

# SILICON GULCH GAZETTE

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Computer Faire, 333 Swett Road, Woodside CA 94062

(415) 851-7075

## Britain Announces Portable Computer

A British-made "computer in a briefcase" contains a word processor, an 8" x 8" viewing screen with a capacity of 480 characters, a bubble memory and a telephone coupler.

The MICRODATA 8400 weighs less than 17 lbs. and has a standard "QWERTY" keyboard. It can operate anywhere in the world because it works on power supplies from 105-265 V. The acoustic coupler allows the unit to transmit or receive data or programs over public telephone lines. It operates on both American and European communications standards. The 94-K capacity bubble memory stores the data and is not erased when the power is switched off.

The portable computer comes in a briefcase and can be carried as hand luggage.

For further information contact: Mr. B. P. Wallace, Microdata Computers, Belvedere Works, Bilton Way, Hayes, Middlesex UB3 3ND England; Telephone: 01 848 9871; Telex: 934110.



The MICRODATA 8400 portable computer — a British-made "computer in a briefcase".

## KCSM Initiates Weekly Program Focusing on Microcomputing

KCSM-TV is creating a weekly half-hour television program that will focus on microcomputers and microcomputing. With a new 1.5 million-watt transmitter, this UHF station (Channel 60) now blankets the San Francisco Bay area, including the San Francisco Peninsula's internationally known "Silicon Valley".

### A Show for Computer Folk

The show will address current events and issues in microcomputing, including applications, new products, personalities, business issues, foreseeable futures, etc. Although the show will make a reasonable effort to be intelligible to the layperson, it is designed for viewers who have some interest in low-cost computing power or personal computers — people who are at least semi-literate about computing.

The show is scheduled for a near-optimal time-slot — 7pm-7:30pm on Thursday evenings, just before prime-time network shows. The show will be repeated late Saturday afternoons, 5:30pm-6pm. It will begin airing September 17th.

KCSM-TV is associated with the Public Broadcasting System. Producer Dave Carlson expects that — as the show proves itself — it will be picked up by PBS affiliates located in other areas oriented towards high technology.

One of the unusual aspects of the show is a plan to directly interface the video output from demonstration microcomputers to the broadcast video. This direct connection will allow viewers' televisions to become temporary

display terminals for computer and software demos, whenever it is useful. The station engineers — normally minimally interested in much of the station's programming — are unusually enthusiastic about this program and the opportunities it offers for their special brand of wizardry.

### First Shows: Osborne, Felsenstein, Whitneys

September 17th, 7pm

One of the newest entries to the low-cost computer market is the Osborne I — the brainchild of publisher Dr. Adam Osborne and electronics wizard Lee Felsenstein. Both men are well known personalities in the micro industry, known for their innovation, and for their strong views about the present and future of mass microcomputing.

The Osborne I will be demonstrated and its design and software discussed. Of equal interest, Osborne and Felsenstein will be interviewed on topics ranging from their recollections of the chaotic early days of personal computing and its personalities to their views of the foreseeable futures.

September 24th, 7pm

John Whitney and his son are well known innovators in the area of computer graphics. Both will show samples of their exotic computer graphic creations, discuss how they were produced and principles behind graphic computer art, and will offer projections of the future of computer graphics, electronic art, and computerized animation.

John Sr. is internationally known for his early work in the area of computer art and graphics, and has recently completed a book based on that early research that addresses the interrelations between music, harmony, and visual art. John Jr. has followed in his father's footsteps to become an equally innovative technologist/artist working with computer art and graphics.

### Jim Warren to be Show Host

KCSM-TV conducted a reasonably extensive search for appropriate personalities to anchor the show. They were interested in finding a host or hosts who were technically competent, known and respected in the microcomputer industry, and who could communicate effectively in a television setting.

Producer Carlson investigated a number of possibilities, including having a permanent panel, or cycling through several hosts. After discussing it with a number of people in the industry, Carlson and the station's General Manager, Stewart Cheifet (who has been a personal computing enthusiast for several years), chose to invite Jim Warren to serve as the show's single, permanent host.

Warren's name had come up repeatedly in the search. He is well known in the area for having organized and chaired the West Coast Computer Faires. He served as the first Editor of *Dr. Dobb's Journal of Computer Calisthenics*, and was the originator and publisher of the microcomputing industry's first newspaper (later sold to *ComputerWorld* and named *InfoWorld*). He has chaired local chapters of the ACM (Association for Computing Machinery), SIGMICRO and SIGPLAN, and served on Program Committees for the NCC and the IEEE'S Compton.

He holds graduate degrees in computing from Stanford and the University of California, and had completed all but his dissertation for a Stanford Ph.D. He also holds two degrees in mathematics.

Prior to entering the computer profession, he had taught mathematics for most of a decade, including conducting a 13-week series on mathematics for KPIX-TV (Channel 5, San Francisco) while Chairing the Mathematics Department at the College of Notre Dame.

### Show Title Debated

There was considerable debate over the title of this show. Originally, it was called "Bits & Bytes", internally at the studio, a

(continued on next page)

## S. F. Convention Focuses on Inexpensive Business Computing

For the first time, San Francisco hosts an exhibition and seminar program exclusively concerned with low-cost computing power for business and finance. Business Computing '81 will be held at San Francisco's Masonic Auditorium Sept. 23 and 24.

Most computer conventions have been for the computer professional and have concerned the use of large, expensive computing systems. This show — Business Computing '81 — is the first to focus specifically on low-cost computerized solutions to a wide selection of business problems.

### Broad Range of Exhibits

Strongly supported by local dealers, the show has more than 70 exhibits including demonstrations of most major microcomputers — Tandy's TRS-80, Apple, Commodore, Zenith, Heath, Alpha Micro, and many others.

An equally broad selection of applications programs are being demonstrated — accounting, financial planning, stocks, inventory control, inexpensive word processing, and much more.

### Shop the Whole Bay Area, All at One Time & Place

Unlike a visit to any one or two computer stores, Business Computing '81 allows the attendee to see and compare the offerings available from most Bay area computer dealers. This provides an excellent opportunity to select the system and price that best suits the needs of each individual business person.

### Free Access to Computer Consultants

Several independent, business-oriented, computer consultants are available to Business Computing '81 attendees — without cost — throughout the show, for informal discussion of business problems and their solutions. Their availability has been arranged by the convention organizers; they are not affiliated with the exhibitors.

### Two Seminars by Independent Lecturers

The show includes two in-depth, four-hour introductory seminars given by experienced business consultants, independent of the exhibitors and vendors. Both seminars are designed for the business person who is experienced in business but a novice in computers. Both are designed to provide practical, decision-making information.

"An Introduction to Business Computing" offers an overview of systems and applications, and pragmatic suggestions concerning what to look for... and what to look out for.

"An Introduction to Word Process-  
(continued on next page)

## New Dimensions in Computer Output

Computer Output in two and three dimensions is the topic of five papers in the *Proceedings of the 6th West Coast Computer Faire*.

### RIGHT ON BRAIN POWER

In a fascinating article entitled "Computing for the Right Brain", Fred Lakin focuses on "a personal computing system for the right brain, to support qualities like . . . playfulness, feeling, motivation and sensory and imaginative processes."

The Pattern Manipulating system (PAM) communicates with the computer via right brain activities. First, manual controls are *handled* to direct the computer in the creation of picture images; then pictures are constructed serving as instructions to the computer. The user can then draw lines, drag, rotate and scale objects and collect objects into groups.

The initial application for this was writing and drawing in working groups. Also physically handicapped children and those with learning disabilities can readily communicate using PAM.

### BIBLIOGRAPHY OF COMPUTER GRAPHICS

Aaron Marcus, in an article entitled, "Graphic Design and Computer Graphics: A Bibliography", lists a good selection of books on graphic design and typography; maps; computer graphics; diagrams, charts and symbols; and general theory of computer graphics. Forty publications are listed in all.

### 4 BILLION COLORS??

That's what has been claimed about the color capabilities of the HIRES screen on the Apple Computer.

Ted Perry describes how a menu of colors or a graphic palate on a TV screen can be combined to come up with many new colors. In his article entitled, "4 Billion Colors on the Apple?"; Perry explains

how the Kid Tyme and Chip educational projects have completed work on graphic enhancements to the Apple computer.

The program allows the user to select the color for each color bit, to combine colors to form new colors, to designate patterns and fill them and to change colors.

The additional graphic tools were designed by computer graphics expert Steve Dompier, who modestly admits that there are really only eight colors available on the computer, the others being combinations of the first eight.

### MAPS: A MOVING STORY

John Westfall deals with the use of computer graphics to avoid the necessity for hand-compiling the printed maps needed for animation.

In a paper entitled, "Microcomputer Production of Animated Maps", Westfall shows how a microcomputer is used "to create an animated film of the changes in the Roman territory from 510 B. C. to A. D. 1461."

The territorial changes are readily seen as the map "moves" across the screen, changing borders and colors.

### RODIN, WATCH OUT!

Did you know that you can carve three-dimensional sculptures using a computer? David Dameron has and explains the system in his paper, "A Three-Dimensional Computer Input Output System."

Three-dimensional input, generated by algorithms, is the first step, according to Dameron. The object is previewed as a perspective drawing on an X-Y plotter and then can be carved into wax by a computer-controlled machine.

Any shapes can be sculpted — from simple cubes and spheres to complex human faces.

## KCSM-TV (continued from page 1)

title for which Warren expressed little enthusiasm.

Considering that the show would draw from the massive electronics and computer resources of the San Francisco Peninsula, additional proposals ran along the lines of "The Silicon Valley something" — e.g., "The Silicon Valley Sentinel", or "The Silicon Valley Weekly Connection". For the more grandiose, "The Silicon Valley Weekly Oracle" was proposed. [Of course, Warren — known to be ever so shy and bashful — rejected this title.] For the more sedate — "The Silicon Valley Computer Journal". Then, for the Saturday night red-eyes, there was the proposal of "Live — From Silicon Valley!"

In the end, it was decided to be neither technonut nor provincial — the title of the show will be "The Computer Chronicles" (with apologies to Ray Bradbury).

### Products, Personalities & Sayers of Sooth

Reviews of interesting products and events, as well as investigations of interesting applications will be a regular part of "The Computer Chronicles". If you have suggestions of such products, applications, or events, please forward them to Jim Warren, 345 Swett Road, Woodside, CA 94062. (Please write; do not phone.)

Interviews with microcomputing experts will be a regular part of the show. If you have suggestions of individuals who are particularly competent in any of the areas of microcomputing technology, software design and development, business and entrepreneurial effort, interesting applications, or market and futures projections, please send your suggestions to Jim Warren.

[Note: This is a request for the originators and designers of interesting systems and applications, and for proven entrepreneurs who would be of interest to the viewing audience as personalities. With few, if any, exceptions, marketing and PR people will not be invited to be guests on this show.]

## New Assembly Code

### Translator from Digital

#### Research

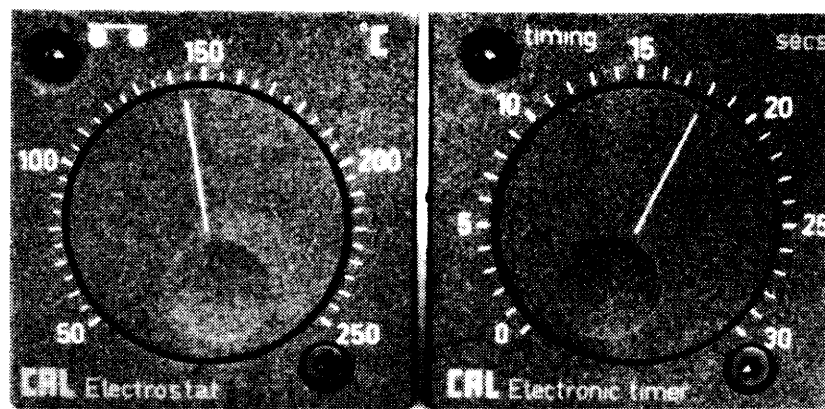
A XLT86 program translator to help companies save time when converting their CP/M software products from 8-bit 8080-based systems to 16-bit 8086-based microcomputers is the latest offering from Digital Research.

The XLT86 program translator reads an assembly language program compatible with the Digital Research ASM, MAC, RMAC assembler format and produces an output file containing 8086 assembly language statements acceptable to the Digital Research ASM-86 assembler. Unlike other 8086 code converters that translate a single 8080 instruction as many as ten 8086 instructions, XLT86 performs extensive data flow analysis to determine register usage throughout the original program. The information collected through this analysis is used during program translation to eliminate unnecessary flag save and restore operations.

Programs translated by XLT86 run on CP/M-86 and MP/M-86, Digital Research's 16-bit single-user and multi-user operating systems.

XLT86 operates on any 8-bit CP/M or MP/M system, or under the VMS operating system for use on Digital Equipment Corporation VAX series minicomputers. The CP/M version is priced at \$150.00. The VAX version sells for \$8,000.

For more information call or write: Digital Research, P. O. Box 579, Pacific Grove, CA 93950; (408) 649-3896.



## Time/Temperature Control Package is Very Small

A time/temperature control package from Britain covers a wide temperature range and is said to be half the bezel size of similar products. The CAL system, designed to be reliable in industrial applications, reportedly provides extremely accurate control for units of this size.

The system comprises a pair of matched panel units, an electronic timer and a temperature controller.

Each unit has a 1.9" x 1.9" (48 x 48 mm) front bezel, a dial, status LED and an individual dial lock. Standard temperature ranges vary from 0 to 1500 degrees Fahrenheit and from 0 to 1600 degrees Centigrade. Timing ranges are 0-1 sec, 0-3 sec, 0-5 sec, 0-10 sec, 0-20 secs, 0-30 secs, 0-60 secs, 0-120 secs and 0-300 secs.

The temperature controllers can switch and control loads up to 3 kW (220V 14A ac). Built-in power feedback automatically compensates for variations in heater power which could be caused by voltage fluctuations. The matching electronic timers in the package have an internal rated switching and control relay with heavy-duty, silver-cadium-coated changeover contacts for switching inductive loads.

Various temperature sensors, compression fittings, terminal leads, compensating cables and a plug-in model are available.

For further information contact: CAL Controls, Inc., 1155 Waukegan Road, Glenview, IL 60025; (312) 998-5720.

## S. F. Convention (continued from page 1)

ing" provides a detailed introduction to inexpensive word processing, including exotic letter preparation, automatic documentation, mailing list facilities, spelling correctors, etc., as well as the connection between word processing and general business computing.

Each seminar is offered each day of the show. Each meets from 9:30am-12:30pm for a formal presentation, and reconvenes from 4pm-5pm for an extensive question-and-answer period (after registrants have had the opportunity to study the exhibits and discover more questions). Registration for the seminars is extra.

### Extensive Cross-Index to Products & Dealers

An *Exhibitor Guide* is given to each Business Computing '81 registrant. It lists all exhibitors, their addresses, and a description of their products and services.

Additionally, a second booklet — *Program & Seminar Notes* — includes all *Exhibit Guide* information, plus a cross-index to exhibitors by generic name of product and service, plus another cross-index by brand names. It also includes the *complete lecture notes* of both introductory seminars, including a

check-off list of questions to ask and points to consider when examining a business computing system or word processing system. This reference book is included in the seminar registration fee, and is available to other attendees for a nominal fee.

### Late Hours Accommodate Business Attendees

Business Computing '81 will take place in the Masonic Auditorium across from Grace Cathedral on top of Nobb Hill (California & Taylor Streets), September 23rd & 24th. The exhibits will be open 9am-7pm on Wednesday the 23rd, and 9am-6pm on Thursday the 24th.

### Registration

Registration to attend the exhibition is only \$15 (that's less than the cost of the time and gasoline it would take to visit just one or two computer stores — BC'81 has over 70 exhibits). Exhibition registration is available at the door. Advance registration for the exhibition is not necessary.

Each of the two seminars is \$85 — \$70 plus the \$15 exhibition registration. Seminar registration also includes a copy of the *Program & Seminar Notes*, which includes the notes for both of the seminars.

*Pre-registration for the seminars is STRONGLY advised.* Each seminar will be limited to 75 registrants, and all are expected to be heavily subscribed. To pre-register, call the BC'81 office at (415)851-7075.

### Silicon Gulch Gazette

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## **Sept. 23-24**

Wednesday 9am - 7pm    Thursday 9am - 6pm

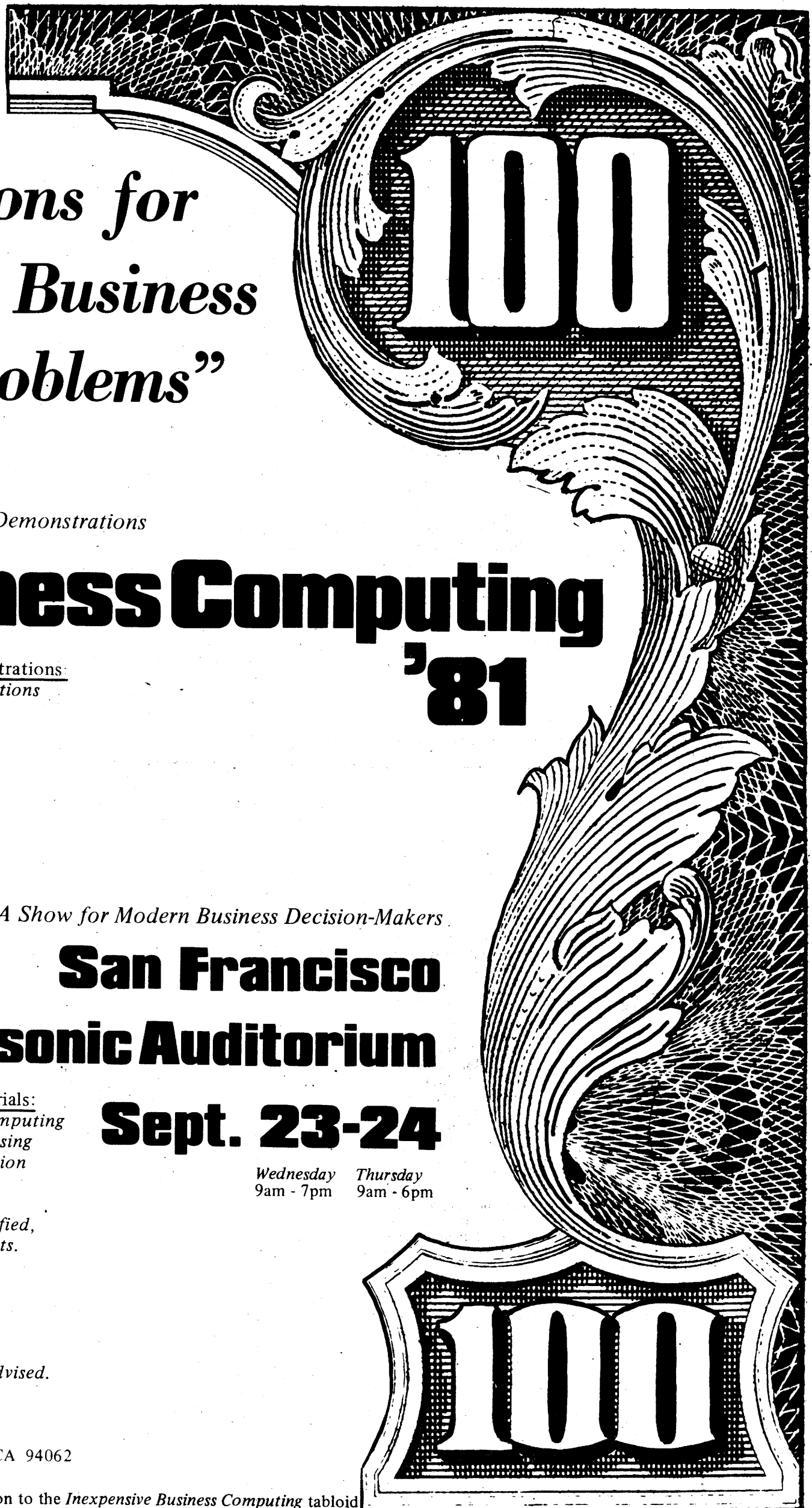
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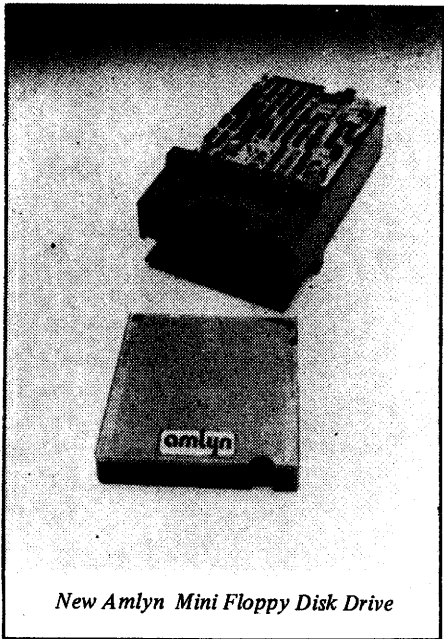
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## Pre-Comcon '81

"Software Design Techniques" is one of four pre-conference tutorials to be presented on Sept. 14, the day before the beginning of COMPCON FALL '81. The instructor will be Dr. Peter Freeman, Associate Professor of Information and Computer Science at the University of California at Irvine.

For more information about COMPCON FALL '81 to be held Sept. 15-17, at the Capital Hilton Hotel, Washington, DC, write COMPCON FALL '81, P. O. Box 639, Silver Spring, MD 20901; (301) 589-3386.



New Amlyn Mini Floppy Disk Drive

## Amlyn Introduces Mini Floppy Disk Drives Using 5-Diskette Cartridge For 8MB Capacity

Amlyn Corporation today introduced a new family of 5.25 inch floppy disk drives employing a five-diskette cartridge to provide up to eight megabytes of data storage for use in on-line computing applications as well as for backup of Winchester disk drives.

The first two models are the Amlyn 5850 and the Amlyn A506, each of which is compatible with currently available floppy disk and Winchester disk drives.

The design of the Amlyn drives features the proprietary diskette cartridge, which holds five spin-coated, high resolution diskettes, and an articulating selector device which removes the addressed diskette and loads it on the drive spindle. The cartridge measures 5.25 x 5.5 x 1 inches and is designed to allow users to change an entire cartridge at a time or individual diskettes within it.

Diskette recording is single sided with a density of 9,500 bits per inch (BPI) using 770 tracks at 170 tracks per inch (TPI). This provides a storage capacity per diskette which is the same as double-sided, double density Maxi-Diskettes and 60 percent more than 96 TPI double-sided, double density compatible with IBM formats as well as those of popular Winchester disk drives. Both of the new drives employ an Intel 8051 microprocessor to handle a variety of real-time control functions.

For more information, contact: Amlyn Corporation, 1758-H Junction Ave., San Jose, CA 95112; (408) 275-8616.

## Unusual Computing

The second section of the 6th West Coast Computer Faire *Proceedings* "Microcomputing: Very Unusual Applications," has papers about everything from farming to fame.

### HORTICULTURAL COMPUTING TAKES ROOT

"Horticulture is a science in the midst of an information crisis," writes author, Frederic E. Davis, in his paper "Computers and Horticulture." With a half million plant species in the world, Davis says there are important uses for computers in the retail florist and nursery industries, plant breeding, pathology, and taxonomy, and greenhouse automation. In his six page treatise, Davis describes how computer use can bloom in these areas.

### A "STARS" IS BORN

"Stars, an Automated Manager for Small Performing Arts Theatre," can do just about everything for your theatre company but sign autographs, writes David J. Blow. In his paper, Blow describes the functions important to a profit or non-profit companies that Stars performs, including: performance costs and returns, theater pricing, marketing techniques, and grant accounting. The system is already being used in theaters across the country, says Blow.

### COMPUTER CROSSWORDS

Modern crosswords have fascinated millions of people since 1913 when the first one appeared in the New York World newspaper. Now Chuck Adams of North Texas State University's Computer Sciences Department tells how to create computer crosswords in "Computer Generated Crosswords." The rules included in this paper are simple and easy to implement in both high level languages and assembly language routines. Eight sample puzzles are included in Adams' paper.

## Smart Terminal Programs for the Radio Shack Modem I

A series of smart terminal programs for the Radio Shack Modem I is available from the MicroPeripheral Corp. The programs, called SMART, are supplied on cassette or disk for the Model I (Smart 80/D- & \$79.95) or Model III (SMARTIIC/D- \$99.50).

The smart terminal software permits the transfer of data (BASIC programs, text and source or object code) between computers. Control codes are used for automatic buffer open and close to capture the received data.

Another feature unique to the SMART terminal programs for the Radio Shack Modem I is the provision for formatting the line length on the CRT. The line will feed on a space and not hyphenate the word. Also featured is software selectable half or full duplex operation, baud rate, word length, parity selection and stop bits to match virtually any host computer.

The SMART series is fully compatible with Radio Shack VISICALC, PROFILE and SCRIPSIT. Data generated by these programs, or messages and text prepared with SCRIPSIT can be transmitted or received by SMART. For those who do not have this word processing program, SMART also incorporates a message/text preparation program.

For additional information, contact the MicroPeripheral Corporation, 2643 151st Pl. N.E., Redmond, WA. 98052. Tel. (206) 881-7544.

## New Atari Peripherals Announced

The MicroPeripheral Corporation has just announced two products for the Atari 800 Personal Computer Systems.

The MICROCONNECTION is a direct connect modem which eliminates the need for noisy and unreliable acoustic coupled devices. An AUTODIAL/AUTOANSWER option permits dialing or responding to other computers automatically. The option is available for use with either the Model 400 or 800, with or without the ATARI 850 Expansion Interface. When used with the Model 850, it is directly interchangeable with the ATARI modem. Typical applications include small business bulletin boards and message centers or automatic downloading of programs and other data.

The MICROCONNECTION for the ATARI is Bell 103 compatible and operates in the originate or answer mode at 300 baud. Models for use without the 850 Interface incorporate a socket (DB-25) for connection to any serial printer capable of operation at 300 baud.

Another significant feature is the provision for on-line data storage. An inexpensive, voice grade cassette recorder can be plugged into the MICROCONNECTION and will "transcribe" on-line communications for later playback. A special version, which is compatible with European telecommunications standards, is also available.

The unit measures 7.7 inches wide by 5.5 inches deep by 1.7 inches high and weighs less than one pound. The price, complete with autodialing terminal software, power source and connecting cable (but without options) is \$199.50. The AUTODIAL/AUTOANSWER option is \$79.00 extra.

TSMART is the first smart terminal program for the ATARI 800, with provision for autodialing other computers. The program is available on cassette with instructions for transferring to disk. TSMART permits transfer

of BASIC programs between a remote host computer and an ATARI cassette or disk storage device. The autodial feature works in conjunction with the AUTOMICROCONNECTION, a direct connection modem (\$199.50), manufactured by the MicroPeripheral Corporation.

The program permits off-line text preparation (messages, manuscripts, letters, etc.) with a text editing or word processing program for on-line transmission. A built-in feature permits creation and storage of text, then transmission by TSMART for those who do not have a text editor.

TSMART also permits transfer of source code assembler files. The recipient can create the object code using an editor/assembler program. A separate command is available for transferring object (hexadecimal) code files, such as ATARI Music Composer Files.

An AUTOBUF feature will open and close the memory storage buffer automatically when uploading or downloading. TSMART recognizes the automatic buffer open/close (X-on/X-off) codes transmitted by TSMART or other compatible programs. Downloading from FORUM 80 bulletin boards is also accomplished automatically. The buffer can be "toggled" on and off as many times as desired while data is being downloaded. Another feature is software selectable half or full duplex operation.

The program was written for the ATARI 800 by James W. Clark. It can be used with any RS-232 compatible modem, although the dialer feature cannot be used with obsolete acoustic modems. TSMART is supplied in a protective binder with extensive easy-to-use operating instructions and is priced at \$79.95.

For additional information on TSMART or the MICROCONNECTION, contact the MicroPeripheral Corporation, 2643 151st Place N.E., Redmond, WA. 98052, Telephone (206) 881-7544.

## Sing and Shout!

### Computer Music and Speech Synthesis

"Speech and Music Synthesis," the sixth section of the 6th West Coast Computer Faire *Proceedings*, describes projects on the leading edge of computer music and speech synthesis. Expanding the vocabulary of Texas Instruments "Speak and Spell" and programming voice synthesizers are just two of the areas covered in the 17-page section.

### PHONETICALLY SPEAKING

Carol A. Simpson of the Psycholinguistic Research Associates of Menlo Park, Ca. authored two of the section's four papers.

"After some 200 years of research and development effort, the technology has arrived and is affordable," writes Simpson in her paper, "Access to Speech Synthesis and its Applications." The paper is a concentrated summary of technical and human factor aspects of the application of speech synthesis for voice displays. It gives readers access to published literature and current technology in speech analysis.

"When speech synthesizers were first introduced as off the shelf, speech output devices, one would have expected everyone with a computer to give his or her favorite machine the gift of the spoken word. It didn't happen," Simpson

says in her second piece, "Programming 'Phoneme' Voice Synthesizers Phonetically." High prices and the lack of a good human factored speech editor are two problems she addresses in her paper. She also introduces basic concepts in phonetic transcription and her Modified International Phonetic Alphabet.

### FROM THE MOUTHS OF MICROS

In "Expanding the TI Speak and Spell's Vocabulary with Speech Sound Concatenation," John Cater of Intelligent System's Engineering, San Antonio, Tx., explains how this \$60 child's learning aid can provide a computer peripheral with tremendous potential. Combining the "Speak and Spell" with a simple interface and phonetic software drive, he writes, will give this learning aid with a vocabulary limited only by its user.

### FM SYNTHESIS

In the five page paper that ends this section, "FM Synthesis and the Casheab Synthesizer," Ceasar Castro discusses FM synthesis and the ability of the 32 channel synthesizer to produce "interesting audio sounds." Numerous diagrams are included in the paper.

## Touch Sensitive Board IEE Announces Special on PEP Kits

The Special Products Division of Industrial Electronic Engineers, Inc., (IEE) has released to the OEM industry an "Evaluation Kit" offer on their touch input plasma display product lines. These Peripheral Entry Panels, PEP, are being offered at a discount price on single quantity buys for the purpose of engineering evaluation.

The kit offers a reduced price on the PEP complete with all display and switch electronics. Included at no extra charge are a supporting power supply, applicable cables and an installation guide. These OEM duplex terminals are available in parallel or serial interfaces (e.g. RS-232C) and in display colors of orange, red or green. Choices also include 256 or 480 alphanumeric character displays with infrared touch input switches on the same viewing screen.

For further information, contact: Al Harrison, Special Products Division, IEE, 7740 Lemona Ave., Van Nuys, CA 91405; (213) 787-0311, ext.201.

*Proceedings Papers:*

## Engineering Applications of Microcomputers

This six paper section of the 6th West Coast Computer Faire *Proceedings* "Engineering Applications of Microcomputers," will help the engineer better understand his or her computer.

"Pascal Programming for Engineers. General Least-Squares Curve Fitting," by Alan R. Miller is a paper that reviews vector and matrix operations. A straightforward technique for finding the least squares to fit a general expression is developed. Miller's approach allows a set of experimentally determined X-Y points to be converted into a set of linear equations which can be solved directly. A Pascal procedure for conversion is given.

"You Too can be a Microprocessor Programmer," promises the title of R. David Pogge's *Proceedings* paper. Many design engineers, Pogge says, will soon have to make the transition from circuit to software design. For some engineers that will be easy, and for some it won't. Pogge's article is designed to help circuit designers become software designers.

Full design automation systems capable of running on microcomputer based systems and producing automated logic drawings and printed circuit board art work will revolutionize the microcomputer industry, writes David Russell. In "Design Automation for Microcomputer," he discusses how these systems will enable professionals and hobbyists alike to produce and market hardware at a fraction of the current cost.

"The need for power system load management due to generation constraints has prompted us to make a study of this system frequency," write the authors of "Microcomputer Use for Studying Interconnected Electric System Frequency." R. K. Adams and J. M. McIntyre of the Oak Ridge National Laboratory and R. W. Rochelle of the University of Tennessee describe the wide variety of power system measurements made possible by microcomputers.

In "Development of Microcomputer Systems and their Applications at the Laboratory of Wave Information Processing of Hokkaido University," Professor Yoshinao AOKI describes the development of some very special systems.

## Heath Announces New Z-80 CPU Card for H-8 Computers

Heath Company has introduced its new HA-8-6 Z-80 Central Processing Unit (CPU) Card for the Heath H-8 Computer.

The new CPU, with a mail order price of \$199, gives H-8 computer owners a choice of two CPUs. The Z-80 CPU Card is designed to replace the 8080A CPU supplied with the H-8.

For more information contact: Heath Company, Dept. 350-135, Benton Harbor, MI 49022, or pick up a copy at a Heathkit electronic center.

## DEC Users Get Automated Security Monitor

Clyde Digital Systems is introducing a utility software package for automated, active system security. Named MONITR, this tool inserts itself between selected job sessions and their keyboards. Literally every byte that passes in either direction between them is recorded in a secured log file.

This capability is now offered for the DEC PDP11 (RSTS) and is being implemented on the VAX system.

The monitoring activity is invisible to the job session and to the user at the keyboard, and may be initiated or released at any point during a job session without effect on the job's correct execution. It makes no difference what is taking place between the processor and

user's keyboard.

Even in cases in which a keyboard is assigned to another job as an I/O channel, MONITR can insert itself and observe the flow of data.

MONITR is table driven and may monitor the entire system according to powerful, flexible criteria for job selection. Such parameters as account numbers, program names, keyboard numbers, and others may drive the monitoring activities. This includes random monitoring or total monitoring of everything on the system.

For more information contact: Clyde Digital Systems, P. O. Box 348, Bedford, MA 01730.

*Please Clip & Post*

# SPEAK!

at the

## 7th West Coast Computer Faire

San Francisco

Civic Auditorium & Brooks Hall

March 19-21, 1982

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Visions of the Near Future

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Exotic Computer Games

Computer Assistance for the Physically Impaired

Designing Systems for Humans

Low-cost Educational Computing

Computer Esoterica

The History of Computers & Computing

Intelligent Mass Communications

Electronic Mail

Residential Energy Conservation Systems

Tutorials on Software Design

Hardware Design & Implementation

High Level Languages for Micros

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Business Aspects for Computer Craftspeople

Peripherals: Plain & Fancy

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all accepted papers will appear  
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Computer Faire

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## New Litigation Support Software Package for Radio Shack TRS-80

Radio Shack, a division of Tandy Corporation, now offers a package of litigation support software for the company's TRS-80 Model II computer of direct interest to law firms, legal offices and attorneys. This software (26-4545) is designed to assist the attorney in implementing an accurate, extremely flexible storage and retrieval filing system, and is available now for \$299 at Radio Shack stores, Computer Centers and participating dealers.

Litigation Support actually creates two complete files, a client file and a form file, both of which provide complete report generation.

The client file holds information on personal background, case history, correspondence and other pertinent data. It has room for up to 350 client records, with up to 12 pleas and up to 10 memos per file. And it generates two mailing labels - one for an individual and one for a client company with a contact.

The forms file works like a paralegal secretary. Upon typing in a subject, topic, case number or keyword, the computer begins reviewing and displaying all matching records, with the user selecting those most pertinent.

The forms file provides room for up to 575 records, with up to 144 characters for sources and up to 255 characters for description.

In addition, the Litigation Support package may be used in conjunction with SCRIPSIT word processing software and extra disk drive systems for composing letters, documents and reports.

For further information contact Radio Shack stores, Computer Centers and participating dealers.



The TRS-80 Modem I

## Direct Connect Computer Modem

Radio Shack has announced a new, low cost modem, used to connect the company's TRS-80 computers and similar devices directly to standard single-line telephones, using the small plug-in "modular" jacks with which most current telephones are equipped. The TRS-80 Modem I (26-1172) is available now for \$149 at Radio Shack stores, Computer Centers and participating dealers.

The TRS-80 Modem I is FCC approved and Bell 103 answer/originate compatible, permitting direct electrical connection to standard telephone lines for up to 300 baud full duplex (simultaneous two-way) communications when connected to the computer's RS-232 port; Modem I also provides half-duplex operation (one way at a time) for 16K Level II TRS-80 Model I systems without RS-232 through the computer's cassette port.

For more information, contact: Radio Shack, 1800 One Tandy Center, Fort Worth, TX 76102.

## Computers Connect to 16 Phones At Once With Multiplexer

Radio Shack has a new Communications Multiplexer which allows the company's TRS-80 Model II computer to respond to information requests from as many as 16 telephone lines at once. This capability makes the Model II suitable for use as a host computer in private Videotex information retrieval networks, allowing communications with a number of Videotex-type text terminals simultaneously for easy access to virtually any data base.

With the introduction of the TRS-80 Communications Multiplexer, Radio Shack can now supply complete Videotex information dissemination systems. Used with the \$399 TRS-80 Videotex terminal, this communications multiplexer makes possible information networks for such closed user groups as farmers, publishers, newspapers, professional organizations and individual corporations.

In an operating Videotex system, a calling terminal first sees a listing of the categories of information which can be retrieved from the memory of the Model II host computer. Once the caller has communicated a specific selection by "typing it out" on the Videotex terminal keyboard, the selected information is transferred from the Model II, over the telephone line, and appears on the caller's Videotex terminal tv screen.

The TRS-80 Communications Multiplexer is available in two versions, either with eight-line capability for \$6000, or expanded to 16-line capability for \$8000. The Communications Multiplexer is available by special order only from Radio Shack Special Marketing, 1600 One Tandy Center, Fort Worth, TX 76102.

## Money and the Micro

Financial and economic planning can be readily accomplished using microcomputing power. Fiscal planning and forecasting on a corporate or individual level can be accomplished faster and more accurately using computer power.

### ECONOMICALLY SPEAKING

Dr. David Chereb describes an econometric model which forecasts the major economic variables in the U.S. economy, in his paper, "A Microcomputer Based Econometric Model of the U.S. Economy".

"One of the chief characteristics of econometric models is that they capture many of the interactions in the U.S. economy. For instance, if interest rates increase it is likely to cause a decrease in investment activity. This will later dampen Gross National Product changes which, in turn, should moderate price increases. If inflation is expected to moderate, that is, prices not increasing as rapidly, this should moderate interest rates. Thus, we have come full circle back to interest rates now starting to affect investment all over again," Chereb said.

Chereb feels that only a computer-based model that can account for these interactions can solve these economic models efficiently and at low cost.

### STOCKPAK

Standard & Poor's STOCKPAK system is detailed in an article by Harvey Pearlman entitled "Standard & Poor's STOCKPAK System".

The objectives of Standard & Poor's Portfolio Management and STOCKPAK System are:

1. Offer and provide a monthly Common Stock Data Service on a subscription basis.
2. Provide the System Software necessary to facilitate easy access to and analysis of Common Stock information.
3. Provide for an ability to interrogate Common Stock information based on a subscriber's own screening criteria.
4. Enable a subscriber to easily format reports in any desired sequence.
5. Furnish the subscriber with an

Proceedings Papers:

## LAW AND THE MICRO

Law and the computing world—what do they have in common? Two answers are found in the *Proceedings* of the 6th West Coast Computer Faire.

### COMPUTER SUITS

The first paper entitled "Mini-computer Applications in Antitrust Litigation", by David Bradwell explores the uses of mini-computers in "marshalling the economic arguments and estimating the extent of damages incurred by the independent [newspaper] dealers."

Bradwell uses the example of newspaper monopolies to examine anti-trust litigation. Computers can be used for "data reduction, estimation of the effects of wholesale level price discrimination, estimation of resale price fixing damages, estimation of damages due to territorial splits and valuation of dealerships."

Bradwell goes through a typical sequence of calculations using a computer to calculate the damages incurred in an anti-trust suit.

### PROTECT YOUR SOFTWARE

David Harrison, author of "Software Protection - Legal Fact or Fiction", voices the "disappointment and frustration with a widely perceived unwillingness or inability of the legal system to provide worthwhile protection for software."

Using the DataCash computer chess program legal hassle as an example, Harrison examines the value of copyright and trade secrets and patent protection for software. He feels that none of these methods offer 100% protection, but that each creates a minimum level of protection.

"Copyright is a very dull legal implement when it comes to protecting software," Harrison says, and "to get a patent on software is not only very difficult, it is also time consuming." He recommends a trade secrecy approach to the protection of software.



## New Moog Synthesizer

A polyphonic musical synthesizer designed for club or concert performance, composing, rehearsing or personal enjoyment is the newest offering from Radio Shack. The Realistic MG-1 Synthesizer (42-2000) by Moog (trademark of Norlin Industries) is available now for \$499.95 at Radio Shack stores and dealers.

The Realistic MG-1 features a 2½-octave full-chromatic keyboard and a versatile control panel, divided into related sections and color-coded.

Two independent three-octave tone sources feature variable waveshape. Tone Source One offers a 2:1 sync selec-

tor, 3-position octave selector and 2-position (square/ triangular) waveshape selector. Tone Source Two offers a detune control for dissonant or full-interval offsetting of its pitch, 3-position octave selector and 2-position waveshape selector. The mixer offers a selection of tone one, tone two, a noise source, a bell tone or polyphony.

The Realistic MG-1 which comes with a manual is U.L. listed for AC operation.

For more information contact: Radio Shack, 1800 One Tandy Center, Fort Worth, TX 76102

Proceedings Papers:

## Quasi-Commercial and Very Commercial Hardware

There is a lot of hardware on the market today and some of the lesser-known varieties are described in six articles in the *Proceedings* of the 6th West Coast Computer Faire.

Allen Heaberlin describes a slave processor (Z-80) which has its own on board ROM, RAM and programmable clock, in his article, "Slave Processor for S-100".

Anton Pietsch presents an overview of the PI Bus as a proposed standard which will permit the orderly transition from present day processors to high-speed, high-power computers of the future with the minimum of confusion or effort.

"One of the most useful devices in development work or small scale production is the EPROM (erasable programmable read only memory)," says Jerry Randal Bauer in his article "Single-Chip Microcomputer Programs EPROMS".

Peter Redford, in his article, "The Anatomy of a Single-Chip Microcomputer", describes the differences between a multi-chip microcomputer and a complete computer system on a single-chip.

And the final article addresses the "neglected segment of the microcomputer marketplace - computer enthusiasts".

Charles Floto feels that the Heath Company has the current machine of choice for computer enthusiasts—the H8—and he describes it in detail in his article, "Heath Company's H8: The Computer Enthusiast's Choice."

## SEVENTY-FIVE NOVICES AND A NUN

by Cheryl Rhodes

A recently held "Show and Tell" conference, sponsored jointly by the San Mateo County Office of Education (SMCOE) and Computer-Using Educators (CUE), drew about 75 computer novices and one nun to the San Mateo County Education Office in Redwood City, CA, to see demonstrations of microcomputer software for the classroom. Over 100 attendees participated in the conference. The demonstrations were given by educators, for educators, and consisted of both public domain and commercially available programs that are proven to be useful in a classroom setting.

The "Show and Tell" conference introduced many educators to the SMCOE's microcomputer center and to SOFTSWAP—a joint project of SMCOE and CUE. SMCOE established the microcomputer center in the library of the San Mateo Educational Resource Center in June of 1980. At that time SMCOE compiled a directory of computers used in the schools of San Mateo County, and found that 102 microcomputers and 79 computer terminals were being used in 31 schools from 15 districts.

Four months later, SMCOE updated the directory to show that 164 microcomputers and 77 computer terminals were used in 54 schools from 18 districts. SMCOE plans to publish a third edition of the directory soon.

SMCOE recently hired Leroy Finkel, an educator and an author of several books on microcomputers, as a part-time microcomputer consultant for all schools in San Mateo County. Santa Clara and Alameda Counties have also hired microcomputer consultants, which shows that Silicon Gulch schools are aware of the potential of microcomputers for education, and are committed to providing the necessary support.

According to Leroy Finkel and other computer-using educators, much of the commercial software is not usable or appropriate for education. Educators who are beginning to explore the possibilities of using microcomputers in the classroom are extremely vulnerable to mail-order ripoffs and inferior quality software. SMCOE and CUE are establishing the center and SOFTSWAP as a new service to teachers that will help avoid such bad experiences.

The intent is to provide a setting for educators to use and evaluate commercially available hardware such as Apple, Atari, TRS-80, Compucolor and Commodore microcomputers. The San Mateo county microcomputer center also provides both tape and disk storage devices, so educators get a chance to see the advantages and disadvantages of choosing tape storage over disk storage, before making any buying decisions.

By providing both software and many different types of computers in one place, educators can independently compare and evaluate the capabilities of each machine and the software available for it. The microcomputers have been placed in the center on long-term loan from the manufacturers, partly due to the efforts of Computer-Using Educators (CUE). CUE has over 1500 members in 28 states and 8 foreign countries. CUE members provide much of the volunteer effort needed to maintain the SOFTSWAP library which is housed in

the SMCOE microcomputer center.

SOFTSWAP currently offers over 200 instructional programs, all of which are in the public domain. The programs, written by teachers, students, and administrators, are available on computer disks for low cost mail-order distribution, and can be copied by visitors to the center, without charge, if the visitors bring their own blank disks to store their copies.

Major publishers of educational software have been asked to place review copies of their educational software in the SOFTSWAP library (copyrights are respected). The responses so far have been very encouraging. Administrative software, including word processing and data base management programs, are also being reviewed.

In addition to software, the SOFTSWAP also provides microcomputer literature for review. Since critical reviews are rare and many educators prefer to make their own evaluations, this service is a popular one with both novices and experienced computer users in education.

Individual visitors are welcome anytime, and small groups are requested to call Janice Marshall, (415) 363-5472, for an appointment.

## Advice on Alphanumeric Display Terminals From Datapro

A new 67-page report on the purchase of general purpose, nonuser-programmable alphanumeric display terminals is now available from Datapro Research Corporation.

"All About Alphanumeric Display Terminals", includes market perspectives of terminal characteristics, a summary of user experience with over 11,300 installed units, and comparison charts of 262 commercially available terminals from 68 vendors.

The ratings of 101-users provide "hands on" independent reviews of in-use alphanumeric display terminals and serve as a buying guide. Users rated their terminals on overall performance, ease of operation, hardware reliability, maintenance service, software and technical support.

A 12-page introduction provides buying guidelines, including an analysis of display media, "human-factor" ergonomics, and major display markets. The market perspectives provided in the introduction are useful in understanding the terminal characteristics utilized in the 53 pages of comparison charts.

The charts allow a "quick scan" first-level search of commercially available terminals through "side-by-side" listings of terminal descriptions and availability; display, keyboard, and transmission parameters; ancillary devices; and pricing.

"All About Alphanumeric Display Terminals", reprinted from "Datapro Reports on Data Communications" is available for \$15 a copy from Datapro Research Corporation, 1805 Underwood Blvd., Delran, NJ 08075.

## ABOUT THE COMPUTER BUSINESS

"About the Computer Business," the sixteenth section of the 6th West Coast Computer Faire *Proceedings*, covers such diverse topics as writing a user's manual, preparing media product announcements, public relations for computer entrepreneurs and marketing software.

### A QUALITATIVE DIFFERENCE

"Some Reflections on a Commitment to Quality," is James Gagne's paper on his philosophy concerning excellence in the computer industry. The physician, who started DataMed Research, says he went into business, "as a way to exercise my passion for computing and to see if at the same time, I could make a profit without feeling trapped or guilty." According to Gagne, after a number of years in business he can do just that.

"A poor or mediocre manual can render software totally useless by misrepresenting its function and use," writes Sharon Rosa in "Write the Right User's Manual for Your Business Applications Software." This paper explains the function of a user's manual, some ways to identify its readers, and tips on writing style. Rosa is a partner in Nicholas Rosa Associates.

"Software ranges from a few lines of source code to tens of thousands of lines," writes Victor Wyman, "Since there are so many variations, the subject of software marketing is very broad." In his paper "Marketing Your Software," Wyman of Technology Watch, discusses the importance of packaging, promotion, protection, and pricing. By cultivating a knowledge of these four areas, software dealers can keep from making major mistakes on the open market.

In "Preparing Product Announcements for the Media," Frank Vaughan draws on his experience as a trade press editor and public relations manager to tell readers how press releases are handled by the media. The key to press coverage of your product, no matter how trivial, is a well written press release, he says. Vaughan tells readers how they can author effective releases or find a competent professional to do it for them.

Use Us!

Pascal is a fairly new programming language and is considered by many to be more powerful and cleaner in design than many older languages as well as more reflective of current trends in the philosophy of program design and structure.

A section on UCSD Pascal Systems found in the 6th West Coast Computer Faire *Proceedings* contains eight articles on Pascal as a programming language.

Two articles, one by A. Winsor Brown and another by Dr. James Gagne, report on USUS — the UCSD Pascal System User's Society — and their function to promote education and information exchange about the UCSD Pascal system.

Another article, by Mark Bodenstein, examines the uses of Pascal-100, a 16-bit plug-in CPU model for the IEEE-696 (S-100) bus.

A fourth article by Dick Karpinski describes "DataTool . . . a system which dramatically reduces the effort required to develop single and multiterminal microcomputer applications software."

"A high level of end-user interaction with the entire development process" will increase the ultimate likelihood of success according to Karpinski.

### A MILESTONE

MILESTONE is a project management program written in PASCAL for use on UCSD and CP/M computer systems. According to Dr. Michael Posehn, author of the article, "MILESTONE — A Project Management Program written in Pascal for use on UCSD and CP/M Computer Systems," the basic technique is to divide a complex project into a series of smaller and more readily understood tasks, then analyze their timing to see which ones are critical to the overall completion of the project.

Another method of improving productivity is the "PCIF Productivity Package" explained by Robert Peterson.

The PCIF system was designed for use by people with little or no experience with data processing. In a six-page article, Peterson describes PCIF communications, software development, text processing and data entry capabilities as well as other aspects of the system.

## Toys for the Mind!

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all the latest  
computers & electronics for entertainment & education

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(415) 851-7075

# WANT ADS

The Silicon Gulch Gazette will accept want ads for publication in future issues. SGG is published six times each year.

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 alphanumeric 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.

ARTIFICIAL INTELLIGENCE breakthrough? Internationally circulated manuscript work of A. Murray, called "serious contribution" by Nobelist in brain study, in first published form in NOVEMBER magazine, Summer 1981. \$1.50/issue, \$5.00/year. Box 33991, Seattle WA 98133.

## CDC Delivers Hawk Drive Number 100,000 To Alpha Micro

It stood only three feet high, a foot and half wide. But in order of significance it was one of the largest deliveries Alpha Micro ever received — Control Data Corporation's (CDC) Hawk Drive bearing the CDC serial number 100,000.

The occasion was celebrated with a luncheon at Alpha Micro, a tour of the company for CDC, and a presentation ceremony where Alpha Micro President Robert Hitchcock received the Hawk and a plaque from Bruce Dobberteen, Vice President, Oklahoma City, Disk Operations; Magnetic Peripherals, Inc., a subsidiary of CDC.

Sep, 1981

## Computing Show Offers Extensive Product & Service Cross-Index

Attendees at San Francisco's September Business Computing '81 exhibition will find a valuable cross-index to Bay area computer products, services, and dealers. The show's *Program & Seminar Notes* publication will list all exhibitors, plus a cross reference, indexed by generic product/service name, plus another cross reference indexed by brand name.

Additionally, it will include complete notes from the two introductory seminars on business computing and word processing, and will include the check-off lists of points to consider when approaching the purchase or rental of such systems.

## Osborne Creates Dealer Network

Osborne Computer Corporation shipped the first demonstration units this month to its nationwide dealer network. In addition to the independent computer retailers who are handling the Osborne 1, the OCC dealer network included 24 retail Xerox outlets. This network will be supported by OCC's co-op advertising program, dealer advisory board and dealer service operation. The machines shipped this month have a professionally designed plastic case, four system software diskettes, and comprehensive documentation. Several of the first machines were tagged for special projects — an international film production, communications development research, import qualification for the Canadian market and a specific system to be coded for the Unique Arabic character set.

For more information contact: Osborne Computer Corp., Corporate Ave., Hayward, CA 94545; (415) 887-8080.

## Business Computing Show Offers Hours & Days Suited to Business People

The exhibition on business computing, taking place in the City's Masonic Auditorium September 23-24, has been scheduled to meet the needs of business people. It will be open on Wednesday, from 9am to 7pm, and on Thursday from 9am to 6pm. Registration for all exhibits is only \$15 and is good for both days. (Note: \$15 is less than a business person would spend in time and travel to visit one or two computer stores; BC'81 has over 70 exhibits).

## Dynabyte's \$2.5 Million Order For Micropolis 8-inch Rigid Disk Drives

Micropolis Corporation reports that Dynabyte Inc. Headquartered in Menlo Park, CA, has ordered 8-inch Winchester drives valued at more than \$2.5 million.

Dennis Resnik, vice president of sales at Micropolis, said that the order was for the 45-megabyte version of their successful rigid disk line, with deliveries commencing immediately and continuing over a two year contract period.

Mike Watts, president of Dynabyte, indicated that the drives will be offered on his company's top end systems, while Fujitsu will continue as a supplier for low capacity drives in the 10 to 20 megabytes range.

## Free Access to Business Computer Consultants

September's Business Computing '81 exhibition offers attendees a unique facility. The organizers have arranged for several experienced computer consultants to be available throughout the exhibition to address questions from attendees, without charge.

These are independent consultants, not affiliated with any of the exhibitors or product manufacturers.

# The Software Toolworks

## Forging Tools for Your Computing Frontiers

Programs below are available on 8" CP/M disk and 5" Heath CP/M and HDOS disk

### PROGRAMMING LANGUAGES

**C COMPILER.** C/80 compiler for a large subset of the C programming language. Supports character and 16-bit integer data, pointers, arrays and strings, macros, data initialization, full complement of arithmetic and logical operators, and all C control statements including while, if-then-else, for, switch-case, and goto. Lacks structures, pointers to pointers, and long and floating point data types. Includes standard C library providing file I/O, dynamic storage allocation, and execution time profile. Documentation includes language summary, and complements the language reference manual, Kernighan and Ritchie's *The C Programming Language* (not included). Requires 40K. Order #202; Format C8, C5 or H5. C/80 ..... \$39.95

**STRUCTURED FORTRAN LANGUAGE EXTENSION.** RATFOR adds the programming ease and readability of structured programming while retaining the efficiency of FORTRAN. The RATFOR translator produces programs which can be compiled and run by Microsoft FORTRAN. Keystroke to the book *Software Tools*, RATFOR accepts free format source statements, multiple-statement IFs, IF-THEN-ELSE, and structured WHILE and FOR loops. Includes documentation, sample programs, I/O library, and full source code. Requires Microsoft FORTRAN. Order #213; Format C8, C5 or H5. RATFOR ..... \$39.95

**LISP INTERPRETER.** Experiment with the artificial intelligence language to which Byte magazine devoted its August 1979 issue. Based on the INTERLISP dialect, LISP/80 offers over 75 built-in functions, including large machine features like trace, file I/O, and string operations. Comes with a simple editor, file librarian, and formatted expression print routine, all written in LISP, and a 36 page manual. Also included are two artificial intelligence demonstration programs: a guessing game which learns as it plays, and a simple version of the famous ELIZA psychiatrist program. Requires 48K. Order #209; Format C8, C5 or H5. LISP/80 ..... \$39.95

**MACRO ASSEMBLERS FOR Z80 AND 8080.** UVMAC is an absolute macro assembler. 8080 version accepts same source files as Heath ASM, plus includes macro capabilities. Z80 version accepts full Z80 instruction set (Zilog mnemonics). Both support file inclusion, conditional assembly, listing control, etc., and produce absolute files. Selectable octal or hex listing. CP/M versions require 40K. Order #203 (Z80) or #204 (8080); Format C8, C5 or H5. UVMAC and AS ..... \$29.95

### WORD PROCESSING AND UTILITIES

**TEXT FORMATTER.** Performs fill and justification (straight right margins) of text. Page numbering, headers and footers, indents, hanging indents, centering, underlining. Inclusion feature for insertion of other files into document; reset allows multiple disk documents. With the PIE 1.5 editor (Heath only), provides word processing capability found in packages selling for several times as much. Order #207; Format C8, C5 or H5. TEXT ..... \$34.95

**FILE COMPRESSION AND ENCRYPTION.** Two program package saves disk space and provides security for sensitive data. PACK compresses files, saving 25-50% on text and program source. CRYPT takes a user-provided password and employs a cipher algorithm to protect files against unauthorized readers. Order #206; Format C8, C5 or H5. PACK and CRYPT ..... \$24.95

### ABOUT THE SOFTWARE TOOLWORKS

It started two years ago when several computer scientists became interested in personal computers. We built H89 computer kits, then developed software tools for ourselves, programs of the quality and responsiveness we had become used to on larger machines.

The Software Toolworks is our way of sharing both those tools, and the improvements and new products we have come up with in response to user requests. As our professional associates have heard of our success in distributing our software, a number of them have also acquired personal computers and contributed their creativity and expertise to our product line.

Although we are in business, we remain first and foremost computer hobbyists. This enterprise is too much fun for us to run it by becoming completely mercenary. Therefore, we continue to make these programs available at the kind of prices we would like to pay ourselves.

But despite the low prices, this software is solid. We use it ourselves, and sell only programs that meet our personal standards of excellence. We are proud of these software products, and hope you will enjoy using them.

### ORDERING INFORMATION

Please give program number and format (example: #201-H5). Format codes: C8 - standard 8" single density CP/M disk; H5 - 5" HDOS data disk; C5 - 5" Heath format CP/M disk (ORG 0 Heath or Magnolia). Check listing to be sure program is available in desired format. All programs include documentation and will run on 32K 8080 or Z80 unless otherwise specified. HDOS versions run under HDOS 1.5, 1.6, 2.0 and future compatible versions. Price includes single machine license. Programs are available at many Heath/Zenith retailers, or by mail from The Software Toolworks, 14478 Gionetta Drive, Sherman Oaks, CA 91423. California residents add sales tax. Please add shipping and handling charges as follows: U.S. and Canada: \$2 per order for 5" disks, \$3 for 8" disks. We ship via First Class mail except 8" disks shipped UPS in U.S. Overseas: \$3 per order for 5" disks, \$5 for 8" disks. We ship Air Mail AO (small packet). Payment in U.S. funds please.

Programs below available for Heath H8/H89/Z89 only on 5" CP/M or HDOS disk

### ENTERTAINMENT

**MUNCHKIN.** The author of INVADERS does it again with a new arcade-style action game! You run through a maze, evading creatures which try to gobble you up. But turn the tables by reaching a force point, and you're energized to catch and destroy the baddies. Vary the skill level with user alterable parameters; even create your own mazes (changing mazes requires ED-A-SKETCH program, not included). Requires H89 or H19. Order #217; Format C5 or H5 only. MUNCHKIN ..... \$19.95

**INVADERS.** Your screen becomes a fast-action video game. Alien creatures try to land; you hold them off with your space cannon as you dodge their bombs. Play it as it comes, or customize with 23 user-variable parameters to increase the challenge; even design your own graphics. Requires H89 or H19. Order #214; Format C5 or H5 only. INVADERS ..... \$19.95

**FLIGHT CONTROLLER GAME.** AIRPORT tests your skill as an Air Traffic Controller. Your radar screen maps the moving planes as you direct them along air lanes and into and out of airports. Adjust length of game to increase challenge. Requires H89 or H19. Order #208; Format C5 or H5 only. AIRPORT ..... \$19.95

**CHAMPIONSHIP CHESS PLAYER.** New 2.0 release with full graphics! H89/Z89 owners can now own a true world class micro chess program. MYCHESS, winner of the 1980 West Coast Computer Faire over such opponents as Sargon 2.5 and Atari, is now available for the H89. Nine skill levels tailor MYCHESS to any opponent. Plays varying openings from a "book" of over 850 moves. Requires H89/Z89, or H19 and Z80 CPU, 48K. Order #210; Format C5 or H5 only. MYCHESS ..... \$34.95

### UTILITIES

**MODEM & FILE TRANSFER PROGRAM.** REACH turns the H89 into a remote timesharing station. H89 acts as a dialup terminal, transfers files between H89 and remote computer, and spools from remote computer to H89 printer. Operates at speeds up to 9600 baud, full or half duplex. Supports communication between two H89s, XOFF-XON protocol for IBM equipment. Requires serial I/O port; for H89 only. Order #205; Format C5 or H5 only. REACH ..... \$19.95

Programs below available for HDOS only

**PRINTER SPOOLER.** Don't let your printer kick you off your computer. SPOOL-N-GO allows printing of files and program output while you keep working, just as on large timesharing systems. Simply copy or output onto device SP. You then run any program while listing continues with virtually no degradation in computer response. Employs user-allocatable spool area on any 5" disk drive. For Diablo or H14, and compatible printers. Not compatible with 8" drives. H8 requires H8-4. Order #215; Format H5 only. SPOOL-N-GO ..... \$29.95

**INTERACTIVE DISK PATCHER.** Here is a disk dump and patch program that really lets you get your hands on the bits. SUPER ZAP combines menu control with two dimensional screen interaction for exceptional ease of use. Full screen display of 5" disk by absolute sector number, or of 5" or 8" disk by file and block. Displays in hex, octal or ASCII. Position cursor with function keys and change any byte using any format. Search for data string, print sector contents on line printer, display and patch ABS or SYS file. Requires H89 or H19. Order #216; Format H5 only. SUPER ZAP ..... \$24.95

**CATALOG SYSTEM: UTILITIES.** As your disk library grows, the improved Master Catalog System keeps track of your files. It forms a catalog by reading the directory from each disk owned. Print options produce a listing of all files, those satisfying "wild card" conditions, or with specified flags or creation date limits. Five utility programs are included. FIND selects lines in specified text files which contain a specified string or patterns. CHANGE replaces one string or pattern in a file with another. CMP compares two files. CHECK prints the CRC checksum of specified files. And FDUMP is a file dump with up to five selectable formats. Order #212; Format H5 only. Catalog System: Utility Programs ..... \$24.95

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## Digital Video For All The News

Mass digital communications, once only a dream, has become hard fact today and three articles deal with this hot new topic in the *Proceedings* of the 6th West Coast Computer Faire.

Jerry Borell predicts that mass market home information systems broadcast by digital means will be the wave of the future, and sees computer graphics as a big part of these systems.

In his article, "Videotex and Teletext: Computer Graphics Today, Tomorrow Television", Borell discusses the European implementation of broadcast information systems and compares that to the current United States efforts.

Borell warns of exploitation in the consumer marketplace by greedy entrepreneurs for novices, but feels that digital television "will be the basis of home information systems in the foreseeable future of the United States".

### ANOTHER TYPE OF NETWORK

Douglas Gage provides a brief overview of the local networking field, focuses on a specific local networking product (Piconet) and shows the type of benefits that this type of technology can bring to users of small business and personal computer systems, in his paper entitled, "Local Networking for Small

Systems .

A computer network, according to Gage, is "a communications scheme that allows data processing entities (computers, terminals, and/or peripherals) to communicate with one another."

Gage explains how a local network is classified, and then describes the "hot" market development of these networks.

### FRENCH PHONES

The French government has developed an integrated system for providing universal access to digital information through both telephone and broadcast systems. It is called "Telematique" and is discussed in a paper entitled, "Telematique: The First Universal Communications Terminal", by Mark Cummings.

The French have committed to provide a computer terminal to every phone subscriber as part of its basic service. These terminals will access an electronic telephone directory service. Field tests have been completed and full scale implementation is expected by next year.

Cummings discusses its strengths and weaknesses as well as describing the system and suggestions for improvements.

## Integrated Computer Systems Processing Fall Courses

Integrated Computer Systems is offering courses covering computer graphics, PASCAL and distributed processing this fall.

The four-day courses will be held in cities across the country.

For further information and course schedules, contact Ruth Dordick, Integrated Computer Systems, 3304 Pico Blvd., PO Box 5339, Santa Monica, CA

### Its Basic!

"Programming With Free BASIC", an article by Richard Mateosian in the *Proceedings* of the 6th West Coast Computer Faire, describes the program design technique of Free BASIC.

"Free BASIC provides all of the control structures necessary for 'GOTO-less' programming," Mateosian said. It "frees the BASIC programmer from the iron grip of BASIC line numbers," and "allows the BASIC programmer to prepare very readable programs."

Another use of BASIC language is for programming Data Files. Leroy Finkel and Jerald Brown give an introduction to the use of data files in BASIC in their article, "Programming Data Files in BASIC".



THE MICRO-DISC V from New World Computer Company - a removable cartridge drive.

## The Winchester Solution: New World Introduces Removable Cartridge Drive

NEW WORLD Computer Co. recently introduced the first 5/4 inch Winchester fixed and removable cartridge drive.

The new MIKRO-DISC V drives are available in five models, ranging from Model 2/0 - the lowest-priced, highest performance Winchester drive with 2 megabytes of fixed storage - to the Model 4/4, with 4 megabytes fixed and 4 megabytes removable storage.

The removable cartridge, measuring 1 inch x 5.75 inches x 7.8 inches, weighs under 1.5 pounds. The fixed disk drives, also available in 2 megabyte and 4 megabyte version, have a profile of 2

inches x 5.75 inches x 7.8 inches and weigh under 2 pounds.

Both fixed and removable drives still give 100 percent copy up/copy down capability.

Two interface versions are available. Prices range from under \$500 to under \$1,200. A field upgrade kit, available from NEW WORLD, can bring fixed storage MIKRO-DISCs up to fixed removable status for \$40.

For more information, call or write Phil Haines, NEW WORLD COMPUTER COMPANY, 3176 Pullman Street #120, Costa Mesa, CA 92626; (714) 556-9320.

## Zilog and AMD Agree On 32-Bit CPU and New Z8000 Peripherals

Zilog Corporation and Advanced Micro Devices, Sunnyvale, Calif., have signed a letter of intent for a licensing agreement under which AMD will manufacture and market a new 32-bit microprocessor being developed by Zilog, as well as virtual-memory versions of the 16-bit Z8000 microprocessor. The two companies also will jointly develop a number of new microcomputer peripheral devices.

The new 32-bit processor, now designated the Z8000, will be completely software-compatible with existing Z8000 family CPUs, but will offer significantly higher performance and sophisticated memory-related capabilities.

Also under this agreement, AMD will be licensed to manufacture the

Z8003 and Z8004, which offer virtual memory support, a feature unique among currently available microprocessors. Zilog will be licensed to manufacture a number of advanced telecommunication products, as well as several of AMDs proprietary peripheral devices and single-chip microcomputers.

Other new parts to be jointly developed under the terms of the licensing arrangement include a paged memory-management unit, floating-point co-processor, CRT controller, graphicsdisplay unit and Winchester disk controller.

For further information contact Bill Galarneau at Zilog, 10340 Bubb Road, Cupertino, CA 95014; (408) 446-4666.

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We particularly liked hearing from the user who indexed his 700-page book, boiling down 168K bytes of references into a down 38K-byte multi-level index with "see" and "see also" notations. That's what we designed Documate/Plus to do. But this user found a way to do his indexing without Wordstar! And that's something we had not foreseen.

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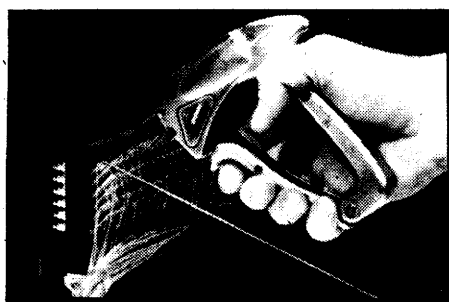
## New General Ledger Software

Microcomputer Consultants has converted its General Ledger software package to the PL/I-80 programming language, a product of Digital Research. General Ledger will run on any CP/M-based microcomputer with 56K of memory and a terminal with an addressable cursor. The package is self-contained, and does not require separate purchase of a run time interpreter or sort utility.

Programs written in PL/I-80 offer a number of advantages over software written in other languages. First, it's fast, providing quicker response time. Second, it's efficient, producing code that requires less memory, yet accomplishes the same task. Microcomputer Consultants uses the additional available space for extensive error-detection routines and a B-Tree file access utility. This utility (Faircom's Micro B+) provides fast data retrieval and eliminates the need to sort or reorganize data files. Finally, numeric data is stored on disk files in binary, rather than ASCII, format. This makes it impossible for an unscrupulous employee to manipulate financial data with a text editor.

This general ledger system includes a number of features. For example, account numbers may be up to ten digits long, and are completely user-definable. Up to 32,000 accounts may be used. Financial statements for an entire firm and individual departments are available. Account balances may be compared with current period and year-to-date budget figures. Reports available from the system include balance sheet, trial balance, income statement, budget report, detailed account inquiry, posting registers, and chart of accounts.

The suggested retail price of General Ledger is \$600, and dealer pricing is available at quantity 1. For more information contact Microcomputer Consultants at P. O. Box T, Davis, CA 95617; (916) 756-8104.



## Speed-Wrap Tool

The new G200/R3278 Speed Wrap Tool introduced by the OK Machine and Tool Corporation, is designed to produce solderless wire wrapped connections by merely squeezing the trigger.

The hardened steel working parts ensure long life and trouble-free service. The tool is light in weight and designed for production line and field service use in the electronic, telecommunications and appliance industries.

Wire-wrapping provides a positive, uniform, "gas-tight" connection.

For more information contact Judy Camen, O. K. Machine and Tool Corp., 3455 Conner St., Bronx, NY 10475.

## DIRECT's New VP825 Runs Hewlett-Packard's View/3000

DIRECT, Incorporated, recently unveiled its latest ASCII video display terminal; the VP825. Designed to run Hewlett-Packard's View/3000 forms design and data entry programs, the VP825 is a terminal that can be tailored to meet the requirements of the user. The VP825 offers a unique combination of features and capabilities that meet both the needs of the operator and the technical requirements of CPU interface.

For further information, contact: Lloyd Graff, West/CSA, 3055 Clearview Way, Suite 308, San Mateo, CA 94402; (415) 349-9834.

Proceedings Papers:

## Homebrew Hardware

Six articles in the *Proceedings of the 6th West Coast Computer Faire* discuss the subject of building your own hardware and peripherals. Some interesting applications are presented and solutions to problems are examined.

### PLAY THE GAME

"Winning the Micro Game" is an excerpt from Don Lancaster's book "Don Lancaster's Micro Cookbooks, Vol. 1".

In it Lancaster outlines the basic steps to follow to make microcomputing an enjoyable and enriching experience.

### TAKE ME TO YOUR LEADER

"What do you do for an encore after you have built computers, and designed computer science courses?" asks Melvin Zeddies, "One answer to this question is: build a robot."

In an article entitled, "After Building A Computer Try A Robot!", Zeddies describes the process involved in building your own robot.

### HOME COMPUTING

Another thing to do after you have built computers is to install one in your home and let it do the work.

Mark Lambert, in his article, "Design Considerations for a Computer Controlled Home", details the design and implementation of a computer-controlled home and security system.

Lambert's system controls three lamps in three different rooms, a television, a stereo, the outside floodlight and an alarm buzzer.

### HOW TO DO IT

Two articles describe homebrew systems based on personal experience.

Darren McKibbin describes a homemade computer based on the 8035 microprocessor.

In his article, "An 8035 Home-made Computer", McKibbin explains that this computer is designed to serve as a multiple test and control tool, and features direct software selection of 512 possible configurations.

The pros, cons and problems of home construction are addressed in this article:

Frederick Knox explains how he built a microcomputer based on the MC68000 microprocessor from Motorola, in his article, "Life On The Frontier: A Homebrew 16 Bit Computer".

Knox used only a wire-wrap tool, an oscilloscope, a complete collection of data books, "and a great amount of time," to build his system.

He discusses component parts, and some of the special features that he designed into them.

### HIGH-SPEED MATH

Twenty-one pages are devoted to "Doing Your Own Thing in High-Speed Digital Arithmetic", by Chuck Hastings.

Hastings presents, in detail, two of the standard "tricks of the trade" in high-speed arithmetic: carry prediction and bypassing, and Booth multiplication. Some interesting graphics enhance his article.

Proceedings Papers:

## Doctoring with Computers

The tenth section of the 6th West Coast Computer Faire *Proceedings*, "Computers for the Physician's Office," is devoted to efficiency in the computerized office.

Physicians usually introduce a computer into their office, not for some space-age medical procedure, but to take care of the billing, report F. Berkenbile and D. Tessman in "A Medical Billing System."

This paper acquaints prospective purchasers with guidelines for choosing the right system for their office. Buying

or leasing a computer, deciding on a system yourself or hiring a consultant to do it, and employee acceptance of the system are all covered in this paper.

Finding the "perfect" medical office system is a tough task, writes Mark H. Spohr, M. D. in his paper "Selecting a Desktop Computer for your Medical Office." Before purchasing a system, a physician should consider many things, including service and software support, he writes. The pleasures and pitfalls of having a consultant select a system are also discussed.

Proceedings Papers:

## Go FORTH and Compute

This five paper section "Languages: FORTH" explains the concept and application of this language. Tours through FORTH as a system tool, the fig-FORTH Model, and FORTH software are included in these papers.

### FORTH - The Concept

"FORTH Conceptual Introduction," by John James, answers the question "What is FORTH?" Users are enthusiastic; the author reports, while causal observers of this language go away with a variety of impressions. This introductory overview surveys the features, advantages, disadvantages and current status of an unusual software development tool.

For Henry Laxen, FORTH is the way to computing freedom. In his paper, "What is FORTH?", Laxen explains how this language can give programmers unparalleled computing freedom. "In FORTH," he writes, "the programmer is the scanner, the parser, and the optimizer. . . You as an implementor are no longer constrained to live by someone else's definition of what a language should be."

Samuel Bassett in "FORTH - The System Tool" tells readers that FORTH

can do anything any other computer language or combination of computer languages can. Bassett reports that FORTH is structured, modular, and has all the best features of existing languages. He explains how FORTH is the best language for applications demanding both speed and memory conservation.

"A Guided Tour through the fig-FORTH Model" is a discussion of the origin, structure and future of this two year-old computer language. The advantages of a common language model are presented from the viewpoint of both the user and the vendor. A breakdown of the model components is given, with special regard to language portability. William F. Ragsdale, of the Forth Interest Group, is the author of the paper.

In "Software Quality and FORTH Programs," Kim Harris laments the poor quality of many FORTH programs and offers suggestions for their improvement. Harris, a member of Forthright Enterprises in Palo Alto, CA defines software quality, its techniques and tools. Included in the paper are data passing considerations, reducing complexity and improving the readability of FORTH programs.

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# SMALL BUSINESS COMPUTING

## Output is Kaput

OUTPUT magazine will cease publication after its August issue. James M. Morris, Group Publisher for Technical Publishing Company, said, "The goals of a large, paid circulation were attainable, but not at a realistic cost." OUTPUT was one of the first information systems magazines to speak directly to general and senior management.

## Business Computing Show Offers Seminars for Business People

Business Computing '81, being held in San Francisco's Masonic Auditorium, September 23-24, includes two 4-hour introductory seminars for those who are experienced in business but novices in computing.

The fifteenth section of the 6th West Coast Computer Faire Proceedings, "Computing for Business Applications," describes how computers can best be utilized in small businesses. Do you have a love-hate relationship with your company computer? Buying a small business system, and developing an amicable working relationship with it is covered in this four paper section.

### BACKWARD COMPUTING

Habitually, aspiring computerists start off buying hardware and then cast about to get it programmed, writes Nicholas Rosa in his paper "Acquiring the Small Business Computer: Take the

Backwards Approach." The head of Nicholas Rosa Associates urges computer consumers to detail what the "ideal" system would do for their business. From this analysis, he says, businesses can determine their software and then their hardware needs.

"It Loves Me, It Loves Me Not," is the name of Jim Schreier's paper on the problems of automating a business. Contrary to popular opinion, he writes, some businesses may not profit from a microcomputer. The importance of employee training and system support are also discussed in the paper.

"The Angry Consumer's Guide to

Word Processors," by Attorney Martin Dean is a paper to educate consumers in search of a good word processor. "Remember, word processing software is expensive, and most people selling it are rank amateurs. Buyer beware," writes Dean in his overview of the word processing world.

Computing economy is the focus of "Low-Cost Computing with Plug Compatible Peripherals and Mainframes," by Joseph T. Simone. Simone, of Decision Data Computer Corporation, discusses the history of computing and the cost saving opportunities it offers in schools, businesses, and industry.

## EDUCATORS ENCOURAGE LISP

"Languages: LISP," the twentieth section of the 6th West Coast Computer Faire Proceedings is devoted to this complex and fascinating computer language. Suggestions on programming style and the educational use of LISP are included in the section's six papers.

### GREEK TO ME

"LISP is like Greek. It is a language of great beauty and expressive power, of philological importance. It is, in any sense that this could apply to computer languages, both an ancient and a modern tongue," writes Patricia Flynn. In her paper, "LISP, Greek and Arete: Musings on a Classical Education for the Computer Age," the San Francisco State University professor discusses why LISP should be an essential ingredient in a quality computer age education.

"There has been a lot of talk recently about the ultimate computer language," writes Mark Cummings. "This is a subtle form of linguistic chauvinism." In his Proceedings paper, "Linguistic Chauvinism" he says that rather than a super language to replace all previous ones, computerists should develop one that will allow continued development of specialized languages while allowing users of different ones to intercommunicate.

In "The Bankruptcy of Basic," John Allen describes how this language shortchanges today's computerists. This member of the LISP Company says that LISP, with its dual role as mathematical formalism and advanced programming language, offers unique opportunities to new computerists. Allen's paper outlines these benefits and compares them to the benefits of BASIC.

In his second paper in this section, "A View of LISP, Functions, Objects, Frames, and Constraints: Functional Flesh, Functional Bones," Allen presents a LISP object-oriented tutorial. Object-oriented programming, frame-based languages and constraint-based systems are discussed.

The new popularity of LISP is going to mean "a radical change in programming style for those brought up in the tradition of BASIC, Fortran, or Pascal," writes Michael Burke in "The LISP Steamroller." Burke, an Associate Professor of Math and Computer Science at San Jose State University, San Jose, CA, introduces LISP to new users and explains how to use the system.

"Guidelines for Choosing an Object-Oriented Programming Style in LISP," gives readers a "hybrid" system which includes an object-oriented program facility, and guidelines for choosing this style over "pure" LISP. The guidelines are presented in the context of an object-oriented programming system "TINYTALK". Jim Schmolze of Bolt Beranek and Newman, Inc., authored the six page paper.

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2758	1024 x 8 (450ns)(5v)	9.95	8.95	
TMS2516	2048 x 8 (450ns)(5v)	7.95	6.95	
2716	2048 x 8 (450ns)(5v)	5.95	5.50	
2716-1	2048 x 8 (350ns)(5v)	12.95	11.95	
TMS2716	2048 x 8 (450ns)	9.95	8.95	
TMS2532	4096 x 8 (450ns)(5v)	19.95	17.95	
2732	4096 x 8 (450ns)(5v)	16.50	15.95	

### STATIC RAMS

2101	256 x 4 (450ns)	1.95	1.85	100pcs
2102-1	1024 x 1 (450ns)	.89	.85	
21102-1	1024 x 1 (450ns)(LP)	1.29	1.15	
2111	256 x 4 (450ns)	2.99	2.49	
2112	256 x 4 (450ns)	2.99	2.79	
2114	1024 x 4 (450ns)	8/17.95	2.10	
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2114L-3	1024 x 4 (300ns)(LP)	8/21.95	2.45	
2114L-4	1024 x 4 (450ns)(LP)	8/18.95	2.25	
TMS4044-4	4096 x 1 (450ns)	3.49	3.25	
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T=TO-220 V=8 PIN K=TO-3

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4116-200	16,384 x 1 (200ns)	8/17.50	1.95	
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4164	65,536 x 1 (200ns)	CALL		

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7805K	1.39	7905K	1.49
7812K	1.39	7912K	1.49
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78L15	.89	LM317K	3.95

LM309K	1.49	LM323K	4.95
LM317T	1.95	LM337K	3.95

T=TO-220 K=TO-3 L=TO-92

### IC SOCKETS

8 pin ST	.13	.11
14 pin ST	.15	.12
16 pin ST	.17	.13
18 pin ST	.20	.18
20 pin ST	.29	.27
22 pin ST	.30	.27
24 pin ST	.30	.27
28 pin ST	.40	.32
4		



# A New Publication That Provides Documentation

Sep, 1981

Silicon Gulch Gazette  
page 13

## DataCast Becomes an Issue

The *DataCast* subscription ad includes a famous engraving by Schongauer, "St. Anthony Tormented by the Demons," and the copy reads:

"POOR DOCUMENTATION BUGGING YOU? Too many choices in new systems? Can't sort out your application needs? Need the latest information on mass digital communications? SUBSCRIBE NOW to *DataCast* (the hardcopy version)."

What's this? A computer magazine using art from antiquity? "We chose our first cover [an Albrecht Durer engraving titled "Melancholia"] to depict a sense of subtle frustration over using existing tools in scientific and artistic endeavors," remarked Tony Bove, one of the editors of *DataCast*. "Durer was an artist at the time of Gutenberg's invention who felt this frustration, and had not yet 'turned on' to the possibilities of the printing press. This similar frustration is felt by today's artists and scientists who have not yet used microcomputers."

*DataCast* is not a literary magazine, but it is well-written. *DataCast* is also not a computer magazine — it's more like a "bookzine" or "magabook" that sits on a micro user's reference shelf. *DataCast's* editorial content is for users — the articles are about CP/M and MP/M systems and other microcomputer systems in that price range. *DataCast* also covers data communications, information services and future videotex offerings for the users of these systems.

*DataCast's* editorial policy is unique: most of the articles are written by the editors (who are technical writers), and are consistent in style and terminology. The articles focus on the usefulness of available software packages and information services, and provide user documentation and reference guides. The editorial concept could be applied to any family of systems, but *DataCast* chose to focus on the CP/M family of systems in order to better serve the world of CP/M users.

*DataCast* is not a speculative or scoop driven weekly or monthly. The information is up-to-date and complete in order to be useful — it is not based on rumor. *DataCast* can provide objective documentation since the publisher is not also a hardware or software manufacturer, distributor, or dealer.

Software manufacturers need to provide complete documentation, yet they usually do not have the resources to provide good tutorials or application notes. *DataCast* has useful articles that focus on the use of a software product in typical applications.

*DataCast's* first issue featured a report on AT&T's videotex protocol, including illustrated explanations of the protocol's picture description codes that reconstruct graphic images. Other features included an "Impatient User's Guide to CP/M," a CP/M command summary and reference guide, an illustrated CP/M tutorial, and an overview of home information services.

*DataCast* also reviewed Digital Research's Independent Software Vendor Seminar Program. To support the CP/M software cottage industry, *DataCast* provided software documentation protocols for typography and notational conventions, for use in manuals produced with typesetters, daisy-wheel printers, or typewriters. The protocols serve both users (who benefit from standard notational conventions) and software providers (who benefit from consistent appearance and style).

The editors have extensive backgrounds with CP/M systems and microcomputers in general. Cheryl Rhodes has coordinated computer awareness projects, worked in the ComputerTown USA! and Apple Van Projects, developed and tested courseware in classrooms, managed a computer lab for engineers, and worked in corporate data processing departments. Tony Bove has been a technical writer for Data General and Intel, has won awards for manuals, and contributed material for Sybex's *The CP/M Handbook*.

*DataCast* will continue to focus on

CP/M software, other major microcomputer systems and their software, telecommunications for home and business, consumer-oriented issues in future videotex proposals, and the independent software vendor and information provider marketplace.

*DataCast* Number Two, due out in October, will focus on writing and doing research with CP/M systems. Articles focus on writing and producing documents with CP/M software, and researching data bases available from several information services. The popular WordStar word processing program

will be covered in tutorial and reference articles.

*DataCast* is a series of issues that provide documentation for CP/M and other similar microcomputer systems and their software packages, and updates and evaluations of digital communications for micros. *DataCast* is published six times a year (every two months) by Wireless Digital, Inc. (a Jim Warren publication), and a subscription costs \$18 a year. For advertising information and closing dates, contact Nels Anderson at *DataCast*, 345 Swett Rd., Woodside CA 94062 (415-851-7075).

## Poor Documentation Bugging You?

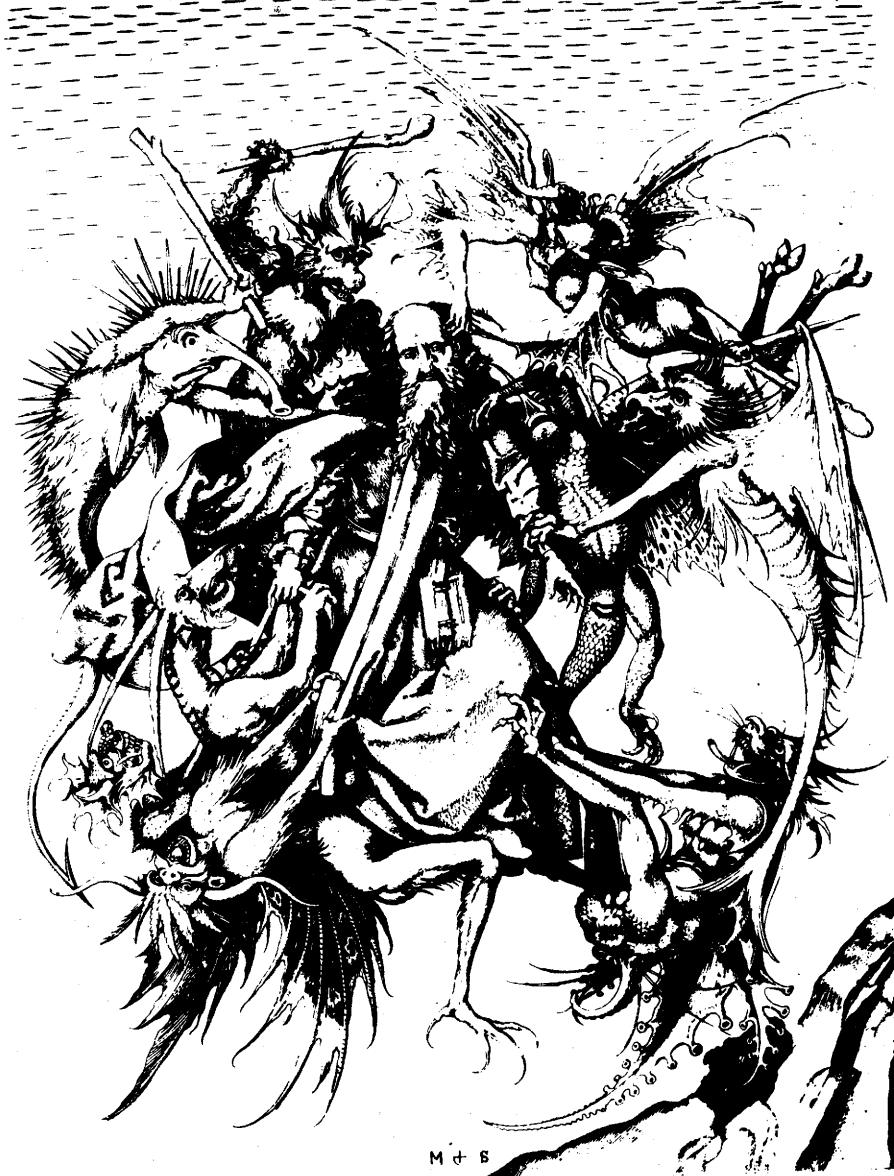
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What devices do you use with your computer system?

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What services do you recommend?

What information do you regularly receive?

SGG8

## It's Time to Stop Student Exploitation

editorial by Jim Warren

... And higher education wonders why its having difficulty retaining public support!

One of our staff has been interested in pursuing a publications career. She was taking time off to take the journalism program at a local junior college. Unlike this writer — who has computer expertise but little formal journalistic training — she was actually spending her own time, effort, and money to obtain a 'proper' journalistic background.

But folks, she didn't git it! She encountered a "professional journalist" — her instructor — who illustrated by personal deed some of the worst characteristics possible in journalism and in teaching.

### Extra Credit, But Only If You Perform Free Labor

It is easy for a journalist — who controls publicity — to abuse the power he or she has — using it to wheedle or coerce personal benefits or free goods and services that would not normally be offered. (Infuriatingly, one publisher of several computer hobbyist magazines regularly illustrates such behavior ... but, that's another story).

Similarly, it is easy for a teacher — who controls academic credit — to abuse their power by demanding free services that would not normally be offered. The worst example of this is the instructor who demands sexual favors in exchange for better grades. Different only in degree is the instructor who expects labor that primarily benefits the instructor or the instructor's pet projects, rather than benefiting the student.

Examples of the latter are well known in university graduate programs. All too often, grad students are required to do grunge labor on professors' research projects where their effort provides little educational experience. An example that comes to mind is the southern California students who wrote one I/O driver after another for a portable compiler system, being paid paltry R. A. wages or given credit in a programming lab for so doing. The first time or two, it was educational; thereafter, it was straight-out exploitation.

Another example is the case of our staff member: The students in the journalism course were given writing assignments. They were told they could get extra credit if their stories were published ... in the school newspaper. At first glance, that sounds reasonable — if the works are good enough to be published, then it is certainly appropriate for extra credit to be granted.

The ringer, however, was that extra credit was not being offered for publication. Academic credit was offered to those students who donated the products of their labor for inclusion in the school newspaper — sponsored and controlled by the journalism "teacher" who was teaching the course. More particularly, our staff member (who was part of the Faire staff; not part of the Gazette editorial staff), wrote a story we planned to publish in one of our 50,000-copy editions, a story for which we were willing to pay. I. e., she produced a commercially viable journalistic product. But, the instructor was unwilling to give her the extra grade credit for publication ... unless it was published in the small-circulation school paper that he sponsored. Academic credit was being offered — not for publication-quality writing — but for performing unpaid labor for the instructor's pet project!

Though student exploitation for the benefit of instructors and their projects has a long tradition, it is no longer appropriate. It is not appropriate in a nation where the business of education is big business with a huge federal budget, \$100,000+ NSF grants offered to explore whatever titillates the academician's fancy — and may produce an "academically acceptable" but otherwise useless publication, nor in a state where education is the single largest budget item — and tax expenditure.

It is particularly not appropriate at the junior college level. J. C. instructors have no publication demands, teach 15-25 hours/week for a 8.5-month work-year, have no discipline problems, and generally excellent educational facilities.

### Arrogant Paternalism Prevails

There is an even more infuriating footnote to this sad tale.

Both journalists and teachers are in positions that require a high degree of sensitivity to personal and human concerns and issues. Yet, this teacher — this "journalist" — exhibited outrageous insensitivity, to wit:

Our staff member is an adult. She has been supporting herself for most of a decade, including paying the taxes that help support the j.c. she was attending.

She was attempting to improve herself and her marketable skills — encouraged only by her own will power; not the proding of her parents. When the instructor piled on a mass of writing assignments at the end of the semester (that could have been spread over the period if the instructor had planned more carefully), and she had the audacity to object — this instructor had the audacity to suggest that she quit her job and move back in with her parents if she didn't have the time to do the work!

Incidentally, the writer of this editorial taught mathematics, full time, for ten years, and has taught computing courses part-time, for another ten years ... and is quite aware of the problems and limitations of teaching.

Proceedings Papers:

### Operating Systems

In this three paper section, "Systems: Operating Systems," readers can learn about display oriented operating systems, the IBS Multi-User/Multi-Tasking Operating system, and other systems of the future.

Carl Helmers explains in "Toward Display Oriented Operating Systems," why contemporary personal computers with high speed interactive displays should feature menu oriented systems software. Helmers, of North American Technology, Inc., details his recent experiments with operating system design to show the kind of improvements possible.

In "The Bridge to the Future," Chris Langewis comments on the role of the operating system in the successful marketing of microcomputers. "The role of an operating system ... is possibly the most misinterpreted factor in the design-production-marketing chain," writes the Vice President of Phase One Systems, Inc. He gives his readers tips on professionalism and innovation in the computer marketplace.

Two employees of IBM introduce one of the company's newest products in "The IBS Multi-User/Multi-Tasking Operating System." Alfred Pease and Robert Nelson explain and expound on the virtues of the newly released BETASYSTEM II computer. Among other things, the system offers true concurrency for program segments residing in multiple memory banks.

Proceedings Papers:

### Computer Graphics: The "Eyes" Have It!

Technical aspects of inputting computer graphics were discussed in two articles in the *Proceedings* of the 6th West Coast Computer Faire.

One article by Henry Pfister of USC entitled, "A Simple Computer Eye", compared the computer eye to the human eye and described its use as a low-cost, easy to build, unique peripheral device.

A second article by Ken Rothmuller entitled, "The Design of a Slow Scan TV System", described the hardware and software design considerations necessary to develop a slow scan TV system.

According to Rothmuller, "Slow scan TV is a narrow-band TV system which uses slow frame rates to transmit pictures over voice-grade radio and telephone channels."

In his paper, Rothmuller reviews SSTV specifications, lists potential applications and compares SSTV to other available commercial products which use more "hardwired" logic.

Proceedings Papers:

### Image-In-It

A variety of applications have been found for microcomputer image processing systems and two papers from the 6th West Coast Computer Faire Conference *Proceedings* deal with this topic.

In a paper entitled "Microprocessors in Image Processing", Gregory Baxes presents a unique hardware configuration designed to simplify the image processing system. He breaks the system down into four subsystems: video conversion, video memory, memory interface and multiplier accumulation.

Baxes also discusses image processing software using the Z-80B microprocessor instruction set and pays close attention to speed and efficiency of execution. He also addresses the capabilities and limitations of using a microprocessor for image processing.

In a second article, "Bar Code Technology", Walter Banks and Carl Helmers discuss the past use of bar codes in inventory control and trace the development of bar codes for other applications.

Early use of bar codes as a means of software distribution was outmoded as micro-computers grew from 4K to 64K bytes of RAM. Currently bar codes are used as a program storage medium in hand held calculators and games.

This paper deals with problems of production, reading and distribution of this type of barcoded information.

Proceedings Papers:

### Some Observations About Computing

"The U. S. Constitution — specifically the Bill of Rights — has operated largely within a non-electronic, paper environment. What we need to do quickly... is to make the Bill of Rights — human rights generally — explicit in the telecommunications processes at our disposal."

So says Dean Gengle in an article entitled, "Toward an Electronic Bill of Rights", found in the 6th West Coast Computer Faire *Proceedings*.

An "Electronic Bill of Rights" would protect signatures of identity and privacy, transnational data flow, the use of private and governmental data banks and freedom of information in matters other than paper mail.

### COMPUTERIZATION AND SOCIETY

Computers are revolutionizing mass communications and manipulation of information and this affects the humans involved in many unique ways.

Dr. Paul Armetta, argues that conflicts in roles, status, norms and standard procedure could develop as a result of the new role computers are playing in the communications process.

### Heathkit/Zenith Introduces New Linear Circuits Course

A new "hardware-oriented" course in Linear Circuits has been introduced by Heathkit/Zenith Educational Systems, a division of Heath Company, Benton Harbor, Michigan, to meet the needs of the electronics students, experimenter, radio amateur or computer enthusiast.

According to Heathkit/Zenith, the student learns how each circuit operates by building the circuit and observing its performance. And when the course is finished, the individual has a handy circuit reference file for future use. The Course is mail order priced \$49.95, FOB Benton Harbor, MI 49022.

For more details on the EH-701 Linear Circuits Course, see the latest 104-page Heathkit Catalog. For a free copy write Heath Company, Dept 350-155, Benton Harbor, MI 49022. In Canada, write Heath Company, 1480 Dundas Street, East, Mississauga, ONT L4X 2R7. Free catalogs are available at Heathkit Electronic Centers in the U. S. and Canada (units of Veritechnology Electronics Corporation in the U. S.). Consult telephone directory white pages for locations.

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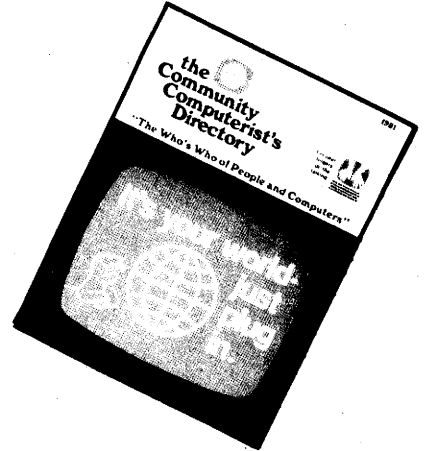
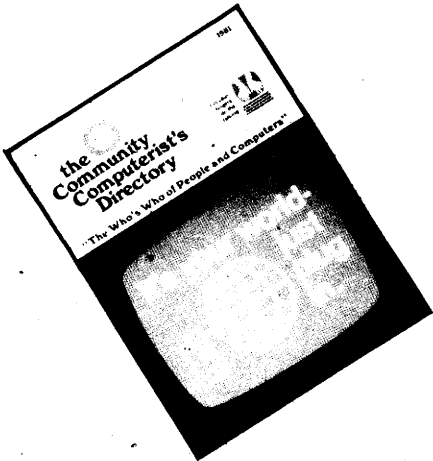
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- 3) a Free 25 word White Page Listing!
- 4) \$5.00 Credit on a Yellow Page Listing! (to appear in #4 & #5)
- 5) \$10.00 Credit towards any size Display Ad! (space reservations now, ads by Nov. 2nd)

**Total Value = \$28.50**

Save \$18.50 and Join the Information Revolution, Subscribe Now

Send me your Yellow Page Display ad rates

Send me your retail store order form.

**the Community Computerist's Directory**  
 PO BOX 405 FORESTVILLE, CA 95436  
 PHONE: (707) 887-1857

YES!! Enclosed is my \$10.00. Send me Issue #3 immediately. [Issue #3 contains all necessary listing forms.]

<input type="checkbox"/> VISA	<input type="checkbox"/> MASTER CHARGE	<input type="checkbox"/> AMERICAN EXP	ENCLOSED \$
ACCOUNT NO.		CARD EXPIRES	
NAME		SIGNATURE	
ADDRESS		CITY	STATE ZIP