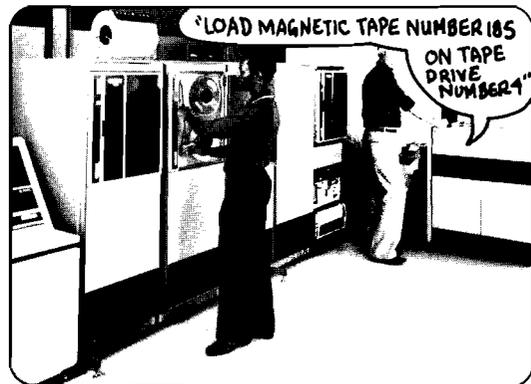


Computer News

For HP Field Personnel
April 15, 1983

A New Dimension in Computer Communication



The 27201A Speech Output Module

For Internal Use Only

COMPUTER MARKETING GROUP

- CMG Computer Marketing Group
- 3PP Third Party Program
- AMD Application Marketing Division
- CSD Computer Support Division
- CSE Computer Support Europe
- CSO Computer Supplies Operation
- MA Major Accounts
- SRO Systems Re-Marketing Operation

COMPUTER PRODUCTS GROUP

- CPG Computer Products Group
- BDD Boeblingen Desktop Division
- CSY Computer Systems Division
- DSD Data Systems Division
- FSD Fort Collins Systems Division
- GTO Grenoble Technical Systems Operation
- YCD Yokogawa Computer Division

PERSONAL COMPUTER GROUP

- PCG Personal Computer Group
- HPG Grenoble Division
- HPPR Hewlett-Packard Puerto Rico
- PCD Portable Computer Division
- POD Personal Office Computer Division
- RTD Roseville Terminals Division
- VCD Vancouver Division

BUSINESS DEVELOPMENT GROUP

- BDG Business Development Group
- BGD Boeblingen General Systems Division
- FSD Financial Systems Operation
- GCO Guadalajara Computer Operation
- IRO Information Resources Operation
- MPD Manufacturing Productivity Division

INFORMATION PRODUCTS GROUP

- IPG Information Products Group
- BSE Boise Division
- CCD Computer Communications Division
- DMD Disc Memory Division
- GLD Greeley Division
- GNO Grenoble Network Operation
- IND Information Networks Division
- OSO Office Systems Operation

INSTRUMENT GROUP

- COL Colorado Springs
- SDD San Diego Division

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On the Cover:

The HP 27201A Speech Output Module (SOM) combines high quality speech, low price, and flexible configurability, making speech synthesis a viable technology for a wide variety of computer-based applications. See article beginning on page 23.



HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

CMG

Dealer Relationships

Hal Mickelson/Corporate Legal

With the teaming up of Sales Force 12 and Sales Force 02, more Hewlett-Packard people than ever before will come into contact with HP's personal computer and calculator dealer network. This means it's a good time to review some basic legal principles that govern HP's relationships with dealers. (These principles also apply to HP's relationships with OEMs and other third parties who purchase and then resell HP products.)

Independent Pricing

The first legal principle in this area is the simplest: A dealer or other third-party seller is free to set its own prices for HP products. In the United States and most other countries, if the dealer wants to charge prices that are below or even above HP's suggested resale prices, the law protects its right to do so.

In other words, the law gives the prospective purchaser of HP computer and calculator products the same right to shop around for the best price as it gives the buyer of consumer goods like cameras, televisions and stereos.

From the lawyer's point of view, this principle has two significant implications: (1) HP may not reach any *agreement or understanding* as to the prices a dealer will charge for HP products; and (2) HP may not *threaten or punish* a dealer as a result of the dealer's pricing decisions.

Independent Competition

The second principle is also relatively simple: Where HP's own sales force sells products that are handled by third-party channels as well, the law forbids HP to make any agreement with a third party that would prohibit

him from competing with HP for sales to any group of potential customers. Once HP puts a product into the hands of the third party, HP respects his right to go after the same prospects that interest HP.

In fairness to our dealers, we sometimes tell them that we call on certain target accounts and that we may offer volume purchase discounts and other advantages to customers who want to deal directly with us. This is acceptable practice on HP's part. However, we should stop short of implying that our dealers aren't welcome to sell to those target accounts if they so wish. Simply put, we're entitled to compete with dealers, and dealers are entitled to compete with us.

By the same token, HP wants to avoid becoming a referee for competition among third-party channels. Suppose there's a customer who's purchased HP products in the past from Joe's Computer Store. The customer gets a sales call from a representative of Sam's Computer Store, who demonstrates some new HP products, offers an attractive price, and persuades the customer to place an order. If Joe comes to us and says he's lost the account to Sam, we should avoid interfering with the situation on the basis of Joe's inputs.

Reasonable Rules

There's another important principle about HP's relations with third-party outlets that relates to what HP *can* do rather than what HP *can't* do. Under the laws of the United States and many other countries, HP is entitled to make reasonable rules for its resale channels, on subjects *other than* the prices they charge, to assure they do a good job both for HP and for their customers. For example, HP can require a dealer to maintain a showroom and to have a trained sales staff. Similarly, HP can require an OEM to add substantial value to HP products before reselling them in order to earn its OEM discount. The

important things about these non-price rules are that they have to be sensible and fair and they must be administered in an even-handed way.

HP has recently adopted some rules for its personal computer dealer channel that are intended to encourage point-of-sale promotion of HP products in competition with those of other vendors and to assure pre-sale and post-sale support for customers on a direct, face-to-face basis. The outlines of this program were announced by John Regan in June, 1982, and the program has now been incorporated into HP's personal computer dealer contracts. In an upcoming issue of *Computer News*, an article in this space will review and explain these important rules for HP's dealer network.

CSD

Sell Customers Increased Productivity

Mickey Friedman/CSD

Do your customers know which training courses are being taught in your local area? Do they understand what these courses cover? Do they understand the productivity improvements they can realize?

Now you can react quickly to such customer requests with the Ad Builder Program. All training center managers will be provided with informal HPDRAW flyers on all HP's customer training courses. These flyers contain essential data sheet information such as course objectives and content, in a "salesy" format. In addition, they have local information left blank so that each area can

customize this portion. The biggest advantage of these flyers is that they can be tailored to each area's specific needs and generated very quickly.

The Ad Builder Program is primarily a tool for the SEO to use to get more of the appropriate customers to take training. Applications for these flyers include:

- Attaching them to the customer class confirmation letter
- Passing them out in class to suggest the next logical class to take
- Increasing enrollment in classes with low registration so that we prevent cancellations
- Posting them in demo rooms for customers to see
- Leaving them in literature racks in the sales office
- Having them available at trade shows.

Use your imagination as to where these flyers can be used to increase the expertise of your customers.

Education is an investment that pays off in the long-term with increased productivity. Use this Ad Builder Program to increase the number of customers receiving training. They will be more satisfied customers in the long run.

Support in Countries Without HP Marketing Presence

Dana Nichols/CSD

A number of questions have arisen since the article about HP's international support policy appeared in *Computer News* on February 15, 1983. The policy will be published in the forthcoming Computer Group Marketing Policies.

There are only two types of customers that HP will support in countries where HP has no marketing presence — major accounts and large OEMs. The commitment to these customers is different.

To be eligible for support in a country without HP marketing presence, a major account must appear on the CMG major account list. The customer must also own and/or operate the site at which the equipment is located.

For major accounts, there are two types of support available. The customer may elect to provide his/her own support. For these customers, HP will provide back-up support from the area office supporting the headquarters of the major account.

The major account may want HP to support the equipment. In this case, we require that the customer stock 100% spare parts or units along with all necessary tools and documentation. This assures that the HP CE will be able to repair the equipment. Our support personnel cannot carry any tools, parts, or documentation across country borders.

For an OEM to be eligible for support in a country without marketing presence, the OEM must have a valid OEM agreement and purchase 50 or more functional units per year. The OEM *must* provide the front line service to their end-user customer in these countries. HP will provide support in a consultant's role *only*. This back-up support comes from the area office supporting the headquarters of the OEM. No HP support is available directly to the OEM end-user.

In all cases where support is required for a major account or OEM in a country without HP presence, a Special International Support Agreement is required. This Special is developed on a case-by-case basis by CSD with the assistance of appropriate field managers. If you have any questions about the policy, contact your sales development engineer at CSD.

CSE

Grenoble 1983 Hardware Customer Training Schedule

Alain Moreau/CSE

Hewlett-Packard offers comprehensive maintenance training programs for many of its computer systems — from the low-priced desktop computer systems, to the HP 1000 technical computers and HP 3000 Series for business applications.

Hardware Maintenance Training Teaches Technical Skills for Cooperative Support

Maintenance courses taught at three training locations, two in the US and one in Grenoble, France, provide in-depth technical instruction for Cooperative Support Customers.

These courses teach maintenance and repair techniques for the HP 1000, HP 3000, and HP 9800 product lines and supported peripherals.

A balance of theory and practical, hands-on experience provides maintenance personnel with the skills needed to troubleshoot, repair, and maintain these products. Documentation to the major subassembly level is supplied to each student.

	MAY				JUNE				JULY				AUG				SEPT				OCT							
	WEEK OF				WEEK OF				WEEK OF				WEEK OF				WEEK OF				WEEK OF							
	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26	3	10	17	24	31	
21XX 91303A 8 days					///													///										
DISC 91304A																												
001/002 5 days						///												///										
MT 91309A																												
91310A																												
7908/7911/7912 CS80																												
35024A 4 days									///																		///	
XL/A600/A700																												
SPECIAL 22999A																												
5 days																												
9845B 35068A 5 days									///																			

Special courses can be tailored to fit your specific needs. For further information or registration, please contact

Alain Moreau or Joelle Pettier in Grenoble, telephone: (33) 76-25-81-41, ext. 247.

CSO

CSO Now Has Removable Media Module for the HP 7935

Mark Manqueros/CSO

When your HP 7935 disc drive customer asks, "Where can I find my 404Mb of removable disc media?" simply point them in the direction of Computer Supplies Operation. The 97935A removable media module can be easily ordered from CSO and is now available off-the-shelf. This unique module is the industry's largest in capacity. It will appeal to many of your customers, particularly those who want disc-to-disc backup, private volume configurations, or fast

system-to-system data transfer capabilities.

The 97935A module is currently in solid stock at CSO. US list price is:

1-4 modules	\$1530 each
5-19 modules	1480 each
20+ modules	1430 each

Be sure to contact CSO for answers to your customer's questions. (Also refer to the March 1 *Computer News* DMD section for details on the 7935 drive.)

New Local Language Computer User's Catalogs

Susan Bryant/CSO Europe

French and German editions of the *Computer User's Catalog* are now available.

These new local language editions feature over 250 new products, which certainly helps reinforce HP's *total solution* commitment.

Your French and German speaking customers will benefit greatly from these new helpful shopping guides. The catalog also contains details of our direct telephone ordering services, which make ordering quick and simple.

Distribution to field locations is underway and your personal copy should arrive soon. Your office literature coordinator will also have copies under publication number 5953-2450 GE (German edition) and 5953-2450 FR (French edition).

CSO DIRECT ORDER

CSO Fast Phones — the easy, direct way for customers to order supplies, accessories, media, furniture and software.

Location	Telephone Number
US	800-538-8787
CA, AK, HA	408-738-4133
UK	0734-792868, 792959
Germany	07031-142829 223133
Netherlands	020-470639
S. Africa	802-5111 53-7954 28-4178



BDD

DSD

HP DESIGN Wins Again

Dieter Roller/BDD

Four HP DESIGN systems have recently been ordered by a large German company with an annual turnover of over \$1 billion.

The customer had investigated and almost decided to buy another vendor's CAD system when they heard about HP DESIGN.

The main reasons for choosing HP DESIGN were:

- Variation design capabilities
- Engineering productivity network strategy

- Power of the individual HP 9000 workstations
- One-vendor solution.

The customer is planning to order another five systems this year, and long term they intend to automate all their design processes. This means the installation is expected to expand to about 40 systems over the next few years.

This is just one example of the potential sales growth in this important market!

HP Quality Decision Management/1000 Solution Brief Now Available

Debbie Feig/MPD

HP's Quality Decision Management/1000, was recently announced by MPD. This innovative software product provides manufacturers with a highly efficient quality decision capability for pinpointing and helping to rectify specific problem areas throughout the manufacturing process. And now, the HP Quality Decision Management/1000 solution brief is available.

This brief discusses implementation of HP's Quality Decision Management/1000 at HP's Disc Memory Division, in Boise, Idaho, detailing the operation involved, the benefits, and the actual savings.

You can obtain copies of this brief, P/N 5953-8722, through the Corporate Literature Distribution Center.



The HP-DESIGN software from Hewlett-Packard runs on the recently introduced HP 9000 Computer and provides the mechanical engineer with one of the first CAD workstations offering 2D variation design capabilities.

A Satisfied Customer Is an Informed Customer

Chris Carney/DSD

More and more, customers are demanding cost-effective improvements to their productivity and system performance. It is therefore crucial for them to be kept aware of all the services available to them in order to deliver the levels of performance they demand. A "co-op of computer users," known as the International Users Group, IUG, provides your customers with a wealth of information concerning their HP computer products.

This group consists of Hewlett-Packard customers only and is divided into an HP 1000 users' group and an HP 3000 users' group. Though this particular article is directed to the HP 1000's group, your HP 3000 customers will derive similar benefits.

Your customers will benefit greatly by participating in this worldwide association of HP technical computer professionals. Members include a wide range of professionals from scientists and engineers to system managers and company executives from around the world, including the Republic of China and the Solomon Islands. The International Users Group is a non-profit, independent organization financed primarily through membership dues, vendor advertising, and conference registration fees.

The following are some of the specific features IUG provides for your customers:

- Reduces redundant development effort for software, firmware, and systems
- Provides a formal communication channel between users, vendors and Hewlett-Packard

- Increases the effective use of technical systems, by promoting new ideas, applications, software and documentation
- Provides a forum for sharing information among HP users.

You can see how beneficial the International Users Group can be to your customers.

For memberships and further information, contact Chris Carney, HP

1000 IUG liaison at DSD, (COMSYS 2200) or call or write the International Users Group main office:

HP 1000 International Users Group
289 South San Antonio Road
Los Altos, CA 94022
415-941-1943
Telex: 348369

EXECSUITE LTOS

FSD

IBM 3270 Defined

Sue Bodoh/FSD

Would you believe there is no IBM 3270? It's true! The 3270 is a family of IBM controllers, CRTs, and printers, rather than one individual product. Because every customer wants a different implementation, you need to know what the various IBM configurations are so you can better understand the customer's needs. I'll try to clarify.

The 3270 was introduced in 1972. A second generation of products was introduced in 1977, and further enhancements were announced in 1979. As the most significant terminal family on the market, the installed base at the end of 1981, per *Datapro*, was about 860,000 units, and is predicted to continue to grow at 20% per year. Of this installed base, about half are IBM models.

IBM 3270 Components

Product No.	Component Type	Introduced	Price (US)*
3271	Control unit	1972	\$2880-4135
3272	Control unit	1972	3255-3555
3274	Control unit	1977	6035-20570
3275	Standalone display station	1972	2820-3835
3276	Control unit display station	1977	5980-6480
3277	Cluster display	1972	1470-1905
3278	Cluster display	1978	2060-3070
3279	Color cluster display	1979	3955-6105

*Purchase price depends on communication protocol (Bisync or SDLC), speed, and function for all components. We do not know whether IBM gives any configuration discounts.

IBM 3270 Component and Subsystem Compatibility

Controller	Mode	Displays	Keyboards	Printers
3271	Remote	3277	463x	3284/6/7/8
3272	Local	3277	463x	3284/6/7/8
3274	Remote/ local	3277/8/9	462x/463x	3284/6/7/8/9
3274-51C	Remote	3277/8/9	4640/4651/2	3284/6/7/8/9
3275	Remote	(included)	463x	3284
3276	Remote	3278/9	462x	3287/9

It is important to know that IBM 3270 systems operate in a "block mode" under the control of a program on the host computer. The individual keyboard characters, including all escape characters that perform such functions as cursor positioning, tabbing, etc., are not immediately seen by the host as being typed. The characters are just put on the screen, and *only* sent when the host program asks for them. The 3270 system responds to four types of command types: READ, WRITE, CONTROL, and SENSE.

We hope this will increase your knowledge of the IBM products and help you understand your customer's needs.

IBM 3270 Family Configurations

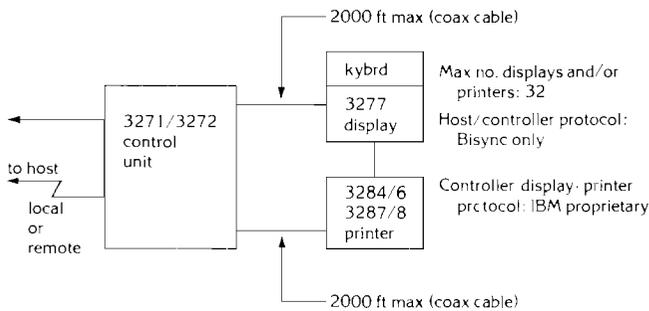


Figure 1a

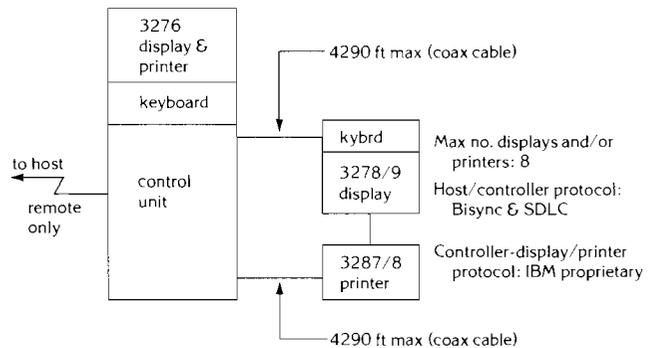


Figure 1c

The 3276 can act as either a standalone controller/printer/display or as a cluster controller to eight other displays and/or printers.

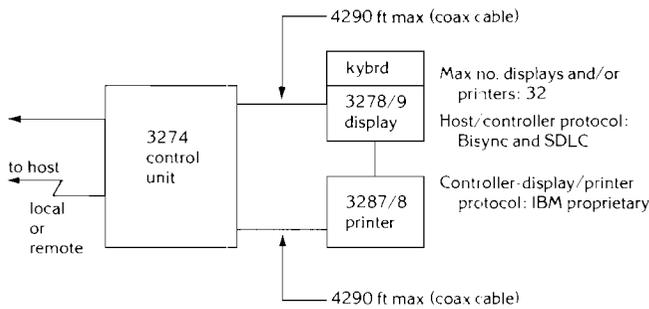


Figure 1b

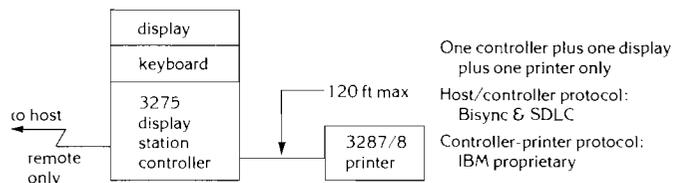


Figure 1d

Use Article Reprints to Convince Customers

Al Sperry/FSD

To complement FSD's advertising program, we continually try to publish technical and applications articles in appropriate trade journals. We have some of these reprinted for you to use as handouts during sales calls, or for your local promotions.

Three reprints are currently available from FSD.

"Strife Testing," from November 1982 *Quality*. This article, based on a conference paper by Bob Gilbert and Bob Bailey, describes advanced production test methods used by DCD to improve overall hardware quality.

"Computing on a Budget," from May 8, 1980 *Machine Design*. Although an "oldie," the cost-effective decisions this discusses regarding selecting computing equipment for various applications are still valid. It features the HP 9845C.

"Desktop Computer Clarifies Graphics with Vivid Color," from May 10, 1980 *Electronic Design*. Describing FSD's 9845C entry into the color graphics world, this could help lay the groundwork for selling the advanced HP Series 200 Model 36C.

If you need copies of any of these reprints, please contact Renée Adams, ext. 2250 at FSD.

Watch for announcements of other articles to be published. We have targeted a number of them for publication in 1983. Because quality is a highly visible topic, up to six of the articles will relate to FSD's quality improvement strategy.

SRM System Symbolizes Success

Al Sperry/FSD

Large systems such as HP Shared Resource Management (SRM) are becoming an increasingly important part of our business. Representing this growth was a recent sale that placed Sandy Perlman, SR in the Rolling Meadows sales office, as second of last December's top ten salespeople.

Sandy's success was the sale of an SRM system to a large Chicago-based electronics manufacturer. It consists of 20 HP 9816s, the SRM itself and an HP 9888A I/O expander with five plug-in multiplexers. The customer has an HP 7912A at the moment which will be used with the SRM, and plans to buy an HP 7914A as soon as it is supported.

Sandy's customer is using each of the Model 16s in a test station where several tests are performed on transducers used to sense carburetor pressure on a large 1984 model automobile. These transducers, built on a crystal substrate, undergo inductive and capacitive changes as pressure varies. Each transducer must be tested several times during the manufacturing process, and test data is stored on the disc. From there, data can be retrieved to locate and analyze abnormal results and their causes.

An HP 1000 was also considered to solve the problem, but it was more costly and complex than the customer needed for the application. The customer chose the SRM system with Model 16 computers because this allowed integrating the data into one mass storage base. This will accomplish significant savings in both labor and time.

Future possibilities include the addition of more Model 16 test stations to the present system. "Also," says Sandy, "this system will act as a reference site when the customer is thinking of installing more SRMs."

Name Approved for FSD BASIC Language Products

Jim Geer/FSD

Introducing HP's PRO-BASIC — a language for engineers and scientists. Yes it's happened, our BASIC language product (as originated in Colorado) finally has a name.

For years this BASIC has surprised everyone who tried it with its enhancements, power and sophistication. Yet we continued to call it by its generic name, BASIC, a name that implies beginner, easy, vanilla. For the uninitiated, there was little to indicate that HP's BASIC might be something special.

Giving our product a distinctive name is a step toward merchandising its uniqueness. To gain the nod, PRO-BASIC cleared some fairly tough hurdles. Of the hundreds of suggestions, PRO-BASIC was the one that passed legal requirements and gained management approval. It is

both meaningful and appropriate because HP's workstation strategy is based on providing powerful products for PROfessionals.

We do not intend to register the name as that is another legal battle in itself. We will use the name PRO-BASIC in all new sales materials, advertising and merchandising efforts. Existing literature stocks will be used up before being revised to reflect the change.

Some simple guidelines have been developed for use of the name PRO-BASIC. First and most importantly, this name applies only to languages based on the BASIC designed and enhanced by FSD for technical applications. Any language not meeting these qualifications should *not* be called PRO-BASIC.

The name is always capitalized. It should read "HP's PRO-BASIC, a language for engineers and scientists" or "PRO-BASIC" when mentioned as a product in and of itself. When identifying it in relation to a particular computer, it should read "PRO-BASIC/product number" (i.e., PRO-BASIC/9000).

To reinforce the identity for PRO-BASIC, a subset of this strategy will be applied to the BASIC manuals.

HP 9000 Business in Japan

Kazuo Nomura/YCD

Our Challenge and Opportunity

HP 9000 is HP's first 32-bit computer, and it gives us a chance to enter the new market.

The new market, called "CAE," was previously led by DEC, and we could easily expect to get questions in the NPT:

- "What is the CAE application?"
- "Where can I find the customer?"
- "Can we compete with DEC?"

We spent many days in preparing answers and defining the strategy to deal with those questions, because we thought we should innovate the sales mind for entering the new market.

Fortunately, the HP 9000 business has started very well in Japan by the well-defined new CAE concept and product positioning.

But when we look at the new market, we need new application knowledge,

and different sales talk and approaches. The new project organization called "SSO" is handling support and sales leadership of the HP 9000.

The HP 9000 is opening the CAE market, but for deeper penetration in the market, we need to have application software and some CAD peripherals for giving solutions to customers' problems.

If we continue to develop hardware and software based on real customer needs of the CAE application, there is no doubt that HP 9000 business will be successful.

Let us exchange information and give feedback to FSD!

Computer Products

YHP Show '83

Kazuo Nomura/YCD

The YHP Show '83 was held February 15-17 at Tokyo and February 21-23 at Osaka. The theme was "To cope with the systematization" under the MPN concept, and HP 9000 was one of the main products in the show. The

HP 9000 product and HP-UX seminar were done in parallel at both locations. The seminar attendance was about 650 customers for both. Total visitors were 12,936 and we will be following up on the leads to get orders in FY'83.



HPG

Datacomm Cable for HP 3092/93A Industrial Terminals Available from CSO

Claudia Devaux/PCG

Four facts are important to remember when ordering and installing the HP 3092A Industrial Display Terminal or the HP 3093A Industrial Graphics Terminal.

- These terminals do not come with a datacomm cable (nor power cord)
- You can't use an HP 262X cable because it has a connector
- The terminal must be opened so the datacomm cable can be attached at the screw connections
- The 92179D shielded, five-wire, 24-gauge cable is available from CSO. The diameter of the datacomm cable must be between seven and nine millimeters, and this cable meets that requirement.

How Do You Describe Terminal Ruggedness?

Claudia Devaux/PCG

One characteristic shared by the HP 3092A Industrial Display Terminal and the HP 3093A Industrial Graphics Terminal is an IP rating of 55. The industrial bar code wands have an IP rating of 64 while the bar code slot reader is rated IP 65. What does this mean?

These ratings are based on a standard provided by the International Electrotechnical Commission (IEC) which is affiliated with the Interna-

tional Organization for Standardization (ISO). The standard classifies degrees of protection provided by the enclosures of electrical equipment.

After the letters "IP" you see a pair of numerals. The first numeral represents the degree of protection against particles, and the second represents the degree of protection against liquids. The accompanying table describes degrees of protection.

IEC Standards for Classifying Enclosures

Class	Particles	Liquids
0	No protection	No protection
1	> 50 mm (e.g. hand)	Protected from dripping water (vertical only)
2	> 12 mm (e.g. finger)	Protected from dripping water (+/- 15 degrees from vertical)
3	> 2.5 mm (e.g. screwdriver)	Protected from splashing water (+/- 60 degrees from vertical)
4	> 1 mm (e.g. steel wire)	Protected from splashing water (any direction)
5	> 75 microns (e.g. metal filings)*	Protected from water jets (.3 bar/12.5 liter/min)
6	Total protection from dust whatever the particle size	Protected from water jets (1 bar/100 liter/min)
7	—	Protected from accidental immersion (150 mm depth)
8	—	Protected from continuous immersion

**Smaller particles cannot penetrate the enclosure in amounts sufficient to disrupt operation.*

The 3092/93A terminals, with IP 55, are protected from dust (particles smaller than 75 microns cannot penetrate the enclosure in amounts sufficient to disrupt operation) and protected from water jets.

The industrial bar code wands are dust-tight (they are protected from dust regardless of the particle size), and they are protected from splashing water. The bar code slot reader is dust-tight and protected from water jets.

For comparison's sake, notice the IP rating of an ordinary office terminal like the 262X is IP 20.

IP ratings are useful in describing the suitability of a terminal for a factory environment. Right now you may find yourself explaining the ratings to customers. The day will come, however, when customers will start off an inquiry about a terminal by asking, "What's its IP rating?"

PCD

Transferring Data Between HP-IL Controllers

Mason Lakowske/CVD

As the number of HP-IL controllers and peripherals grows, we are seeing an increasing interest in transferring data between mainframes. This interest is being driven primarily by the use of the HP-41 and the HP-75C as data collection devices, and the desire to process collected data on larger, faster machines.

Control of communications via HP-IL is currently supported by three mainframes: the HP-41 Handheld Computer, the HP-75C Portable Computer, and HP-85/86/87 Personal Computers (referred to collectively as Series 80). The ease and practicality of transferring information between these controllers varies somewhat, and this article provides a brief synopsis of what is currently possible.

HP-41 to HP-75C

Direct data transfer between these two mainframes is not possible at this time. Both the HP-41 and the HP-75C wake up as active HP-IL controllers, and neither has the capability of giving up this control. Therefore, to transfer data between them, an intermediate device must be used. The only suitable device, at this time, is the HP 82161A Digital Cassette Drive. The HP-41 can read information in LIF (Logical Interchange Format) files written by the HP-75C. The HP-75C can read information stored in HP-41 ASCII files or data files, and can write numeric data to HP-41 data files. Both the HP-41 and the HP-75C are capable of reading the byte values for information stored anywhere on the cassette (with the aid of available firmware and software). As a practical matter, it makes sense to transfer only numeric data or ASCII-coded text between the two machines.

HP-41 to Series 80

The ability of the Series 80 mainframes to relinquish control makes data transfer between the HP-41 and an HP-8X relatively straightforward. These two controllers can be connected directly to each other, via the HP 82938A HP-IL/Series 80 Interface, thus eliminating the need for an intermediate mass storage device. The HP-8X will accept numeric data or ASCII-coded text from the HP-41. Additionally, it will also accept RPN programs in two

forms; text strings representing the program listings as they would appear on a printer, or the actual byte values for each program instruction. Either of these two forms can be sent by the HP-41 to the HP-8X and stored in text strings. (The transfer of byte values requires the use of the Series 40 HP 82183A Extended I/O Module.) The HP-41 will accept ASCII text, numeric data or RPN programs (the byte values for each instruction) sent from the HP-8X.

HP-75C to Series 80

An obvious advantage of this link is the BASIC language common to both machines. In anticipation of the most commonly-asked question, it is possible to transfer programs between the two controllers. However, since the HP-75C is capable of sending only ASCII-coded character strings, a program can be sent only as the character strings associated with a program listing. If these strings are written to a file, the Series 80 GETSAVE binary program can then be used to transform the text into an executable BASIC program. Conversely, a program to be sent to the HP-75C must first be converted into the corresponding lines of text before it is sent. Once this information has reached a destination file on the HP-75C, the TRANSFORM command can be used to change the text file back into a BASIC program. Numeric data and ASCII text can also be sent and received by either machine.

An in-depth discussion of how these data transfers are accomplished is beyond the scope of this article. HP-IL controller application notes will be available later this year to provide more detailed information on each of these HP-IL applications.

New Series 80 HP PLUS Application Pacs

Dick Siegel/PCD

A number of exciting new software pacs aimed at vertical markets have recently been accepted by the Series 80 HP PLUS software program. We are excited about their capabilities and want you to know of their availability because *software solutions sell hardware*.

These pacs are currently HP PLUS listed, but will be HP PLUS referenced as soon as possible. They look like quality pieces of software and increased sales will help them qualify for *referenced* that much sooner.

Since the next Software Catalog won't be out for a few months, here is a preview of their capabilities.

CADD/86-87

CADD/86-87 is a general purpose computer-aided design and drafting package. It provides rapid access to hundreds of high-level graphic functions by use of special function keys, is screen graphics oriented and supports a range of HP Plotters. Features include: drawing, editing and redrawing, plotting, group moves and replicating, automatic drawing of common geometrical shapes and electronic components as well as many other features. CADD/86-87 provides an accurate, time-efficient and cost-effective solution to a broad spectrum of design and drafting applications.

Software pac for HP-86/87 \$550

Supplier: Tensegrity, Inc.
2424 Addison St.
Chicago, IL 60618
312-935-9714

3D Plotting

The Land Innovation 3D Plotting package allows the user to draw perspective, isometric or plan drawings of objects, designs, buildings and other structures on the CRT screen or external plotter. The X,Y,Z coordinate data may be input from the keyboard or from data files which interface with a number of other HP PLUS packages or with inputs from the HP Graphics Tablet. Features allow rotation, transformation, mirroring and replication of the objects. Windowing and rescaling as well as use of alternate viewpoints make the pac highly flexible and useful.

Software pac for HP-86/87 \$400

Supplier: Land Innovation
P.O. Box 50662
Dallas, TX 75250-0662
214-392-1136

Interior Design Package

The Land Innovation Interior Design Package is a valuable tool for the production of floor plans and layout of furniture in architectural designs. The pac serves as a tool to increase your efficiency, save time, insure accuracy and provide professional presentation-type graphical layouts while allowing full individual creativity and imagination. Graphics Tablet inputs, files of standard furniture items and unique graphics entry capabilities make the pac very versatile.

Software pac for HP-86/87 \$985

Supplier: Land Innovation
(see address above)

Vibrational Analysis

Vibrational Analysis pac programs allow analysis of the time and frequency response of a one or two mass coupled system in rectilinear motion. After inputting a description of the system, the force applied to either mass and the displacement of the base, the user can calculate a variety of results. These include both frequency and time domain charac-

teristics as well as the position of either mass, damping, overshoot and settling time, etc. Extensive graphics capabilities provide easy to read plots, including the ability to superimpose response curves of different systems.

Software pac for HP-85 \$175

Supplier: Priority Software
20993 Foothill Blvd.
Suite 101
Hayward, CA 94541
415-889-1650

Op Amp Circuit Design

The Op Amp Circuit Design pac consists of a series of programs developed to aid the designer with the most often encountered op amp circuit design tasks. Extensive use of circuit models permits simplified data entry and rapid computation. Four principal sections of the pac determine the dynamic response (time and frequency), noise, steady-state operational characteristics and two-pole response of the circuits.

Software pac for HP-85 \$325

Supplier: Priority Software
(see address above)

Linear System Response

The Linear System Response pac analyzes the time and frequency response of a transfer function which can be expressed as the ratio of two polynomials. Program results are displayed in tabular or graphic format. Response plots are fully annotated and allow the user to superimpose any number of response curves for various systems.

Software pac for HP-85 \$145

Supplier: Priority Software
(see address above)

Personal Computers

Active Filter Design

Active Filter Design presents a comprehensive design and simulation program for active filters. It has been optimized for easy use and its numerous features are valuable to both the beginner and experienced designer. Time and frequency response are calculated and the pac includes an "automatic design" option that computes the required component values to match the input specifications. Filter types include: high, low and band pass, notch and elliptical. Filter response includes: Bessel, Butterworth, Paynter and four variations of Chebyshev.

Software pac for HP-85 \$175

Supplier: Priority Software
(see address above)

- Flexibility in terminal positioning and location
- Adaptability to different users, tasks and environmental conditions
- Relief from annoying visual disturbances, such as reflections and glare spots.

The Tilt and Swivel Pedestal is available as:

- Option 401 — priced at \$50, US list price
- Upgrade Kit — Product Number 40206A priced at \$130 US list price. (Customer Engineer installation required but not included in price.)

Option 401 and Product 40206A availabilities are:

- Option 401 — same as on the terminal
- 40206A (Upgrade Kit) — two weeks orderable from Grenoble Division only, Division 6300.

In addition, a user-installable Palm Rest is now available on 262X Extended Keyboards (keyboards including a numeric pad), orderable from CSO as an accessory, product number 92171R.

The Palm Rest is priced at \$35. Volume discounts are available.

For more detailed information, please contact PCG Sales Center in Sunnysvale or Grenoble.

POD

Ergonomic Features for HP Display Terminals

Jean Charles Dubuis/HPG and Ed Washington/POD

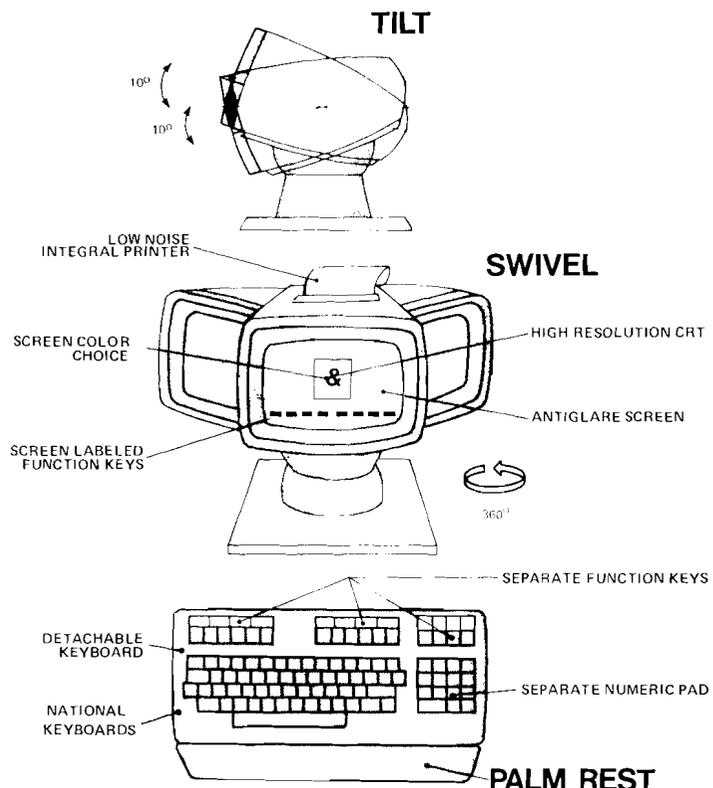
As of May 1, 1983 (CPL introduction) the Tilt and Swivel Pedestal will be available on the HP 262X Series Terminals (except the HP 2627A), and the HP 125A/B Personal Office Computer.

The Tilt and Swivel Pedestal allows the user to:

- Tilt the screen up and down by 10 degrees (overall 20 degrees)
- Rotate the screen 360 degrees around its vertical axis.

By providing an adaptable workstation, Hewlett-Packard contributes to user comfort by allowing:

ERGONOMICS by 
*Jean-Charles Dubuis/HPG
Ed Washington/POD*



RTD

Video Interface for HP 262X Terminals and HP 125

Michel Jourdan/HPG

For customers who want to connect a monitor to their HP 262X or HP 125, a Video Interface is available as an option or as an upgrade kit.

It is built-in, as Option V04, in the following products: 2622A, 2623A, 2624A, 2626A/W, and HP 125B.

For the same products, the following upgrade kits are available:

- 93992A Option V04 for 2622A
- 93993A Option V04 for 2623A
- 93994B Option V04 for 2624B
- 93996A Option V04 for 2626A/W
- 93995A Option V04 for HP 125.

The price of Option V04 and the upgrade kits is the same: \$200, but CEO installation time of the kit has to be added. Availability is standard +8 weeks for the kit.

Products to be ordered in Sunnyvale (4200), HEART Override required.

Conrac and Melford monitors can be connected.

The address for Melford is:
Melford Electronics, Ltd.
Leigh Court, Leigh Street
High Wycombe, Bucks
HP112QU, UK
Tel: 0494 25696
Melford monitor reference:
DU-1-24

George Washington's Image in New HP 2627A Ad

Dan Jorgenson/RTD

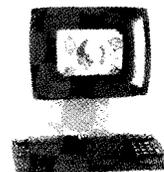
You can see George Washington's image in the HP 2627A ad campaign now underway in the US. Watch for it in *Datamation* (April, May, June) and *Computer Design* (April, May, June). A black and white version of the ad appears with this article. To find out the color of George's hair and other features, see a copy of the actual ad.

Also, for a colorful, action-packed description of the 2627A, get a copy of the 2627A videotape. This 7-minute videotape is available from Hewlett-Packard TV network, (HEART Override, product number 90704R from CPC).

How to get a lot more color for your money.



Image courtesy of HP



hp HEWLETT
PACKARD



BDG

HP Corporate Library Automates with the Virginia Tech Library System

Chris Eckhardt/BDG

It all began about one year ago when Mark Baer, Corporate Library Manager, formed a task force for automating HP's Corporate Library.

One of the first things they did was compile a "hate-to-do" list of manual tasks which they wanted to automate. A list was then sent out to all HP SRs, soliciting information on library packages. After receiving several responses and reviewing the capabilities of each system they made the decision to acquire the Virginia Tech Library System.

Some of the key reasons for choosing VTLS include:

1. User friendliness — Accommodates both non-sophisticated and sophisticated users.
2. Networking capability — Provides the capability for networking between all HP libraries.
3. Standard formats — Ability to handle full MARC format records. This allows compatibility with cataloging utilities and services, such as ARLIN and OCLC.
4. On-line catalog and on-line circulation capabilities.
5. Ability to input record once. Records do not have to be input each time books are checked in or out.

6. Word Search capability.
7. Global Correction — Ability to change all subject headings automatically when Library of Congress changes a subject name.
8. Authority Control — If two headings are similar, the system alerts you and necessary corrections can be made.
9. Ability to modify records in order to maintain local control.
10. Human engineering system design is based on the concept of screen networking. This allows easy access to all functions of the system.
11. Ability for multiple access points (by author, title, subject, etc.).

In addition to using VTLS, the Corporate Library takes advantage of word processing and electronic mail on the HP 3000. They are also using VisiCalc[®] and a program called Checkmate on the HP 125. Checkmate allows check-in of periodicals and generates a list of the table of contents for specified periodicals.

To expand library automation throughout HP, the Corporate Library has begun an investigation to devise a plan for automating other HP libraries (currently there are about 28).

Check out the companies in your territory — their library may just be a prime candidate for an HP 3000 running the VTLS system!

VisiCalc is a registered trademark of VisiCorp.

HP 3000 Monitors Money Transfers at Chemical Bank

Helen Harbin/BDG

An HP 3000 system is at work in Chemical Bank, New York, as the front end of a larger money transfer processing system. The wholesale services area of the bank processes about \$40 billion per day in international money transfers transacted on behalf of corporate clients and correspondent banks. In addition to recording and correcting rejected transactions, the HP 3000 system handles the heavy load of interactive inquiries about the status of individual transfers. It processes approximately 1000 inquiries per day with an average response time of two seconds.

As a byproduct of this processing, the HP 3000 provides activity measures used to monitor accuracy of transactions and quality of service to clients. Graphics software products DSG/3000 and HPEASYCHART are used in the daily operations to present this information to managers. Use of this system has significantly increased their control of work flow.

The system configuration is a Series 44 (recently upgraded from a Series 30) with 2Mb of main memory, 600Mb of disc storage and 24 terminals. Over 120,000 transaction histories are stored on-line to keep them available for inquiries.

Chemical Bank, with \$48 billion in assets, is the sixth largest bank holding company in the US. Our thanks to Mike Pellegrino, Commercial Rep in Manhattan, for details on this application. It's an excellent example of how an HP 3000 can be used in backoffice operations to keep a bank in the forefront of the industry!

BGD

MPN Showcase at BGD

Angela Ramsay/BGD

HP products are helping us improve productivity in so many ways at BGD that we have decided to make sure that people know about it. To this end we have set ourselves up as a showcase installation and now represent a live example of what MPN is all about. The MPN showcase approach is threefold.

1. Workstations throughout Boeblingen have been designated as models to be used during visits. The people who use the applications daily have been trained to give a short pitch. The model workstations are marked by a sign hanging above them and each person has a few large-scale, hard-copy slides to help them explain their application. Most pitches can be given in at least English and German.
2. A dedicated, manned MPN demo room, with facilities for demonstrating all the products used.
3. A "Productivity In Action" brochure. This gives a summary of the HP productivity networks strategy and gives an overview, with some pictures, of the applications we have running. It is designed to generate interest in the project and/or to serve as a memory-jogger after the visit.

So far, 14 model workstations from the MPN model have been set up. They are application-oriented, rather than product-oriented, and include applications in the controller's department, production and even the cafeteria.

Taken as a whole, the MPN showcase provides a very impressive example of how computers boost productivity in all areas of a business. European SRs will find it an invaluable sales aid.

Questions about the MPN showcase can be answered by Jean-Pierre Guegen in the European Sales Centre (ext. 2958/COMSYS B200). The MPN demo room can be booked through Ilse Streit (ext. 2173/COMSYS B200).

HPFA Product Evaluation Guide Sets New Literature Standards

Karen Blue/BGD

The new HP Financial Accounting Product Evaluation Guide (PEG) was distributed to the field last month. This guide represents a new concept in sales literature and is intended for use by the customer together with an HP representative. It enables them to accurately determine that the product really is a fit.

All HP Financial Accounting features, screens and reports are included in the guide and are organized in a logical fashion which reflects the way that accounting software is typically evaluated. Since it includes enough detail to allow an accounting supervisor and a financial analyst to evaluate whether the product meets their requirements, the PEG should reduce the pre-sales involvement of the application specialists.

The PEG is designed for use in the final stages of the sales cycle, i.e. prospects will have already seen the flyer and G.I.M. and have been qualified by the SR. It will therefore only be needed in small quantities and will fill a gap in the closing cycle which could previously only be filled using expensive manual sets. Sales offices in Canada and the US have already received the PEG; additional copies may be ordered using a HEART (Cochise) 12 order for P/N 32304-90301, Supplying Division 47 or B2.

The PEG was developed using HPWORD, the HP 2680 laser printer and a special BGD-developed utility which enables the latest versions of screens and reports to be automatically formatted and included in the text. This enabled us to have the PEGs ready at introduction time, something that would never have been possible using conventional methods. It also means that the PEG can easily be localized by the local Application Centers and that SRs throughout HP can benefit from this unique new sales aid.

HPFA Support Team Ready and Waiting

Angela Ramsay/BGD

The February 1 issue of *Computer News* announced HP Financial Accounting, BGD's range of eight software packages which together add up to a total financial accounting solution. The products were on the January 1 CPL. When approaching your prospects you can rest assured that a whole host of expert back-up personnel are ready to consolidate your efforts.

Two training courses have been held at BGD and Application Engineers from all over the world have been thoroughly trained in all aspects of the products. The AEs, like SEs, will be your first source of technical back-up. However, they are in turn backed up by groups responsible for training and support in FSO, for North America, and the local Application

Centers for Germany, UK, Australia, Italy, the Netherlands, Finland, Sweden and France. As the accompanying diagram shows, the team is headed up by BGD. As well as having a group which is dedicated to worldwide training and support, BGD is also the home of the R&D engineers who originally developed the products.

Whether it be training material, sales aids, documentation or support personnel, we have ensured that we are supporting the sales effort in every way possible. This means that from day one you can approach your prospects confident in the knowledge that the products which comprise HP Financial Accounting are truly up and running.

FSO

Country Application Centers Take Up the Challenge of HP Financial Accounting

John Orr/UK Sales HQ

Activity following the recent introduction of HP Financial Accounting is being stepped up in the UK Application Center based at Pinewood Facility in England.

The UK Application Center charter is to take the basic Financial Accounting product from BGD, localize it for UK market release, and provide support to the field.

Localization activity includes the customizing of the product to reflect UK terminology and language, the value added tax requirements and certain specific local needs such as supplier invoice registration and the handling of automated bank accounting through the bankers automated clearing service offered by several major UK banks.

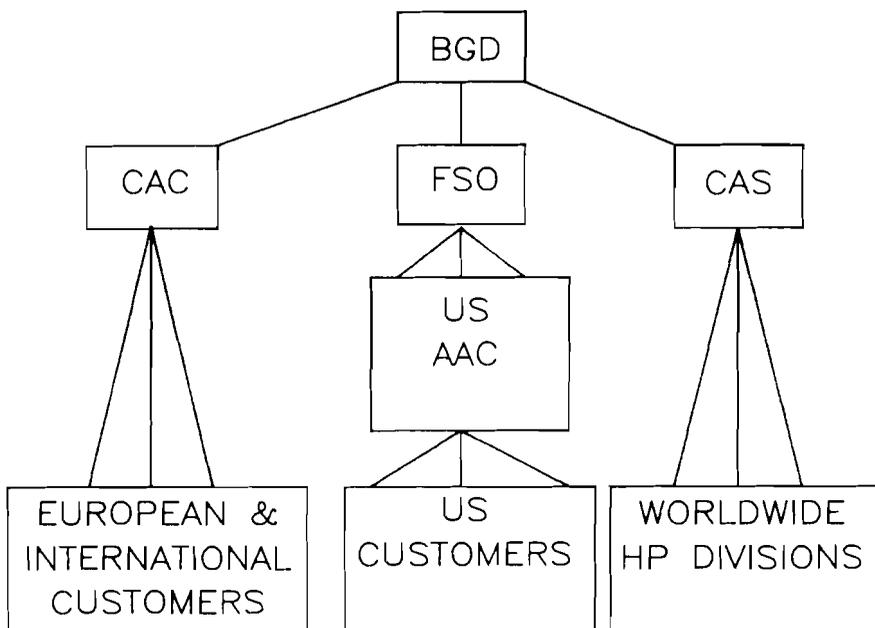
Also included is the need to reflect these changes in the various user manuals and sales documents.

Introduction of the product to HP in the UK and to the marketplace has been underway since long before the product itself was officially announced.

Two training seminars for SRs have already been held and the product has been very well received by the sales force.

For prospective customers, a series of one-day seminars is underway. Between February and June, 16 seminars are scheduled. For those already held, the average attendance has been in excess of 35 per seminar.

SUPPORT CONCEPT EXTERNAL



In addition to these, individual prospects have attended detailed product presentations and demonstrations at Pinewood and other centers in the UK. Since the start of FY'83, well over 50 such sessions have been held.

The result of all this is simply — orders! In the first month of availability five major orders were received, with several more pending final completion. Shipments are scheduled to commence in April.

The first HP Financial Accounting customer training course held anywhere in the world was held at Pinewood for two full weeks in February and can only be described as a resounding success, with attendees from the UK and the US.

In summary, HP Financial Accounting is alive and kicking on a local basis. More importantly, the local Application Center in the UK has now handled its first major product introduction and is now really on the HP map.

IRO

Distribution Solutions for the Manufacturer

Ross Duncan/IRO

Over the last few weeks we have spent some time talking about how to sell SFD and OM to distributors. It is time now to take a look at how these products fit in the manufacturer's environment which is the major focus of the MPN.

All manufacturers are distributors. Consequently, in many cases SFD or OM is an excellent fit! Manufacturers fall into two basic classes — those who have a large number of orders for a large number of customers, and those who have a few orders for a few large customers. Examples of the latter class are manufacturers who sell to manufacturers' rep organizations and those whose products lend themselves to a small number of orders (e.g. Aerospace). Those manufacturers typically would not have a need for our order management capabilities. However, manufacturers who have a large number of orders might be *very* interested in SFD/OM because of our backorder management, future order and blanket order capabilities.

Manufacturers typically operate as two separate companies — the manufacturing and distribution portions of the business. (A manufacturing company may have a sole customer — their distribution division.) Manufacturers who fall in this category are a market for Hewlett-Packard since our distribution and manufacturing systems can operate independently from one another. In this environment, SFD or OM would provide the customer with a superior order management and accounts receivable system. The customer would have a choice between the full purchase order system within SFD or the purchase order tracking system within Materials Management/3000.

Currently, plans exist for an interface between the sales order module of SFD/OM and the Master Schedule module of MM/3000. For the manufacturer who is looking for an "integrated" solution, this interface provides the first step. Hewlett-Packard has made the long-term commitment to have an integrated solution utilizing SFD/OM and MM/3000. If you find a prospect in the short term who is interested in such a solution, please contact your Application Software Center to further qualify the fit.

In summary, manufacturers can effectively utilize Hewlett-Packard's distribution software *today!* The HP customer list offers a wide variety of manufacturers using distribution and manufacturing products that might be used as references as well as potential customers for SFD/3000, OM/3000 or MM/3000.



BSE

Boise Bullet

Artie Stone/BSE

HP 2685 Direct Mail Piece Available

DeLona Lang Bell/BSE

Are you trying to sell the HP 2680 Laser Printer in accounts which don't have HP 3000s? If so, the HP 2685 Laser Print Station is the selling solution you need. Boise Division has produced a new direct mail piece which can help you introduce the 2685 to that kind of customer.

The piece features a flyer which presents the 2685 as the affordable remote printing solution. It discusses the high reliability of the 2680, the low cost of ownership, and the laser

printer's special printing capabilities. The flyer comes with a matching envelope and a postage paid business reply card which the customer can return if interested in more information or a demonstration.

This piece is especially designed for direct mail, so if you have names of prospects who would be interested in the 2685, why not order some of these from Corporate Literature today? The P/N is 5953-7127.

Just a few more weeks remain before the HP 2680A upgrade program expires. Remind your customers that they can trade in their used impact printers for credit toward a new laser printer. Help your customers save up to \$36,000!

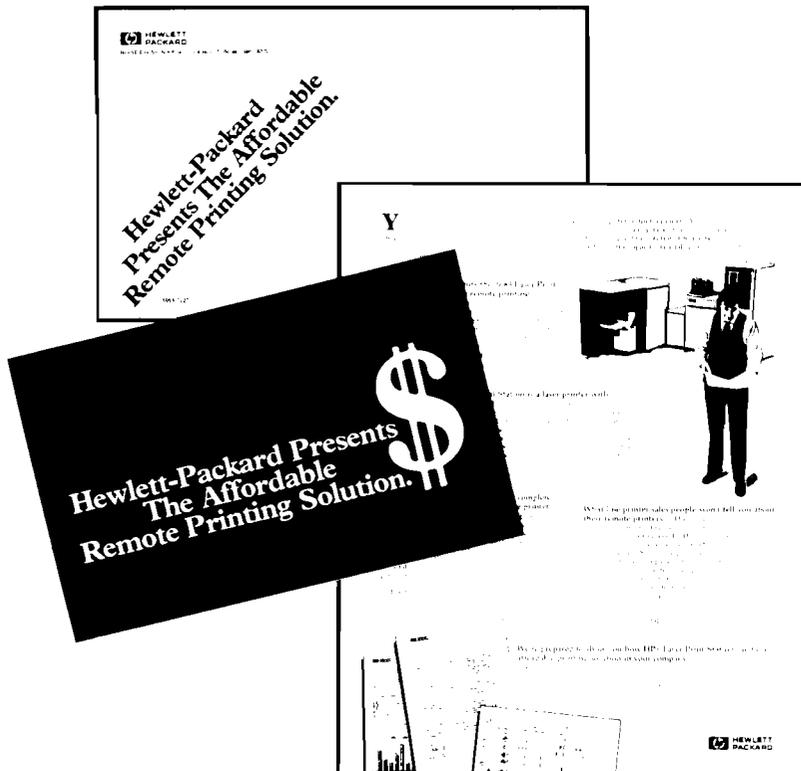
New 264Mb Disc Space Option for HP 2685

Alan Armstrong/BSE

Recently we announced Options 052 and 053 (50 Hz version of the HP 2685 print station) which double the standard disc capacity while saving the customer \$1,000 by including a 7914TD in place of the standard 7912 and 7971A.

Now customers can order the 2685 with two 7914s (total of 264Mb) by ordering Option 054 or 055 (50 Hz version). The US list price of Option 054 (or 055) is only \$13,290, which is a bargain for an additional 200Mb of disc space over the standard 2685. Options 054 and 055 upgrade the 2685 from the standard 7912/7971A combination to two 7914s and a 7970E in an upright cabinet.

A summary of the standard disc and 7914 disc options for the 2685 is shown in the chart at the top of the next page.



Standard Disc and 7914 Disc Options for the 2685

Option	Disc	Disc Space	Tape	US List	Power
STD	7912	65Mb	7971A	\$ 164,000	60 Hz, 120V
052	7914R	132Mb	7970E	-1,000	60 Hz, 120V
053	7914R	132Mb	7970E	-1,000	50 Hz, 220V
054	(2) 7914R	264Mb	7970E	13,290	60 Hz, 120V
055	(2) 7914R	264Mb	7970E	13,290	50 Hz, 220V

CCD

CCD Proudly Announces HP 27201A Speech Output Module for HP 1000s and HP 3000s

Duncan Campbell/CCD

The first speech output peripheral designed by a major computer company is now available from Hewlett-Packard. The HP 27201A Speech Output Module (SOM) combines high quality speech, low price, and flexible configurability, making speech synthesis a viable technology for a wide variety of computer-based applications.

Where Can Computer Speech Be Used?

The Speech Output Module is most useful for applications where *prompting*, *warning*, or *error messages* are required, or where a person's hands, eyes, or attention are focused on something other than the computer. Almost every computer system uses prompting, warning, or error messages. In the office environment, a business person can use the HP 27201A to announce the receipt of an electronic mail message. Another application would be an Electronic Data Processing center where the

Speech Output Module prompts for the loading of a magnetic tape, or notifies the operator that a printer is out of paper. In these instances, the advantage of speech output is unlike a bell or buzzer; information is provided about what action to take.

In Computer Aided Design, a CRT filled with schematic information does not have to be overwritten with error messages that clutter the screen! For Computer Aided Test, a technician will not have to look at the CRT for results of a probe test. He can keep total concentration on the circuit board being tested and listen to the Speech Output Module for pass or fail information. Other prime applications include facilities monitoring, process control, graphics, inventory management, and computer aided manufacturing.

Product Overview

The Speech Output Module is a small (6¼" x 4¾" x 1¼"), complete pe-

ripheral device that can connect directly to a host computer or interconnect between the host and another peripheral (such as a terminal, printer, or plotter). It communicates via a three-wire RS-232-C hardwired line at speeds up to 19,200 bits per second. The vocabulary can be downloaded from a host computer file to the Speech Output Module or it can be resident on the HP 27201A in a customer-supplied EPROM. EPROM-based vocabularies can include up to 200 words, while the downloaded vocabulary is limited only by host memory.

How It Works

The vocabulary is produced using a technique called Linear Predictive Coding (LPC). LPC is a speech compression technique that uses actual human voices or sounds as a basis for synthesis. The natural redundancies of this speech are removed and particular parameters are extracted to compress the bit rate of speech. In essence, the entire synthesis process resembles a digital tape recorder with a very low bit rate. The major difference here, however, is that tape recorders only play back and cannot synthesize. The result of this process is high quality speech output, with a reduction in the number of stored bits per spoken word of 97% to 98.5% over purely digitized speech.

The speech chip used in the Speech Output Module is the TMS 5220. The TMS 5220 is the latest generation chip from Texas Instruments. The 5220 takes LPC input from RAM or EPROM data located on the Speech Output Module and creates an analog signal as output. Chip output is filtered, amplified and sent to a standard audio jack mounted on the front panel. To get your customer "up and speaking," we have enclosed a pair of headphones with every product that will plug directly into the front panel.



Software to Make It Easy

The Speech Output Module is easy to get "up and speaking" through a software package available for the HP 1000 and HP 3000 computer systems. The software products are the 27203A for the 1000, and the 27205A for the 3000. Software for the HP 9000 and the HP series 200 will follow! The software package consists of three parts:

- A start-up library of 1500 English words and sounds
- The Voice Exerciser program that creates an interactive environment
- The Voice Manager program which is essentially a data base manager.

Sales Aids

An introduction package has already been sent to all commercial and technical SRs. Included is a field training manual, data sheets, word list, and a 4-color brochure. The brochure will bring awareness of the product to your customer and contains a recorded sample of the Speech Output Module's speech quality.

Roseville has also developed a demo package that is available. The demo

does its own HP top-down MPN pitch! It shows how the Speech Output Module can be used in each of the MPN quadrants.

Price and Availability

US List Prices are as follows:

HP 27201A Speech Output Module	\$781
Option 001 Added RAM	150
Option 002 Added Power Supply for HP 262X terminals not supplying power	175
Option 003 Added Power Supply and Cable for HP 264X terminals, and general RS-232 hardware devices	175
HP 27203A SOM Speech Library/1000	100
HP 27205A SOM Speech Library/3000	100

All products are on the April 1 CPL.

Roseville is quoting a four week availability! Come and hear the new Speech Output Module. Once you hear it, you will agree that the quality of the product speaks for itself.

DMD

Disc Performance "PEPped" Up

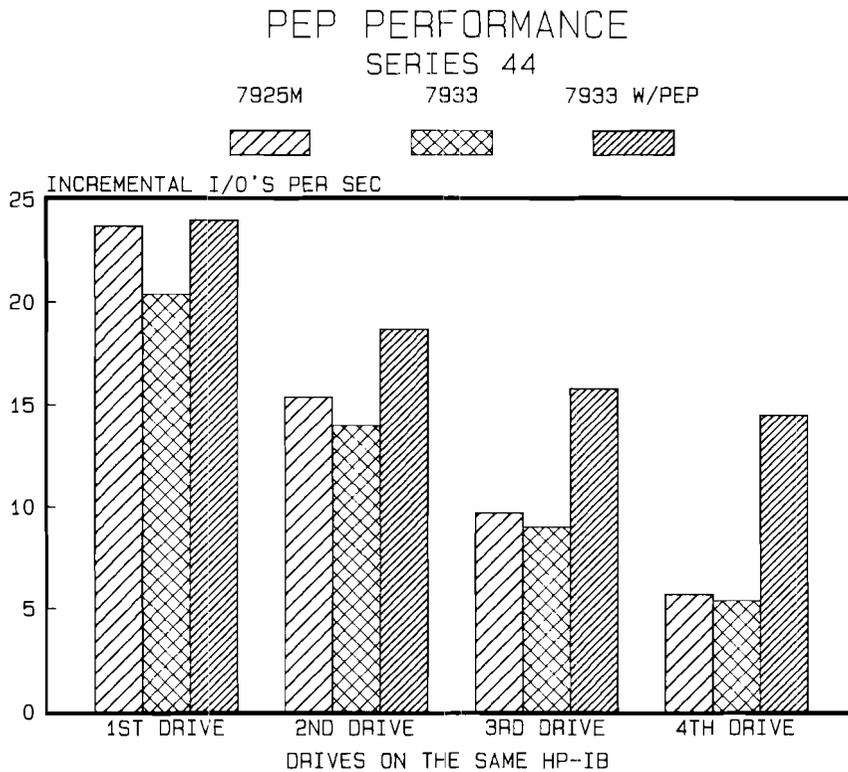
Ed Paulinik/DMD

Are you tired of hearing the same old complaints about CS-80 disc performance? Well, DMD has just the solution for those of your customers that desire additional performance from their HP 7933 disc drives. The DMD Performance Enhancements Project (PEP) has redesigned the 7933 firmware to achieve faster execution of the CS-80 code. Note that there are no software modifications involved; PEP is solely a firmware-controlled improvement! The net benefit to your customers is more I/Os per second on the system, i.e. their applications run faster. The accompanying graph depicts a standard performance measurement with the new PEP firmware.

The graph on the next page shows representative performance improvements that can be obtained by adding pepped-up disc drives to a system. The actual improvement your customer will see is, of course, application-dependent.

DMD will be shipping this new firmware in all new 7933s and HP 7935s beginning in May. Furthermore, you will soon be receiving information on PEP upgrades for existing 7933s. We are also planning to PEP up the HP 7911/12/14 product lines in June.

IND



Touring Datacomm Primer Now Available

Michael Szymanski/IND

It's here! Now available through CSO, *Touring Datacomm*, the data communications primer. This well written, well illustrated primer is an introductory text which guides you and your customer through the basic concepts of data communications. *Touring Datacomm* begins with a discussion of simple communication concepts and gradually introduces increasingly more complex topics. It has been written for readers with little or no previous data communications knowledge. Technical terms and concepts are introduced in a nontechnical manner and are complemented with illustrations and examples.

Touring Datacomm is an excellent pre-sales tool, as well as an educational tool for those who are not knowledgeable in the field of data communications. If you plan to use *Touring Datacomm* internally as a teaching aid or for personal use, please order through internal channels. Internal orders, of course, will be TAC which is expected to be less than \$5. If you are teaching a customer class, please order your copies through CSO. List price is expected to be less than \$15. Copies of *Touring Datacomm* can be ordered by P/N 5957-4622. To order your copy, phone 800-538-8787. If you are calling from California, Alaska or Hawaii, dial 408-738-4133.

GLD

Last Chance for HP 7976A Upgrade Credit

Sandy Hansen/GLD

Now is the time for your customer to upgrade to an HP 7976A and receive a special \$5000 credit from Boise. This offer is good only until April 30, 1983. When you add this credit to the existing trade-in plan from SRO, the savings increase to as much as \$14,000 depending on the number and type of existing drives being traded in.

If your customer's system back-up time is greater than three to five hours, if the online storage of the existing system is greater than 700Mb, if he is expanding or upgrad-

ing his system, he needs the higher performance and speed of the 7976A.

If your customer upgrades to a 7976A before April 30, 1983, you will win a special solid brass belt buckle (shown here) as part of the Action '83 contest and may be eligible for even more prizes. For further information or sales assistance, call the Greeley Action Team on the HELP line, 303-226-3800, ext. HELP; or TELNET 1-226-HELP.

New Edition of Datacomm Handbook Available

Jill Wilk/IND

A new edition of the *HP 3000 Computer Systems Communications Handbook*, P/N 30000-90105, is now available (1/83). Copies have been distributed to all subscription services which include FOS, to the PICS Centers, and to the CE subscription service (5957-3809) — system/network interfaces. Along with updated information on all the HP 3000 datacomm products and sub-systems, it includes a new section, a "Troubleshooting Guide."

To expedite delivery, this new edition is being shipped without a binder. Most installations will be able to use the binder that was shipped with the original copy of the handbook. If needed, a new binder (P/N 9282-0683) can be ordered through CSO.

DSN/ATP Direct Connect Type 422

Donna Merlin/IND

The DSN/ATP is designed to interface to asynchronous workstations. It is an intelligent controller that has a dedicated micro-processor for each workstation port. This means that the micro-processor performs most protocol functions and character processing for data transfers, offloading the HP 3000 SPU.

The DSN/ATP offers many features which provide the usual HP support plus the basic customer communication needs. However, there is one

feature that is unique to the entire generation of HP terminal controllers — direct connect type 422.

The ATP direct connect type RS-422 is an electrical interface that is just becoming recognized in the area of peripheral communication. RS-422 offers a very good noise immunity from RFI (Radio Frequency Interference), EMI (Electromagnetic Interference) including lightning, and electrostatic discharge with its shielded twisted pair cable. Hewlett-Packard complies fully with the EIA RS-422 standard.

Since the standard did not define the connectors, HP designed an innovative five-pin connector that remains within the RS-422 specifications while saving space on the HP 3000 backplane.

Besides noise immunity, the RS-422 implementation allows peripheral connection up to 4000 feet or 1220 meters. When your customer wishes to connect a terminal beyond the RS-232-C 50-foot limitation, he may do so with the RS-422 standard. In conjunction with this added length, the DSN/ATP supports line speeds up to 19,200 bps.

DSN/ATP direct connect type 422 provides all the flexibility of its direct connect type 232 counterpart in addition to connection length and noise immunity.

What Is IEEE 802?

Bev Horn/IND

Have you been wondering what the excitement regarding IEEE 802 is all about? So that you may share in the excitement, we will be discussing the various aspects of IEEE 802 and local networking, and how they affect your customers' Local Area Networking plans in this, and in future issues of *Computer News*.

First of all, what is IEEE 802? IEEE Project 802 is an industry-wide effort, spearheaded by the IEEE Society, to agree upon a standard for the development of multivendor-compatible Local Area Networks (LANs). One part of this standard defines a baseband bus network utilizing a Carrier Sense, Multiple Access with Collision Detection (CSMA/CD) to gain access.

Why is everyone excited? 802 is an organized and standardized design approach upon which all vendors can focus their LAN efforts. Instead of having vendors develop company-specific LANS, an 802 LAN will allow any vendor's computer system with an IEEE 802 interface to connect to it.

In addition to HP's commitment, Bridge Communications, Data General, DEC, Fujitsu, Intel, Interlan, National Semiconductor, Siemens, Tektronix, 3Com, Ungermann-Bass, and Xerox have all publicly endorsed the 802 standard.

Another advantage is the modular design of 802, which is based on ISO's Open Systems Interconnection (OSI) Model. The 802 standard defines Levels 1-2 (physical layer and data link layer) of the OSI model. Its modular design makes an 802 LAN adaptable to future technological changes with minimum disruption to the user's applications. Hence, when a customer buys an 802 LAN, he buys a product with lasting value.

HP's Local Area Networking strategy is to adopt industry-wide standards. IND is currently developing a LAN based on the IEEE 802 standard. It is a baseband, CSMA/CD, 10 Mbps, coaxial LAN (details in an upcoming issue). This product, available in the first half of 1984, will be the basis for the interconnection of HP's various processor families, including the HP 200 Series, HP 1000, HP 3000, HP 9000, and future HP computer systems. In addition, the network will support the connection of any 802-compatible computer systems, regardless of vendor.

Stay tuned for more exciting IEEE 802 LAN information!

OSO

Configuration Guidelines for HPWORD

Tom Stokes/OSP

The present HP 3000 Performance Guide provides reasonable HPWORD performance data for "typical" HP 3000 machine environments. For different job environments, you may find the following guidelines, which are approximations based upon experience, to be useful. These guidelines apply to HPWORD-II, A.01.03.

1. ATPs are always better HPWORD terminal controllers than ADCCs. If possible, always specify ATPs instead of ADCCs.
2. When adding HPWORD to HP 3000 Series II/III CPUs, remember that the maximum point-to-point terminal speed is 2400 baud. Most users consider 2400 baud to be unacceptably slow for a terminal running HPWORD. Therefore, before selling such a configuration, make sure that your prospect's secretary actually uses HPWORD while it is running at 2400 baud.
3. When your prospect who has an HP 3000 tells you that he wants to add some HPWORD terminals, OPT/3000 should be utilized to determine what the present performance of the machine is. Each HPWORD terminal will require three to five disc accesses per second. While CPU utilization is not normally a significant factor for HPWORD performance, if the CPU utilization of the present applications on the HP 3000 is very high, then reasonable HPWORD performance is going to be difficult to obtain.
4. HPWORD terminals should always be configured at 4800 baud maximum when attached to ADCCs; when attached to ATPs, HPWORD terminals may be configured at 9600 baud, but this will place a greater load upon the CPU than if the terminals were configured at 4800 baud. A user cannot normally perceive the difference between an HPWORD terminal running at 4800 and 9600 baud.
5. For HP 3000 Series 30 and Series 33 CPUs, a maximum of seven to nine HPWORD terminals can be supported, running at 4800 baud maximum. This assumes that the HP 3000 is configured with 1 Mb of memory, and two master discs (see (6) and (7) below).

6. The algorithm for computing the amount of memory as a function of the number of HPWORD terminals, which is given in the HP 3000 Performance Guide, is incorrect. The correct algorithm is as follows:

Memory (words) = 120k
 + 20k * no of 2601/2602 terminals
 + 20k * no of HPWORD terminals
 + 20k * no of HPWORD terminals configured to access an HP 3000 system printer

Thus, eight HPWORD terminals, two of which have access to a system line printer, with four 2601/2602 printers would have a memory requirement of $120k + (20k * 4) + (20k * 8) + (20k * 2) = 400k$ words = 800k bytes. One megabyte, then, would allow 200k bytes for MPE.

This algorithm assumes that no memory manager activity will occur; i.e., everything is always memory resident.

7. Be aware of the disc I/O bandwidth of each HP 3000 model. In general, two master disc drives will provide superior HPWORD performance when more than four or five HPWORD terminals are running simultaneously.
8. Always ensure that your customer tests any HPWORD configuration which you are not certain will work before he buys that configuration.

Please feel free to contact either Tom Stokes, Judy Gibbons, Carlos Gomes or Roy Dalpra at Office Systems Pinewood, or Mariann Ososkie or Lauren Wilkins at Office Systems Cupertino if you have any questions about a specific HPWORD configuration.

HPWORD release A.01.03 performance characterization tests are now being specified at OSC and OSP, and we will publish the results as soon as they are available.



Backtalk/Price Chang

RETURNED TO SENDER
 RETURNED TO SENDER
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Talk About "Remote" Remote Support. . .

Barry Kroskie/DCEM — Bellevue Sales Office

Recently, SR Account CE Cary Hockman was manning the Hardware PICS Center in the Bellevue, Washington office when he received a distress call from one of our HP 3000 customers in Homer, Alaska (1,400 miles away).

The customer had inadvertently halted his system in the middle of a cold load. Cold load error 202 — Mount correct volumes or reload. Cary dialed into the system and used SADUTIL to change the cold load ID

Bits so they all matched. Result: the system was up without a time-consuming reload, and the customer was satisfied — another testimony to the benefits of remote support.



Computer Groups Price Changes Effective April 1, 1983

These prices, effective April 1, 1983, will appear on the Corporate Price List on that date, available in your office. Prices are US List unless otherwise noted. Orders at old prices will be honored at the factories for 30 days (or 60 days in the case of government quotes, see exception, III. GSA) after the effective date of an increase. All quotations, either verbal or written, shall be made at the new prices upon the effective date of the new price list. The customer should be notified that his order will be honored at the lower price if it is received within the 30-day grace period. Price decreases are effective immediately and in-house orders shipped 5 working days prior to the announced decrease date will be billed at the new lower price.

Product No.	Description	Current Price	New Price
12587B	INTERFACE	745	1,310
12589A	AUTOMATIC CALLIN	640	920
12699H	256KB MEM MODULE	3,010	2,510
12732A	FLEX DISC SUB.	5,090	5,650
12733A	FLX DISC S/S SLV	3,230	3,550
12920B	MULTIPLEXER	2,765	4,035
12920B	OPT. 001 ADDS 202 SUPPORT	850	1,285
12922A	FIELD UPGRADE	1,065	1,310
12926A	TAPE PUNCH SUB	5,310	6,400
12967A	SYNC COMM I/O	850	1,380
12968A	ASYN COMM I/O	800	1,060
12968A	OPT. 001 ADD 2640 CABLE	-0-	30
12968A	OPT. 002 DATA SET CABLE	-0-	70
12968A	OPT. 003 ADD 2749 CABLE	-0-	100
2113B	12" E COMPUTER	9,175	9,775
2178C	HP 1000 MODEL 60	25,750	23,750

Product No.	Description	Current Price	New Price
2895B	PAPER TAPE PUNCH	5,050	5,900
32193A	MTS/3000 S/W	1,350	2,500
32193M	DSN/MTS R-T-C	675	1,250
32193R	MTS/3000 S/W RTC	675	1,250
32261X	MM/3000 ONSITE	8,000	4,250
32271X	PM/3000 ONSITE	8,000	5,950
32272X	OPER CUST ONSITE	7,200	3,400
32312LZ	AUST. HP GA MAN	195	190
32338LA	AUST. UPGRADE HPGA	100,000	12,000
32445AH	OPT. 507 EXPD. MEM. TO 1MB	10,100	8,200
32460BH	OPT. 609 UPGRADE FM S/44	-4,300	-43,000
32460BH	OPT. 613 RC SIII W/30341	-3,000	-30,000
9020B	OPT. 241 1ST ADD'L I/O PR	1,010	2,020
9020B	OPT. 242 2ND ADD'L I/O PR	1,010	2,020
9020C	HP 9000 MODEL 20	39,855	43,890
9020C	OPT. 241 1ST ADD'L I/O	1,010	2,020
9020C	OPT. 242 2ND ADD'L I/O	1,010	2,020
9020S	OPT. 241 1ST ADD'L I/O PR	1,010	2,020
9020S	OPT. 242 2ND ADD'L I/O PR	1,010	2,020
9020T	OPT. 241 1ST ADD'L I/O PR	1,010	2,020
9020T	OPT. 242 2ND ADD'L I/O PR	1,010	2,020
97041A	2ND I/O PROCESSO	1,010	2,020
97042A	3RD I/O PROCESSO	1,010	2,020
9845C	DESKTOP COMPUTER	33,800	36,830
98464DM	COPYRIGHT 98464DA	6,360	6,360
98464FM	COPYRIGHT 98464FA	6,360	6,360
98464M	COPYRIGHT 98464A	6,360	6,360
9915A	COMPUTER	1,690	1,825
9915A	OPT. 001 TAPE DRIVE	430	465
9915A	OPT. 002 OPERATOR INTERFA	355	380

