complete application programs involving the calculation of ordinary annuity, loan payments and depreciation schedules, and illustrates unique PL/I output formatting features.

For more information on PL/I-80, Version 1.3, contact Curt Geske or Phillip Nelson of the Marketing Department at Digital Research.

If you want a choice in print wheels, there's only one choice in printers.

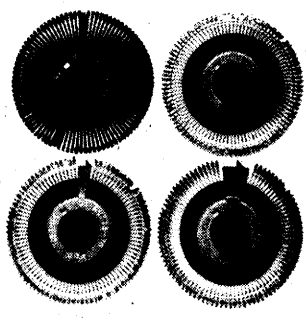


The Diablo 630.

It's the only printer that lets you use either metal or plastic print wheels. So you can choose the print wheel that's just right for the job.

The 630 works as well with a 96-character plastic daisy print wheel as it does with an 88-, 92-, or 96-character metal daisy print wheel. In over 100 different type styles.

Every 630 has fewer moving parts than competitive printers, which makes it more reliable. And it offers unsurpassed print quality. Compatibility with Diablo supplies. And bi-directional printing capability.



The 630 is the only printer in the world that uses both metal and plastic wheels.

So if you want to change your print wheels, you'll just have to change your printer.

To a Diablo 630 printer.

Diablo Systems

XEROX

Diablo® and XEROX® are trademarks of XEROX CORPORATION.

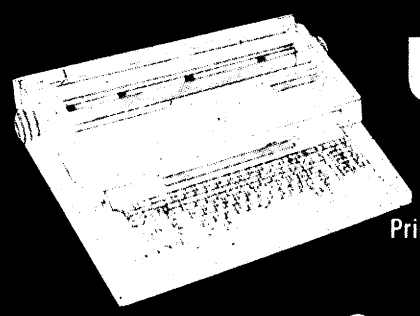
IT'S A DAISYWHEEL COMPUTER PRINTER & AN ELECTRONIC TYPEWRITER BUT . . .

IT WON'T WORK!

...UNLESS YOUR PRINTER & YOUR SOFTWARE ARE TOTALLY COMPATIBLE

The TYPRINTER 221 T.M.

Is a TYPEWRITER QUALITY, DAISYWHEEL PRINTER that is Totally Compatible with All Word Processors. That's because the TYPEPRINTER 221 may be PROGRAMMED in PLAIN ENGLISH, Imbedded within The Text File of All Word Processing Software!



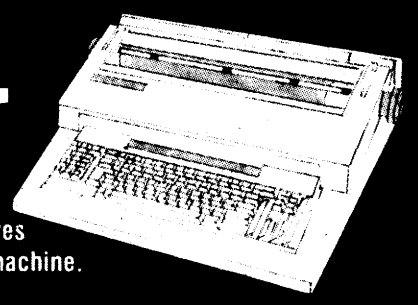
Use the 221 as your...

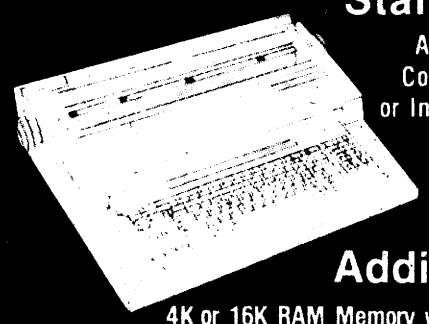
Electronic Typewriter

When not being used as a Computer Printer, the 221 becomes a fully functional Electronic Typewriter.

Computer Printer

It's a Daisywheel Computer Printer with more standard features and available options than any other machine.





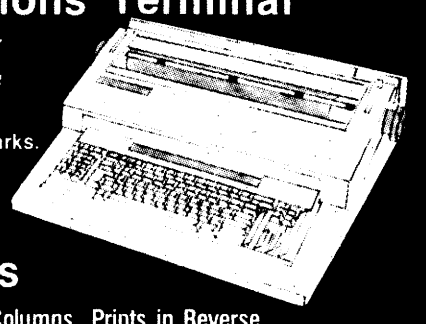
Stand Alone Terminal

Available options allow the 221 to Communicate with Distant Computer or Information Services such as Source, Micronet & others.

Tele-Communications Terminal

Option available to allow your 221 to access the Teletype & Telenex networks.

Telex & Teletype are registered trademarks.



Additional Options

4K or 16K RAM Memory which can be used as INPUT or OUTPUT Buffers. Also use as an Automatic Spooler to your computer. Bi-Directional Communicatons from The 221 to your Pet, Apple or TRS-80. Nothing else to buy. Lawyers, Accountants and others will find our Automatic Strike-Out Type and High Density Spacing options very useful.

Built-in Features

The 221 Centers Copy Automatically, Sets Columns, Prints in Reverse, Bold Face and Underlines Automatically. The 221 also Justifies Right, Types in Three Pitches and does Proportional Spacing. It Types in Spanish, French, German, Italian and Portugese as well as English. And much, much more!

Call 714/778-3443 for the distributor in your area.

HOWARD INDUSTRIES

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