Slides produced from a desktop

Slides are produced in minutes using Presentation Master. Resolution of images is four times that seen on the computer screen. Users choose eight color combinations from a selection of 72 colors.

StarLink™ turns IBM® PC into a multiuser system

You may have an IBM PC that works great for a single user. Perhaps several other people want similar power at their fingertips. Unfortunately, you cannot afford to buy additional computers for them. The answer is StarLink.

StarLink from Digital Research turns your IBM PC into a multiuser system for five people. The package comes with everything you need to add four terminals: the connectors, the multiuser card and the operating system to make it all run properly. Once connected, all five users may work independently on different applications.

As an example, the IBM PC may be placed in the office of one worker. Each additional person placed on the system may prefer a different style of terminal. One may

use a Zenith®, the second an IBM, the third a DEC® and the fourth an Apple®. They share the same processor, printer, hard disk and, if necessary, the same files.
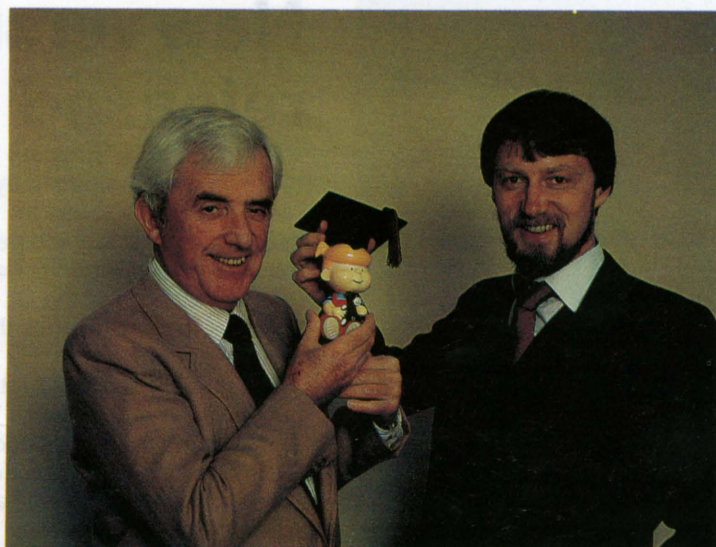
"The cost of buying four new IBM PCs may be $20,000 or more," said Mike Loftus, product manager. "StarLink allows you to add up to four users at a fraction of that cost."

Most software purchased for the IBM PC works in the usual way with StarLink. The reason: StarLink runs under Concurrent™ DOS, the latest operating system from Digital Research that bridges CP/M-86® and PC-DOS. Applications for either system may be used. Because Concurrent DOS offers multitasking, different applications may be

Complete solution provided for business presentations

Visual communications have taken a leap forward with the introduction of an inexpensive method to produce color slides using a personal computer.

Presentation Master™ from Digital Research merges the fields of art and technology. Sold for less than $2,000, it may be attached to a personal computer to bring a communications capability not found elsewhere. The upshot: Businesses get their messages across in a professional manner with speed, without loss of confidentiality and at a reasonable cost.

Polaroid® and Digital Research have teamed up to provide the desktop film studio. Everything needed to get started is provided in one package: the hardware, software, documentation, film and simple operating instructions. Presentation Master is marketed and distributed to retail channels by Digital Research under agreement with Polaroid.

"The two companies have provided a complete solution that makes graphics affordable for any size of business," said Mark Duchesne, director of marketing at Digital Research. "The Presentation Master offers an easy way to incorporate high quality visuals in everyday presentations. The system uses current technology to its fullest potential."

Polaroid supplied its Palette, a shoe box-sized attachment to personal computers. A 35 mm camera is attached to the end of the box. Two types of cameras are provided — one to produce instant prints and the other 35 mm slides. Also included is a 35 mm auto processor.

This visual communications solution is software driven and features DR Graph™ and DR Draw™. DR Graph allows users to produce different kinds of graphs, pie charts and multiple graphs. Data may be entered directly to the program or transferred from an electronic spreadsheet such as SuperCalc,

Multiplan™ or VisiCalc™. Points, curves and bars are plotted automatically.

The second application, DR Draw, gives users the ability to create their own presentation transparencies. Word charts, flow charts or detailed drawings may be made from scratch. DR Draw is menu driven — users select options from a menu of patterns, shapes and type fonts. Or designs may be produced free-hand. You are limited only by your imagination.

Duchesne said the system is designed to work as an integrated solution. An operator's manual found only in the Presentation Master package explains how the products work together. A diskette tutorial introduces users to the system and leads them through the

> ## "The Presentation Master offers an easy way to incorporate high quality visuals in everyday presentations."

simple steps of creating their own slides.

End users do not need to worry about mixing and matching different types of hardware and software. The package costs less than purchasing each item separately.

Duchesne said the demand for graphics has grown steadily. According to Hope Reports, Rochester, N.Y., at least 520 million slides, foils and pictures were produced in 1983 at a cost of more than $4 billion.

"Vendors may charge up to $80 a slide," Duchesne estimated. "The cost of using the Presentation Master is less than $1 a slide."

Slides produced on Presentation Master may be updated from

INSIDE DIGITAL RESEARCH NEWS

Artist Hank Ketcham, left, wrote a humorous user's guide for Dr. Logo, developed by DRI founder Gary Kildall.

Owlcat: A study partner for S.A.T.®

Anyone who has attempted to study for college entry exams knows it can be a frustrating and puzzling experience. Help is here from Digital Research which now offers the Owlcat S.A.T. Preparatory Courses.

Owlcat test preparation software is designed to ease student tension by building confidence in test taking skills. The Owlcat S.A.T. Preparatory Courses help students prepare for tests in English and mathematics and the test of Standard Written English. Beth Newburger, president of the Owlcat subsidiary, said the courses review and add to a student's knowledge.

"Owlcat complements what is learned in the classroom," said Newburger. "Our objective is to provide a series of products that act as a tutor at school or in the home. Owlcat can give students the confidence they need when they take the S.A.T."

According to Newburger, Owlcat has two primary aims: help students do well on the S.A.T. so they can attend the college of their choice, and help them succeed once they attend that college.

The student can choose one, two or all of the three courses in the Owlcat programs: the four disk, 15-hour session; the nine disk, 60-hour session; and a single disk, P.S.A.T. diagnostic pre-test. The courses are currently available for IBM PC PC/XT and PCjr., and the Apple II® series. They will be available on Commodore™. No experience with computers is required.

The student can make the software self-learning on the IBM PC by following simple instructions in the Operators Guide. On the Apple, the software is placed in the disk drive, and the computer automatically brings up the software. A menu of options is displayed.

First you select a general subject area — perhaps Level I, S.A.T. Antonyms. If you choose to study alone, after entering your choice, a second menu of options appears which allows you to select either a learning mode or test mode. At this point you can select several unique Owlcat options such as the times arrow clock, cheers messages or review functions. You may also elect to study with a friend by choosing the "Buddy Study" option.

The first word pops up: You are to select the antonym for

THE WISE COURSE TO TAKE.

"strength." You pick from a list that looks like this:

A) **Sleepy**
B) **Muscle**
C) **Tired**
D) **Weakness**
E) **Feeble**

A clock displayed on the screen limits the amount of time you are given, just as you are timed during the actual S.A.T. You select "weakness." The program congratulates you on the correct selection. Your buddy undergoes a similar procedure with a different set of words. Final scores are based on the time you used and your number of correct answers.

A similar procedure is provided for all of the tests. Math problems are diversified, including geometry and algebra equations. English leads the students beyond word definitions into practice on the use of sentence construction, analogies and reading comprehension.

In all tests emphasis is placed on positive learning, Newburger said. Students are not degraded for selecting the wrong answer. Instead, they are provided an explanation of the correct answer and encouraged to try again.

Newburger, formerly an educator and most recently a director of marketing at The Washington Post, explained that the upbeat tone helps students learn and retain the information studied.

The Owlcat series was designed by a group of educators from New Trier High School, a highly regarded secondary school in suburban Chicago. It was then tested
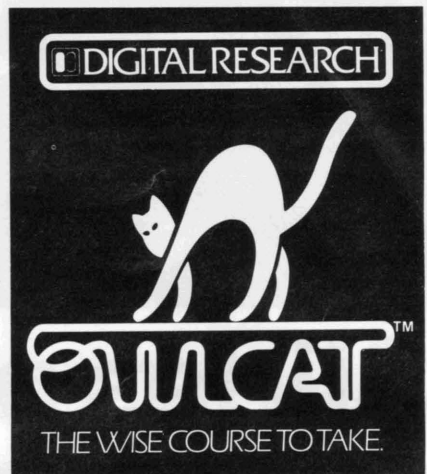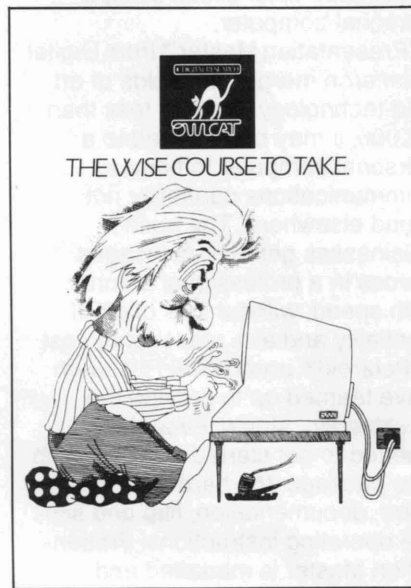
at Whitman High School in the suburbs of Washington, D.C.

A number of textbook editors and secondary school teachers participated in the project, Newburger said. The team was directed by Dr. Ronald W. Weinstein, a member of the prestigious National Review Board of Pathologists.

Weinstein, who is chairman of the department of pathology at Rush-Presbyterian-St. Luke's Medical College in Chicago, developed the software used in Owlcat. He has developed other secondary school programs for computer-assisted teaching and authored more than 100 publications.

"Students who have used Owlcat have improved their comprehension of English, vocabulary and mathematics," Newburger said. "The tutorials concentrate on students' weaknesses and reinforces their strengths. Owlcat can help students feel confident about taking the S.A.T."

For product literature and the dealer nearest you, call toll free (800) 227-1617 ext. 400, or (800) 772-3545 ext. 400 in California.

'Starter Kit' links micros and videodiscs

A new technology that links personal computers and videodisc players has been developed by Gary Kildall, founder and chief executive officer of Digital Research. The technology opens up a new field of microcomputer applications that can incorporate motion pictures.

For example, users can sit behind the controls of an imaginary airplane and command the craft to inspect different parts of a landscape. The landscape appears as if it were actually viewed live. You can control the craft with different commands you enter from the personal computer.

"This is a totally new application for personal computers that merges several inexpensive and readily available technologies," Kildall said. "Video control is the next logical extension for microcomputers, and Digital Research is pioneering the new technology to make it affordable for all personal computer users."

Kildall's invention involves a palm-sized box that links the personal computer and videodisc player. Images produced by the personal computer and the videodisc are then transmitted to the television set.

The box is part of a "Starter Kit" being developed by Digital Research. All of the hardware and software necessary to develop applications is included. The first Starter Kit to be shipped connects the IBM PC and a Pioneer LD-700 videodisc player. Support for other types of microcomputers and videodisc machines will follow in the near future, Kildall said.

Kildall introduced the video technology during March at the West Coast Computer Faire, an annual convention in San Francisco. He explained that the box and its associated software act as intermediaries to different types of computers and videodisc players. The concept is similar to that for CP/M® operating systems:

Applications written for the system can be transported to different types of machines using the same system.

Software developed on the personal computer controls what screens are displayed from the videodisc. This allows users to see different screens in response to commands from a keyboard or joystick.

Further, you can switch between video and computer graphic images. A menu of choices may be shown on the television set. In the example of the imaginary cockpit, users may be given the option of flying in certain directions. Choosing one of those directions sends them over different types of landscapes.

"The potential uses of combining video and computer power have barely been explored," Kildall emphasized. "It's a new technology that provides tremendous opportunities in the fields of education and entertainment."

Dennis the ®Menace meets
DR. LOGO

Written & Illustrated by Hank Ketcham

Hank Ketcham, creator of Dennis the Menace, designed a user's guide for the IBM PCjr. version of Dr. Logo.

New version of Dr. Logo™ released for IBM PCjr.

A version of Dr. Logo for the IBM PCjr. has been produced by Digital Research that includes an entertaining user's guide designed and written by cartoonist Hank Ketcham, creator of the Dr. Logo character and the Dennis the Menace series.

The guide is an introduction to the language and is called "Dennis the Menace Meets Dr. Logo." Another user's guide is a dictionary explaining common terms and uses for the languages.

Becky Jones, product marketing manager, said the guides benefit everyone yet were written

especially for youngsters who wish to learn programming.

The IBM PCjr. version of Dr. Logo requires 128K of RAM and runs under PC-DOS. Most of the programming tools found in the 192K version of Dr. Logo are kept in the smaller version, except the advanced programming tools. The junior version also may run on the large IBM PC.

Check with dealers in your area for product availability. For product literature and the name of the dealer nearest you, call toll free (800) 227-1617 ext. 400, or (800) 772-3545 ext. 400 in California.

Concurrent™ DOS bridges PC-DOS, CP/M

The versatility of personal computers has been increased significantly by Digital Research's release of an operating system which combines the features of Concurrent CP/M and PC-DOS. For the first time, PC-DOS software may be used under a multitasking operating system.

Available to hardware manufacturers only, Concurrent DOS Release 3.1 supports software written for CP/M or PC-DOS operating systems. It also includes the technology provided in previous Digital Research operating systems.

According to Kevin Wandryk, product line manager, users will get increased performance from their microcomputers.

"Most of the popular software developed for PC-DOS runs under the new release of Concurrent DOS," Wandryk said. "This means users can choose their software based on its own merits instead of being limited to one type of operating system that runs it."
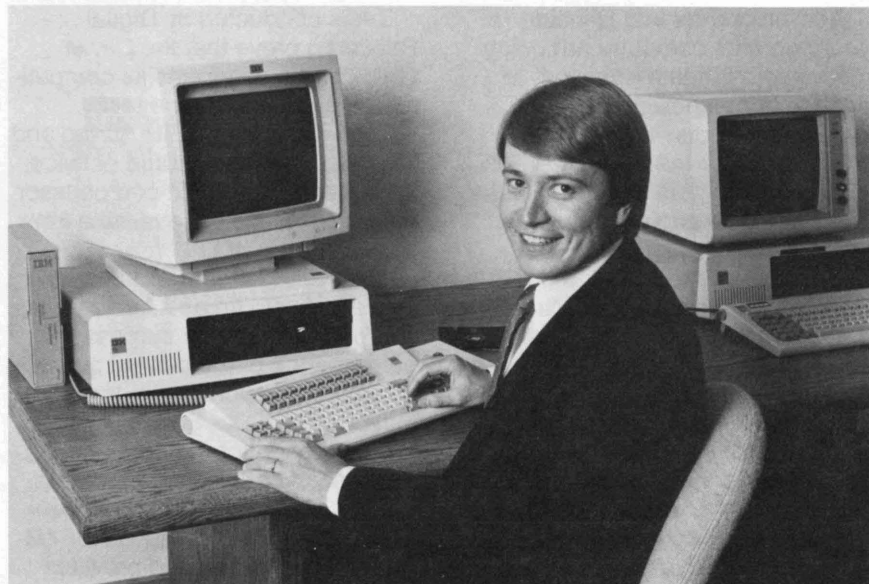
Concurrent DOS Release 3.1 is technically superior to any other operating system for microcomputers, Wandryk said. The new release may be configured by manufacturers for single or multiuser systems, and it provides an upgrade for manufacturers who have licensed MP/M-86™.

"Concurrent DOS Release 3.1 is rapidly gaining momentum and support from a wide range of microcomputer manufacturers," Wandryk said. "Some 60 hardware companies have licensed the product since it was released in early March."

Some of its major features are:
- Multitasking and multiuser support
- GSX bundled in the package at no extra charge
- Network support. With DR Net™, independent clusters of machines may share files or hardware. A file security feature may be used to protect data from unauthorized access.
- Support for the 8087 math co-processor. The new release optimizes performance by swapping registers only when the processor is needed for the following application.
- Shared code support. The code segment of software may be shared by another program, requiring less memory and reducing the time needed to load a program. This is particularly helpful in a multiuser environment where more than one person may be using the same application.
- A generic PRINT utility. It allows files to be printed from the command line.
- Support for virtual consoles, real-time kernel and source code for windowing

"The idea behind Concurrent DOS is to provide an operating system with the best attributes of its predecessors," Wandryk said. "Concurrent DOS reaffirms our commitment to the multiuser market and gives manufacturers the flexibility to configure it to their needs."

Kevin Wandryk explains that Concurrent DOS represents the first time one major microcomputer operating system has bridged to another.

Concurrent™ DOS enters world of finance

Corporate financial officers live in a dynamic world of variables. They oversee a wide range of stocks, bonds and bank accounts. Tracking the fluctuations in each can become a time consuming, laborious chore.

Enter BYAD, a high tech company in Chicago devoted to providing computer solutions that simplify life for members of the financial industry. BYAD has automated the process of corporate banking by combining an IBM Personal Computer and Concurrent DOS 3.1 from Digital Research into the BYWAY Treasury Management System.

Jeff Fischer, president of BYAD, said the system provides features typically left to larger minicomputers, mainframes or time sharing services. Banks send data directly to your desktop, eliminating the need to call each bank individually and wait while clerks search for information on your particular accounts.

Fischer gave an example of how the BYAD system may be used:

The IBM PC is switched on first thing in the morning. Data is collected from accounts at up to 120 banks and automatically deposited into a sophisticated spreadsheet. The spreadsheet is updated as new information arrives.

At any point, the treasurer may print out an accurate picture of accounts or supply projections based on different kinds of transactions. Further, transfers of funds may be made at the touch of a few keystrokes. No calls to second or third parties are necessary, and money may be shifted quickly into accounts where it earns the most interest. In effect, the system works as a cash manager that helps increase profits, Fischer said.

"The Treasury Management System pays for itself within a year," said Fischer, who has 16 years of experience with microcomputers and data communications. "No other financial system provides this level of automation."

Unauthorized access is prevented through the use of codes, Fischer explained. Passwords are provided to a few people within the corporation, and bank representatives may be notified of changes via letters prepared by a word processor.

In a future release of the Treasury Management System, the microcomputer may be linked to a ticker tape service provided by Monchik-Weber. Selected stocks may be displayed on a rolling line at the bottom of the computer screen. The ticker proceeds without interrupting other tasks, a feature made possible with the multitasking capability provided by BYAD's coprocessor board and Concurrent CP/M.

Concurrent CP/M was introduced nearly two years ago. Since, it has become popular in a wide range of applications that require different types of data to be processed at the same time. For instance, information on activity in bank accounts may be obtained while the computer gathers stock data. Or applications such as word processing may be performed without halting the spreadsheet calculations carried on in the Treasury Management System.

The version of Concurrent CP/M used by BYAD bridges the CP/M and PC-DOS operating systems. Most of the popular software sold for PC-DOS runs under this version of Concurrent CP/M, including Lotus 1-2-3 and Multiplan by Microsoft®.

The idea of turning a microcomputer into a financial workstation grew out of other projects by Fischer and his peers at BYAD. Several years ago they developed a minicomputer system for Northern Trust Company of Chicago, the fourth largest bank in Illinois with assets of $6 billion.

Called MoneyNet, the system linked Northern Trust to the Federal Reserve Board and automated the transfer of funds. The same principle was used to develop a microcomputer link between Northern Trust and its corporate customers. Northern Trust contracted with BYAD to develop this link, which was later named the Treasury Management System. It was then included in the bank's cash management service.

BYAD had already developed a coprocessor board that fits inside the IBM PC and allows it to run software designed for other types of microcomputers. The board ran the CP/M operating system for 8-bit microcomputers, bridging the gap between software for 8-bit machines and 16-bit machines.

In developing the financial workstation, BYAD programmed the coprocessor board to include sophisticated communications functions that operate simultaneously on the IBM PC.

"There are other types of cash management systems provided by banks and independent vendors, but none offer the multitasking available in our approach," Fisher said.

BYAD Inc. is located at 95 West Algonquin Road, Arlington Heights, IL, 60005. (312) 228-3400.

BYWAY TREASURY MANAGEMENT SYSTEM

ANK BALANCE REPORT
Summary B
04-02-84

Dv	Ac		Current Ledger	Current Avail.	Lock Bo:
			4,898,502.48	1,144,765.72	1,321,1
0 01 03			17,527.34	1,680.39	17,0
01 2		46		70,938.45	71,4
02 3			300,873.62	300,4
B			273,492.46	388,9
0 02			36	129,3
07				203,9
				3
Bn				
46 206960				
47 5386578				
50 9868356				
Bnk-Total	384,41			
	17,527.34			
	78,430.46			
	32,733.64		300,47	
	28,691.44		388,992.86	236,6
	39,263.84		129,374.63	210,3
	48,394.63		203,947.36	248,2

BYAD

Concurrent DOS allows a personal computer using the BYWAY Treasury Management System to collect data from up to 120 different banks. Money may be transferred between accounts, and a spreadsheet is automatically updated to provide accurate balances at any point in the day. Since it is a multitasking system, word processing or other applications may be used without interfering with transmission of data.

How to increase micro power inexpensively

Add-on boards that fit inside your personal computer are being marketed by Digital Research to provide added power and capability. Two products — the CP/M Gold Card™ for the Apple II series of microcomputers and StarLink for the IBM PC — already have been introduced.

"People are looking for more than bits and pieces of products that they must fit together," said John Meyer, manager of Hardware at Digital Research. "Consumers can turn to Digital Research for complete solutions. We have accumulated the expertise necessary to lead the way in integrating software and hardware."

The CP/M Gold Card brings the world of CP/M applications to owners of the Apple II, Apple IIe® and Apple II Plus computers. It plugs into any slot provided on the Apple computer and lets users draw from the thousands of applications written for the CP/M operating system.

Tests conducted by Digital Research prove that the CP/M Gold Card outperforms its competitors, Meyer said. In one test, Ashton-Tate's dBASEII® sorted and listed records an average of twice as fast as other Apple coprocessor boards. (Results are available from Digital Research.)

"The CP/M Gold Card allows Apple II, Apple IIe and Apple II Plus computers to rival or surpass the performance of the current generation of 16-bit microcomputers," Meyer said.

One reason for the dramatic increase in performance speed is the CP/M Plus™ operating system. It is an advanced version of CP/M for 8-bit computers and provides banked memory, a feature that processes chunks of information in speedy and sequential manner. It also supports disk caching, which improves speed when combined with an optional 128K memory card.

Further, the CP/M Gold Card

transforms the 40-character display on an Apple into an 80-character display when used with CP/M software.

Included with the CP/M Gold Card are documentation on the CP/M Plus operating system and the CBASIC® language.

"Because the CP/M Gold Card is marketed by the company that created CP/M, users can be assured it is compatible with the software available," Meyer said. "It provides everything Apple users need to enter the world of CP/M, including documentation and the CBASIC language."

Digital Research seeks to provide complete solutions which enhance the capabilities of personal computers, Meyer explained. In StarLink, the IBM PC is turned into a multiuser system for five people. StarLink spreads computer power throughout an office at a fraction of the cost of buying new personal computers. (See StarLink story, page 1.)

According to Meyer, that is good news to managers whose office systems are overused or those that are not used to their capacity. It eliminates the problem of people queuing up for a crack at the computer. All five users may run different types of applications simultaneously.
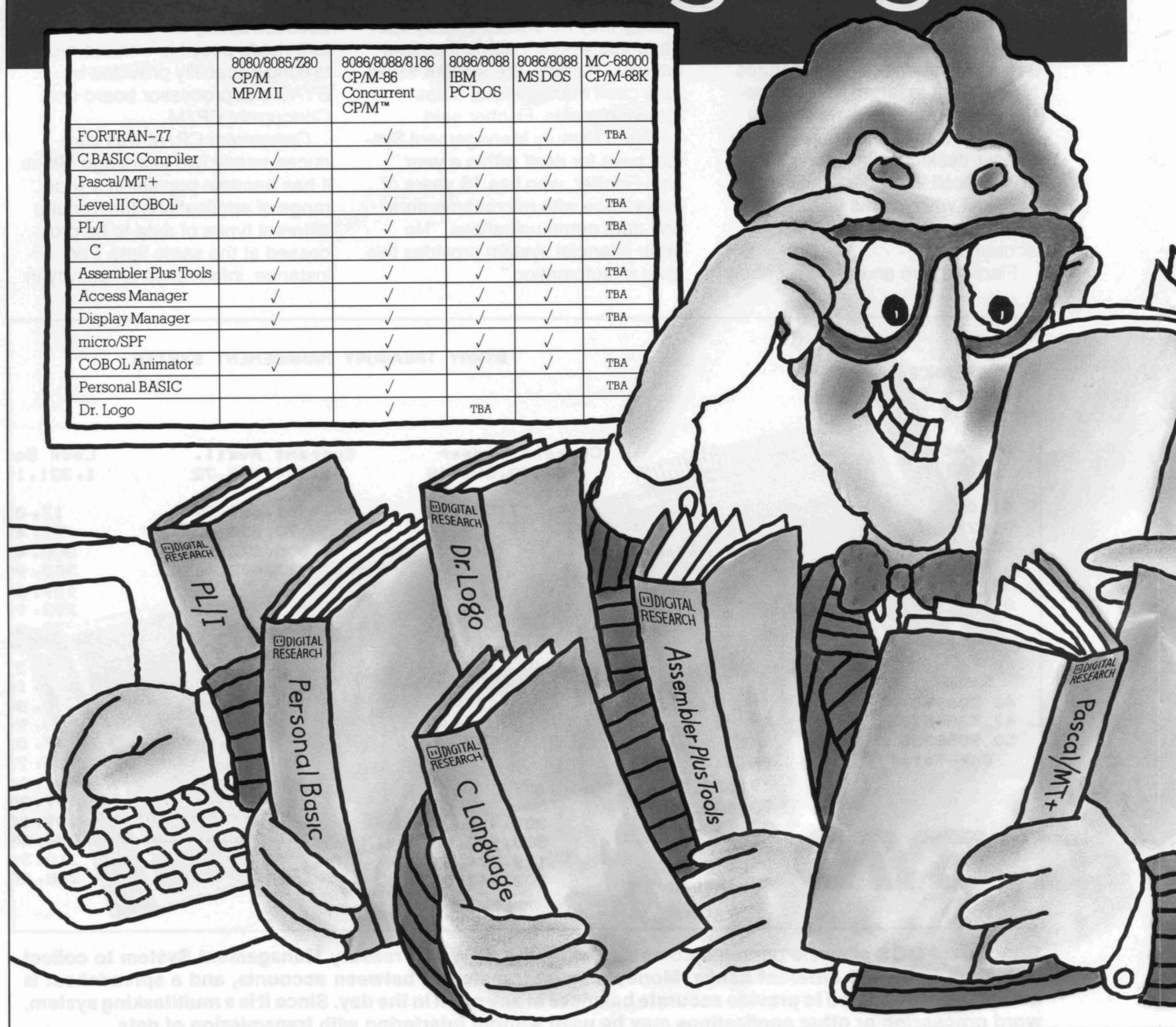
Take the case of a personal computer that sits on one worker's desk. Others in the office may hesitate to work with it and the machine may sit idle most of the day. With StarLink, coworkers can access the power of the machine without interrupting each other's work.

StarLink provides the operating system, board, connections and instructions necessary to install a multiuser system.

"Digital Research is enhancing the capability of a computer to do a specific job," said Meyer. "Our goal is to combine hardware and software to meet specific needs in the office."

StarLink

(continued from page 1)

used by each of the five users.

One person may be printing and entering information into a data base program. Another may be typing a letter and crunching numbers for a spreadsheet.

"StarLink increases the utilization of a specific machine," said Loftus. "It works as if there were several single user systems."

The potential for getting more power out of the IBM PC or PC/XT was illustrated by Loftus:

• The overutilized computer. Say there is one IBM PC for an office of four or more people. Typically it is placed on one person's desk, and anyone who wants access to it must interrupt that worker. It's possible to set it up in a separate room, however, you must still wait until others are finished with their tasks. Buying a separate computer for each work station is impractical.

• The underutilized computer. "Most industry research points out that personal computers typically are used about 20 percent of the time during normal business hours," Loftus explained. "It doesnt' make sense to buy more computing power and let the machines sit idle."

• The mainframe or minicomputer system. Everyone in the company is provided a terminal. The employees compete for computing time and use of hardware. They must wait for printers. And if the data processing department is located at a remote site, retrieving a printout may be difficult. Besides, the entire company suffers whenever the computer system is down for repairs or maintenance.

"StarLink provides a way out of all three dilemnas. It offers an optimum solution that gives you the advantages of a local area network," Loftus said. "It means you can spread around the computing power provided in the IBM PC."

Simply, StarLink is a board that includes an Intel 8088 microprocessor and 64K of RAM. It requires an IBM PC outfitted with at least 512K of RAM. A five megabyte hard disk is recommended. Instructions for setting up the system are included.

"StarLink is a simple yet cost-effective way to upgrade your IBM PC, PC/XT or compatible computer.

For product literature and the dealer nearest you, call toll free (800) 227-1617 ext. 400, or (800) 772-3545 ext. 400 in California.

We wrote the book on portability. In nine different languages.

	8080/8085/Z80 CP/M MP/M II	8086/8088/8186 CP/M-86 Concurrent CP/M™	8086/8088 IBM PC DOS	8086/8088 MS DOS	MC-68000 CP/M-68K
FORTRAN-77		√	√	√	TBA
C BASIC Compiler	√	√	√	√	√
Pascal/MT+	√	√	√	√	√
Level II COBOL	√	√	√	√	TBA
PL/I	√	√	√	√	TBA
C		√	√	√	√
Assembler Plus Tools	√	√	√	√	TBA
Access Manager	√	√	√	√	TBA
Display Manager	√	√	√	√	TBA
micro/SPF		√	√	√	
COBOL Animator	√	√	√	√	TBA
Personal BASIC		√			TBA
Dr. Logo		√	TBA		

DRI helps solve productivity dilemma

The problem of how to increase productivity remains as important today as at the start of the Industrial Revolution. This is especially true for programmers faced with a heavy workload and critical deadlines.

"Digital Research is the only company that has a complete strategy to increase programmer productivity," explained Dr. Tom Byers, product marketing manager for languages. "The development and maintenance of software is time consuming and costly. Off-the-shelf packages often aren't flexible enough and there's a shortage of programmers who can develop custom software."

Sometimes generic software you purchase doesn't meet the needs of your growing and changing business. So you hire a programmer to write a customized application. Sounds easy enough.

The problem, according to Byers, has been that most independent and corporate pro-grammers are deluged by orders. Byers estimated you may have to wait up to two years for customized software. And during the interim your business suffers.

The solution provided by Digital Research: a line of complementary products that help programmers save time. A wide variety of languages are provided, including CBASIC®, CBASIC Compiler™, Level II COBOL™, Digital Research C™, PL/I™, Pascal/MT+™, Assembler Plus Tools™ and Personal BASIC™. These languages provide the means to develop applications for uses from scientific to business.

Further, Byers said no other company offers as many tools to aid programmers. They are:

• Programming editors for modifying source code. micro/SPF™ is an editor that emulates its mainframe counterpart, SPF. It may be used with any Digital Research language. Speed Programming Package™ (SPP) is an editor sup-plied for Pascal/MT+.

• Special tools that may be used with Digital Research compilers. Access Manager™ is an ISAM package which helps programmers build data bases. Display Manager™ is an aid to the interactive development of terminal displays such as windows, menus or help screens. Both of these tools can be used for all Digital Research compilers.

• Debuggers for finding logical errors in programs. Animator does this for Level II COBOL while DR Assembler Plus Tools may be used with any Digital Research language.

"These software tools embellish our products and address the critical issue of applications backlog," Byers continued. "They allow programmers to create applications in a timely and cost efficient manner."

Perhaps you own an IBM PC which runs under the Concurrent CP/M operating system. An application program is written using CBASIC Compiler from Digital Research. That application may be transferred, for example, to a DEC Rainbow 100™ running under MS-DOS™ by a simple recompiling of the source code. All that is needed is the version of CBASIC Compiler for the DEC Rainbow 100 under MS-DOS.

Digital Research language products are supplied for all major brands of computers. Traditionally, microcomputer programmers who wanted a full line of language products turned to different suppliers — one company for the compilers and another for programming tools.

According to Byers, however, it makes sense to patronize a single and well known vendor. In addition, it is easier to turn to one supplier than many for support, consistent quality and service.

Support becomes especially important given the technical nature of software products, Byers said. Digital Research has built its reputation on technical support. The philosophy has been extended to a subscription program called Professional Programmer Support. Subscribers are guaranteed prompt assistance from experts at Digital Research.

"Digital Research is committed to developing its language products in new chips and operating systems and better tools to help ease the logjam of demand for new applications," Byers said.

DRI languages offered by IBM

The National Accounts Division of IBM has agreed to sell Digital Research languages and graphics products developed for the 3270 PC, a personal computer that acts as a link to one or more mainframe systems.

Among the products sold directly by IBM are Level II Cobol; Forms 2, a screen generator for Cobol; a native code compiler; PL/I; Pascal MT+; Digital Research C; CBASIC Compiler; Access Manager; Display Manager; micro/SPF; and DR APT. The graphics products offered by IBM are GSX™, DR Graph and DR Draw.

"The IBM 3270 Personal Computer is a good example of the emerging link between mainframes and microcomputers," said John Rowley, president of Digital Research. "Our products — especially Level II COBOL, PL/I and micro/SPF — strengthen the relationship between the two types of systems since mainframe users are familiar with these languages."

The languages were released in early 1984 by Digital Research. Source code from applications produced with these languages may be ported between Concurrent CP/M, CP/M-86™ and PC-DOS.

Data base services

Subscribers to Professional Programmer Support have access to Digital Research data bases on THE SOURCE and CompuServe.

Users of THE SOURCE can access the Digital Research data base from the command level by typing: MICROLINE

Users of CompuServe may access the data base from the command level by typing: GO DRI

The DR Sig on CompuServe can be reached with: GO PCS-13

For information about Professional Programmer Support, call (408) 646-4928. Or write Professional Programmer Support, Technical Support Department, Digital Research Inc., P.O. Box 579, Pacific Grove, CA 93950.

New directors hired by Digital Research
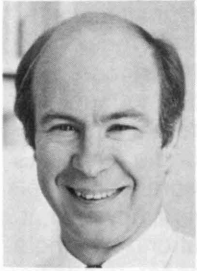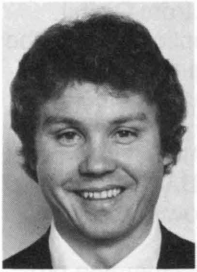
Digital Research President Gary Kildall has announced that John Rowley (upper left) has been appointed a member of the Board of Directors, Steve Maysonave (upper right) has been named senior vice president of World Trade and Stan McKee (left) has been appointed senior vice president of Finance.

Bruce Vanda
Director of Finance

Bruce Vanda, a 13-year veteran of Arthur Young & Co., joined Digital Research as director of Finance. His responsibilities include the management of corporate accounting, data processing, facilities and taxation.

"It's always difficult to manage high growth situations such as at Digital Research. We must anticipate what the needs will be and at the same time maintain firm control of the business," said Vanda. "Also, it's important to maintain the creativity and entreprenurial spirit that have characterized Digital Research."
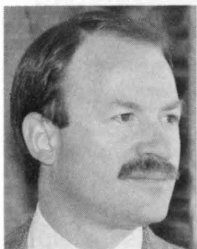
One of Vanda's goals is the completion of a management information system for Digital Research. Among other accounting functions, the sophisticated system tracks expenses and orders automatically.

Vanda left Arthur Young as an audit principal. He acted as management consultant and auditor for the Big Eight accounting firm. Among his clients were several high tech companies and firms in the "Fortune 500." He graduated from Princeton University with degrees in French and Russian, then received a master's degree from the Harvard Graduate School of Business Administration.

Mark Duchesne
Director of Marketing

Digital Research has hired several new directors to strengthen its management team and assist the company's diversification into the consumer market.
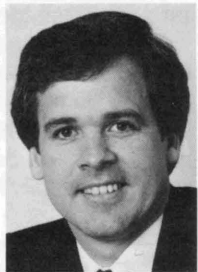
Mark Duchesne, formerly vice president of marketing at Koala Technologies, has joined Digital Research as director of marketing.

"Digital Research is developing new applications that make computers easier to use and more versatile. One of my major tasks is to help launch those products into the consumer and commercial marketplace," Duchesne said. "We have developed innovative uses for graphics and operating systems that bring out the most in current computer technology. Meanwhile, we are continuing our strong rela-

tionship with original equipment manufacturers so that new hardware can be incorporated into current technology."

For example, Duchesne said the CP/M Gold Card coprocessor board from Digital Research brings the world of CP/M software to Apple II, Apple IIe and Apple Plus® computers. StarLink, an intelligent communications board that slides into a slot inside the IBM PC and XT models, turns the computer into a multiuser system at a fraction of the cost of buying new computers. And Presentation Master can be attached to IBM personal computers to make inexpensive presentation slides.

Duchesne has acquired a strong marketing background from some major microcomputer related firms. He started his career in the computer industry as a finance manager for Commodore International. Two years later he became a regional manager at Texas Instruments, where he spent the next seven years heavily involved in retail marketing.

Duchesne worked for two years at Dataquest, a Bay Area research firm, before he accepted the position as vice president of marketing at Koala.

"Digital Research is setting up a streamlined organization and strategy to produce quality products that have significant benefits for end users," Duchesne said. "These products must be introduced in an appropriate manner because the microcomputer industry is a dynamic field. It requires us to remain flexible yet opportunistic."

Duchesne earned a bachelor's degree in marketing and a master's in finance from the University of Santa Clara.

Fred Cutler
Marketing Director, Consumer Products

A former vice president of marketing at Mattel Electronics, **Fred Cutler** has been hired to concentrate on Digital Research's marketing plans for the Consumer Products Division. As Senior marketing director in the division, Cutler assumes responsibility for development of new products.

"I'm excited about the nature of projects that are taking place at Digital Research," said Cutler. "We are releasing the Starter Kit, a small box that links personal computers and videodisc players."

The Starter Kit lets the microcomputer control what appears on the television screen. Users may develop applications that switch between computer graphics and video. The first kit developed by Digital Research connects the IBM PC and a Pioneer LD-700 videodisc player. Cutler said other types of computers and videodisc players will be supported in the future.

"The Starter Kit introduces a new field of opportunities for using home computers," Cutler said, explaining that it is particularly suited for developing new types of games and entertainment.

Cutler has been involved with videodisc technology for the past six years. Before joining Digital Research, he worked for two years at Mattel Electronics and earlier as a management consultant at Booz Allen & Hamilton. He earned a

masters in business administration at Western Michigan University and a doctorate in marketing from the University of Southern California.

Judy Mervis
Director of Corporate Communications

Judy Mervis, who has been Marketing Communications manager for the last 18 months, was promoted to director of Corporate Communications. She is responsible for the planning and management of public relations.

"Digital Research is working with industry leaders such as IBM, AT&T, Motorola and Intel to develop standards for microcomputers," Mervis said. "Our software and hardware add-ons contain a well thought out strategy so end users can get the most out of the current and next generation of microcomputers."

Before Mervis arrived at Digital Research, she worked at Intel® Corp. as an accounts manager. Her duties included public relations, advertising and trade shows. She has also worked at ROLM as a sales administrator and at TRW Vidar as manager of Marketing Communications.

Gabriel Baum
Director of Engineering, Consumer Products

Gabriel Baum, a former vice president of the Applications Software Division for Mattel Electronics, was named senior director of engineering for the Consumer Products Division. He is responsible for development and maintenance of operating systems and application software for home computers.

"At Digital Research I have the opportunity to help direct a variety of projects aimed at the consumer. We intend to increase the number of uses and simplify the operation of home computers," Baum said.

Baum used the Dr. Logo line of products as an example of products that help teach people how to use their computers in a variety of ways. "We are also providing software that turns computers into tutors."

At Mattel, Baum managed more than 200 programmers worldwide. The team produced video games and personal computer software for Intellivision, Coleco, Atari® and other manufacturers' hardware. He also worked with mainframe computers for Thorn-EMI in England, Honeywell in Finland and Xerox® in France, Germany and Australia.

Bruce Weiner
Director of UNIX™ Business Development
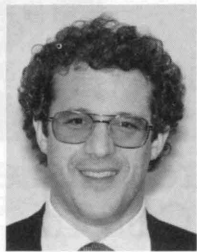
Bruce Weiner, an expert on UNIX operating systems, was hired by Digital Research as a result of recent agreements with AT&T. He has worked as a consultant for Xenix operating systems and had various management positions at Zilog.

As director of UNIX Business

Development, Weiner is focusing on development of an applications library for UNIX® System V. Currently, he is working with AT&T to evaluate softwre.

"AT&T and Digital Research are bringing a number of sophisticated business applications to the market," Weiner explained. "We are making UNIX System V a standard for the commercial market and making it attractive to business. We are addressing key applications."

Weiner earned a bachelor's degree in electrical engineering and a masters in computer science from Stanford University. He received a masters in business administration from Pepperdine University.

"All indications are that UNIX System V will be one of the major operating systems during the second half of the 1980s," Weiner said. "This prediction is based on the fact that UNIX System V is superbly suited for multiple users and multitasking. Digital Research and AT&T are coordinating their efforts so applications will be available at the end of 1984."

Beth Newburger
President of Owlcat subsidiary

Digital Research's entry into one segment of the educational field is being driven by a former educator and marketing manager from The Washington Post.

Beth Newburger has joined Digital Research as president of the Owlcat subsidiary, which produces preparatory courses for college entry examinations. The company was founded by Newburger and her brother Dr. Donald Weinstein, a member of the National Review Board of Pathologists.

Weinstein headed a team that developed the Owlcat S.A.T. Preparatory Course. Shipped to retailers in March, Owlcat has received the endorsement of the National Education Association.

"With Owlcat, Digital Research can contribute to the upgrading of education and enhance what students learn in school," Newburger said. "Digital Research has built a strong reputation for quality operating systems and languages. End users can expect the same high quality in the Owlcat learning line."

At The Washington Post, Newburger helped develop the Washington Business and Washington Home tabloids. She has held various marketing positions at Knight-Ridder Newspapers, The New Republic magazine and CBS-Radio. She earned her teaching credential from Cornell University.

Said Newburger, "Digital Research is moving into more areas of educational software, especially in the field of formal education such as adult education and test preparation."

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"Media Quotes"

Digital Research continues to make news in the industry and the general press. Following are excerpts from a few of the articles which have appeared recently.

"In expanding Concurrent CP/M into a version called Concurrent DOS, Digital Research faced further challenges. The firm specifies that Concurrent DOS will run PC-DOS programs rather than MS-DOS programs for reasons other than merely avoiding the mention of a competitor's product name. Many of the most powerful PC-DOS applications actually bypass the standard MS-DOS commands to address the microcomputer hardware directly (in an effort to enhance the program's graphics and speed), and Digital Research wants to make it clear that Concurrent DOS will handle these specialized applications."
Popular Computing, May 1984

"The first software to link CP/M-based microcomputers via any local area network (LAN) is DR Net™. The package enables offices to tie together diverse microcomputer workstations using local area networks such as Ethernet, Arcnet and Omninet. DR Net interconnects microcomputers running any version of the popular Concurrent CP/M operating system. Its high-level software provides a swift, flexible and inexpensive means of creating an office-automation network based on any combination of LAN and microcomputer hardware."
Interface Age, March 1984

"Concurrent CP/M has always permitted several programs to be run at once, through what it calls 'virtual console.' It does this by partitioning the computer's memory into separate areas. Each program runs in its own area of memory, and is isolated by the operating system from the others to prevent data from one program inadvertently finding its way into another. Now, with windows, the user of Concurrent CP/M will be able to see what is happening in the various programs."
Computers and Electronics, March 1984

"Essentially, Dr. Logo allows you to become a computer literate nonmechanic who would be comfortable at a cocktail party hosted by the data processing department. As a matter of fact, by the time you've completed the tutorial supplied with the Dr. Logo language, you'll have a clear understanding of the concepts behind programming. Thereafter, it's only a matter of time before you'll be able to take that knowledge and write a practical application."
Business Computing February 1984

"The most surprising development of late is the AT&T-DRI partnership, under which the two firms will jointly produce applications programs to run on the most recently released commercial version of UNIX System V. DRI's compilers for its programming languages will become the System V standard under the agreement that was announced in Washington, D.C. at last month's Uniforum conference. The agreement is DRI's strongest move yet into the UNIX market...."
InfoWorld, Feb. 20, 1984

Software for UNIX System V Library undergoing evaluation

Development of The UNIX System V Library is continuing on schedule with the evaluation of software from independent vendors.

The library is a joint project by Digital Research and AT&T Technologies. The two companies intend to market third party applications for UNIX System V at the end of 1984. Products will be channeled through Digital Research to manufacturers, distributors and dealers.

"Software Screening Forms are now available to software vendors interested in participating in the growing market for UNIX System V applications," said Bruce Weiner, director of UNIX Business Development at Digital Research. "Several applications packages already have been evaluated by a team from Digital Research and AT&T."

Software Screening Forms may be requested by writing to The UNIX System V Library, Digital Research, 1860 Embarcadero Road, Suite 215, Palo Alto, CA 94303. A question and answer guide included with the forms provides an overview of the project. All software vendors who participate are expected to complete a screening form. Software is evaluated on the basis of its uniqueness and compatibility to UNIX System V.

If accepted, a marketing contract is negotiated for distribution of the software. Packaging carries the AT&T and Digital Research logos, and manufacturing is done by Digital Research. Royalties will be paid quarterly.

"AT&T and Digital Research have built their reputations on quality products," Weiner continued. "The UNIX System V Library will provide users with excellent software that is well documented and easy to use. We encourage software vendors to participate."

The AT&T and Digital Research enterprise began at the start of

UNIX SYSTEM V LIBRARY

▭ DIGITAL RESEARCH ⬤ **AT&T**

1984 as a means of promoting UNIX System V as a standard operating system. The first version of UNIX was developed in 1969 by AT&T. Several refinements have been added since then, and UNIX

System V represents the latest release.

Written in C, UNIX System V supports multitasking and multi-users. Some of the key features are a hierarchical file system, piping and shell (command language interpreter). Programmers and scientists have found UNIX particularly suited to sophisticated applications. Since its first release, it has been licensed on a limited basis for university and industrial use.

The latest, most enhanced version of the operating system is UNIX System V. Digital Research is porting a version of UNIX System V to the Intel iAPX-286 family of microprocessors. AT&T Technologies retains exclusive rights to the product. Intel and Digital Research were granted non-exclusive rights to market object code versions. Work on the Intel project is proceeding independently of The UNIX System V Library.

"The UNIX System V projects complement our existing line of operating systems. Users are provided an upgrade path from one to the next," Weiner explained. "We intend to meet the demand for a wide range of business application so end users can benefit from the powerful features provided in UNIX. The applications library will speed the acceptance of UNIX System V."

CP/M-68K™ languages sold for VME/10

The year-long project to increase the number of applications for Motorola's 68000 family of microprocessors is proceeding on schedule with the release of the CP/M-68K for the VME/10 microcomputer.

Also, Digital Research recently released 68K versions of CBASIC Compiler, C and Pascal/MT+ for the VME/10.

The delivery of CP/M-68K and the languages represent milestones in the agreement between Digital Research and Motorola. The agreement calls for Digital Research to develop a version of its Concurrent DOS operating system for the VME/10, which is based on Motorola's 68000 microprocessor.

Darrell Miller, marketing manager for operating systems at Digital Research, said Concurrent DOS provides portability between major operating systems. Source code written in CP/M-68K is compatible with that of Concurrent DOS to UNIX System V. The availability of CP/M-68K and languages gives software writers the opportunity to prepare for the arrival of Concurrent DOS at the end of 1984, Miller said.

CP/M-68K, CBASIC Compiler and Pascal/MT+ may be purchased from Westico, a distributor of Digital Research products or, in some cases, the languages may be purchased through Digital Research retail channels.

Concurrent DOS supports software written for CP/M-86 or PC-DOS operating systems. It offers multitasking, hierarchical file structure, windows, support for single or multiusers, networking and GSX, the graphics extension from Digital Research.

"The project ultimately means a greater number of applications that run under the 68000 family of microprocessors," Miller said. "By providing portability of applications from CP/M, PC-DOS or UNIX System V, we are increasing the amount of software available for any of the systems. End users can expect a proliferation of advanced programs that address a variety of business needs."

Distribution network increased for Digital Research products

Digital Research has expanded its distribution network with the addition to its network of Warehouse One, a distributor based in the midwest, and the computer software chain of Entre Computer Centers.

Based in Vienna, Va., Entre Computer Center supplies a chain of 130 stores nationwide. It sells Digital Research products as part of a package for businesses and professionals.

"Entre markets software packaged with hardware so that users never have to worry about which machine and operating system they use. It's an approach that matches our design philosophy," said Craig Conway, director of National Retail Sales at Digital Research.

Among the Digital Research products now carried by Entre Computer Centers are Dr. Logo, the Owlcat S.A.T. Preparatory Course, Concurrent CP/M, DR Draw, DR Graph, languages, compilers, software tools and the new slide production package called

Presentation Master.

Warehouse One serves 2,500 retail outlets including software stores, computer shops, office equipment and office product suppliers. It carries the full line of Digital Research products including languages, operating systems and consumer products.

Based in Lawrence, Kan., Warehouse One is a value-added distributor for Digital Research products. It has a telemarketing group that confers with dealers across the country and provides them with training or other product information.

The new contracts with Warehouse One and Entre mean a more complete network of dealers and distributors who carry Digital Research products. The Digital Research dealer network, which emcompasses the country, gives end users easy access to sales and service.

End users may be referred to a Digital Research dealer by calling (800) 227-1617, ext. 400 or in California (800) 772-3545, ext. 400.

Visuals
information already stored on the personal computer. An entirely new set of slides customized to the audience may be developed in minutes. Meanwhile, security remains intact since the information never leaves the office.

The slides or prints developed by Presentation Master are sharper and clearer than what is viewed on the computer screen. The reason: Images are electronically broken down into smaller parts than possible on the screen and a more enhanced picture is recreated.

The system requires a color graphics card and an IBM PC running PC-DOS 2.0. Any of the 72 colors provided by Presentation Master may be substituted for the 16 colors produced by the IBM PC. Or you may select from eight color combinations.

"Slides are well suited for formal presentations. For example, in a sales meeting color slides provide a dramatic effect," said Duchesne. "The Polaroid Palette and software from Digital Research provide a simple turnkey solution that meets the need for high quality visual presentations."

DIGITAL RESEARCH NEWS

... Briefs ...

CBASIC Compiler includes graphics

Graphics can be easily incorporated into business applications with the latest version of Digital Research's CBASIC Compiler (CB86) for PC-DOS.

GSX, a standard graphics extension to the popular operating systems, is included in the Release 2.1 of CBASIC Compiler (CB86) for PC-DOS. Programmers now can utilize the 25 graphics statements provided in the compiler. GSX provides a Virtual Device Interface for device independent programming.

CBASIC Compiler sells for $600. The latest version, which includes GSX, is provided to registered users at no charge. Registered users will be notified by mail.

CP/M languages, tools available for Apple

Apple microcomputer users take note: CP/M languages and tools from Digital Research are available for you.

The language products may be used on Apple II, Apple IIe and Apple II Plus computers running under the CP/M operating system. Available through Digital Research retail sales channels, the products include: CBASIC, CBASIC Compiler, Pascal/MT+, Speed Programming Package, MicroFocus LEVEL II COBOL, DR Assembler Plus Tools, Access Manager and Display Manager.

Any Apple computer outfitted with CP/M operating system-based coprocessor boards, such as the CP/M Gold Card, can use the language products. Manufactured by Digital Research, the CP/M Gold card easily plugs into a slot provided inside your Apple and allows you to use CP/M-based software.

For product literature and the name of the dealer nearest you, call toll free at (800) 227-1617 ext. 400 or in California (800) 772-3545 ext. 400.

Networking software clusters workstations

Networking software from Digital Research brings the age of interconnected workstations to the office place. DR Net is a software link designed for the CP/M family of operating systems.

Independent personal computers configured with DR Net may share hardware or software. For example, expensive hard disks or printers may be linked into one shared system.

Some of the features include:

• Support for 8-bit or 16-bit computers

• Print spooling

• No requirement to dedicate both the a workstation and server to Concurrent DOS

• Suitable for network applications such as electronic mail

• Design that allows use with other networks such as Ethernet, Arcnet or Omninet

• Compatibility to CP/M, MP/M II™ and Concurrent DOS operating systems

DR Net is available from hardware manufacturers.

Larger files handled by updated micro/SPF

Improved performance and documentation geared toward first-time users are provided in the latest version of micro/SPF, the microcomputer editor that simulates its mainframe counterpart.

Cathy Murphy, product marketing manager, said the enhanced version of micro/SPF handles large files and processes information faster. Speed of processing was increased when portions of micro/SPF were rewritten in Digital Research C.

micro/SPF simulates the mainframe editor so tasks that tie up the mainframes — such as file maintenance and programmer training — can be performed on inexpensive micros. It runs under PC-DOS and CP/M-86 including Concurrent CP/M. Additionally, micro/SPF runs under Digital Research's Concurrent CP/M on the IBM PC.

The updated version of micro/SPF sells for $450. Registered users of micro/SPF will be notified by mail and may purchase it for $50.