COMPUTER SYSTEMS NEWSLETTER

For HP Field Personnel

HEWLETT hp PACKARD

Vol. 4, No. 22
Oct. 1, 1979

Announcing . . .

The 7310A Graphics Printer

- **Simple, Quiet Operation**
- **Flexible Page Formatting**
- **Paper Cutting and Stacking**
- **Bold, Underline, and Reverse Printing**
- **Proportional and Fixed Space USASCII Printing**
- **High Speed Printing of Graphics, Text, Forms**
- **Choice of HP-IB, RS-232-C/CCITT V.24, RS-423-A, or 8-Bit Duplex Interface**

HP Computer Museum
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In This Issue...

BOISE DIVISION NEWS

Sales Aids

A New Data Sheet for the 2617A Line Printer

By: Sue Brault/Boise

What used to be billed as the 13053A data sheet used for HP's 2617A printer has been changed. Now orderable from the Corporate Literature Center is a 2617A data sheet — publication number 5952-9408.

Product News

BOISE DIV.
PROVIDES NEW
SYSTEMS MARKET
FOR HP 1000/3000
WITH
BLOCK

Boise Div. Provides New Systems Market for HP 1000/3000 with BLOCK

By: Gary Sherwood/Boise

A block lettering character ROM has been added to the HP 2608A Line Printer. This ROM plus an application program can provide the capability to print large BLOCK characters. Some example application programs have been written to aid the potential user to quickly implement this capability. The example application programs allow the user to select one of four different character sizes on the HP 3000 system, (standard, and 4, 6, and 8 times standard size), and seven different sizes on the HP 1000 (std, 2, 4, 6, 8, 12, and 16 times standard size). The programs then allow the user to input the text and then print it on the HP 2608A.

Listings of the example programs plus instructions how to modify them to add new characters and/or new character set sizes are included in the Block Character Application Note. It also contains print samples of the 4, 6, and 8 times standard size characters with charts showing how each character is defined. These examples help your customer to more easily define additional characters, additional character sizes, and/or develop their own application programs. The programs are written in FORTRAN.

The character ROM may be ordered as Option S06 to the HP 2608A at a list price of $200. A copy of the application note and/or print samples can be obtained by contacting your Boise Division Regional Sales Development Engineer.

What NEW MARKETS does this open up?? Any place where large labels are needed. For example — warehouses. Most companies that provide physical products use a warehouse to store everything from parts to their final product. Large labels are also used as parts are distributed during the manufacturing process. We have also received several inquiries from paper mills and an inquiry from a carpet establishment. An easy way to generate large labels is needed in many industries. Now with an HP 2608A and the system you sell you have a solution. Large letter capabilities could provide the whole application in a sale or just be one more way to justify the system purchase.

To date there are approximately 65 identified system sales pending world wide based on this application. We will keep you informed through the newsletter of some of the first success stories plus keep you informed of any really unique applications sold. The first sale using this application has already been made. But, whether YOU are second, third, or . . . , it is a NEW MARKET for you with VAST POTENTIAL.

COMPUTER SUPPORT NEWS

Division News

Worldwide 02/06 Service

By: Bob Puette/CSD

I would like to welcome *Ed Miller* to CSD. *Ed* has been the Desktop Computer Group Service Manager for the past 2½ years and previously has held many positions primarily in the manufacturing area during his 19 years with HP.

Ed will continue to be responsible for the Desktop Computer CE Organization and will take on the worldwide CEO management for the CSG (PT02) Organization.

Since both of these organizations have been running very effectively, we are planning few if any changes in the near future. Most importantly, we want to ensure that all of our customers continue to receive the same high level of support for their HP products which has been provided by both organizations in the past.

Product Marketing at CSD

By: Mike Torgersen/CSD

The Customer Service Data Book provided by CSD during the June NPT Tour is the first step in the merchandising of support services by the CSD Product Marketing Department. A primary goal of this new product marketing team is to successfully introduce and merchandise support products that will enhance your ability to sell hardware and software.

Your feedback can be invaluable to our efforts and your selling success. Let us know

1. what new support services your customers are asking for
2. what changes you would like to see in existing support products
3. what the competition is doing
4. where our support prices are competitive or not competitive
5. what specific promotional literature on support would be useful to you

To aid the communication process, I'd like to introduce our Product Management team.

Jay Friedman joined HP in May 1979. He has a bachelor's degree in math and computer science. While attending UCLA *Jay* put his education to work as a programming consultant and a data center manager. He is responsible for on site, per call support products, including site planning, installation, Time and Material service, and future product offerings in this category.

Bob LeMay joined HP in June 1979 upon graduation from Wharton with an MBA. *Bob's* undergraduate degree is a BSEE from Carnegie Mellon. he has four years of military experience as a Lieutenant in naval aviation, as well as summer work experience with Booz Allen. *Bob* is responsible for our present and future on site agreement products. He is currently working on an in-depth review of our BMMC prices.

Mark Roberts is a June graduate from U.C. Davis with a BSEE, computer science option. He is responsible for investigating and defining a set of off site services that can be provided from field offices. This may include remote diagnostic services, Phone-In Consulting for hardware maintenance, and enhancements to our loaner and bench repair programs.

Wanda Sahara is the newest member of our Product Marketing team. She is a June graduate from Stanford with an MS and BS in industrial engineering. *Wanda* also has a BA in engineering management from Clairmont Mens College (it's coed) and summer experience with Rockwell. She is responsible for identifying and implementing off site services that can be provided from a central "factory" location. An assembly repair program and a media refurbishment program are high on her list of priorities.

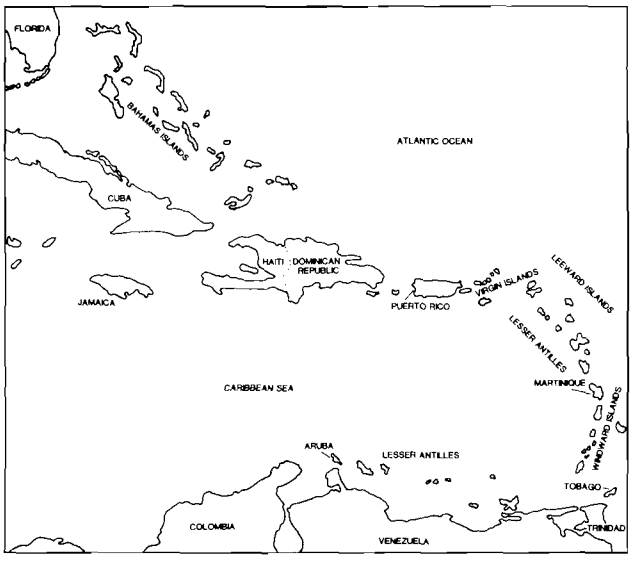
Sue Kimerer, our department secretary, has recently passed the ten year mark with HP. This experience is a real asset to our new department. In addition to normal responsibilities, *Sue* is helping us put together and maintain a competitive file on support services.

Our team is still growing! In the near future we plan to add product management coverage in the very important areas of software support and customer training. Let us hear from you.

CSD Investigates the Caribbean

By: Don Barkley/CSD

CSD is taking a hard look at the Caribbean area in an effort to determine how to improve service capabilities in an area whose market growth seems to be fast approaching a critical mass.



For years the islands of the Caribbean have been a haven for sun-worshipers and travel enthusiasts. More recently, however, increasing numbers of manufacturing and service firms have been attracted to the area by the promise of available labor, investment incentives and tax holidays. Consequently, the Caribbean offers a new opportunity for HP expansion and presents a special challenge to CSD which will be responsible for supporting equipment installed in locations where HP presence may be limited or non-existent.

In order to cope with the expanded service responsibilities that are implicit in any further penetration of the growing market for Caribbean-installed computers, CSD is initiating a study aimed at:

> identifying those islands that are the most likely targets for HP major account customers, and determining the feasibility of providing them with support comparable with that offered in countries with HP presence.

The study will be conducted during the next 10 to 12 months and will draw heavily on inputs from the North American and ICON CSG sales and support organizations. For the moment, requests for support in the Caribbean must continue to be referred to CSD Sales Development. The results of the study will hopefully extend the support umbrella to more Caribbean sites and will include an increased number of smaller accounts.

Inputs are welcome from anyone concerned with Caribbean support and especially from those sales and support representatives who:

1. deal with customers that have HP equipment under maintenance agreement in the Caribbean, or
2. deal with HP major accounts that show interest in putting HP computers or systems into the Caribbean.

Jim Bachta will be responsible for conducting the study and coordinating the preparation of the Caribbean support plan.

Jim, a newcomer to Hewlett-Packard and a new addition to *Don Barkley's* field operations staff, came on board in September after receiving an MBA from Stanford in June. Graduating from West Point in 1969, *Jim* served 6 years in the Army in both command and staff positions. His experience in logistics and international relations should prove invaluable in his current assignment. Please join me in welcoming *Jim* to HP and wishing him every success.

DESKTOP COMPUTER DIVISION NEWS

Product News

DCD Peripherals Product Management and Support Organization

By: Bob Moore/DCD

Welcome to the first section of the Computer Systems Newsletter devoted to DCD Peripherals. We plan to appear here much more frequently in the future. By the time you read this, you should all have heard about the 9874 Digitizer and 9876 Thermal Graphics Printer on the June NPT Tour. To reiterate our commitment to support DCD Peripheral products, I would like to review the DCD contacts and support organization for SF02.

DCD Peripherals
Desktop Computer Division
Ft. Collins, CO
(303) 226-3800

Srini Nageshwar
Marketing Manager

Bob Moore
Product Marketing Mgr.

Nancy Goodrich
Secretary

Bill Boles
9876 Thermal
Graphics Printer

Paul Maybaum
9874 Digitizer

Dick Hanson
Sales Development Mgr.

Alexa Goltz
Secretary

Jack Huffman
Neely, Midwest, Japan
and Consumables

Al Herder
Southern, Eastern, ICON
and Canada

Sirio Sconzo
OEM, ICOEM

All the technical Sales Force should have received a DCD Peripherals Binder containing everything you need to know about the 9874 Digitizer, the 9876 Thermal Graphics Printer and the DCD Peripherals organization. If you didn't get one, please contact *Dick Hanson* at DCD. Another document which you may find useful is the "1979 Peripheral and Terminal Field Sales Plan" which summarizes DCD Peripherals objectives and strategy.

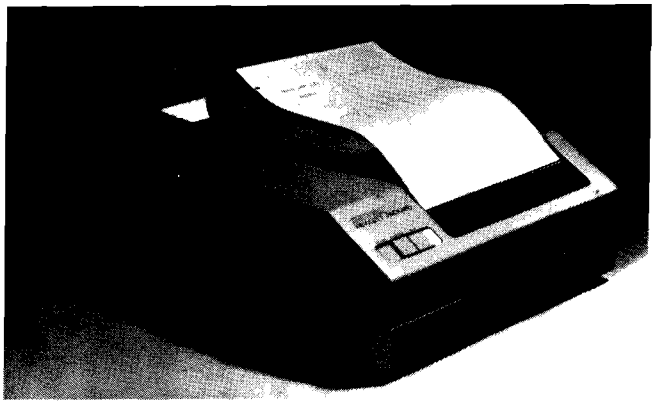
We are looking forward to working with you and to selling HP 1000 and Terminal Systems with DCD Peripherals.

SF02 NPT Tour Review

By: Bill Boles/DCD

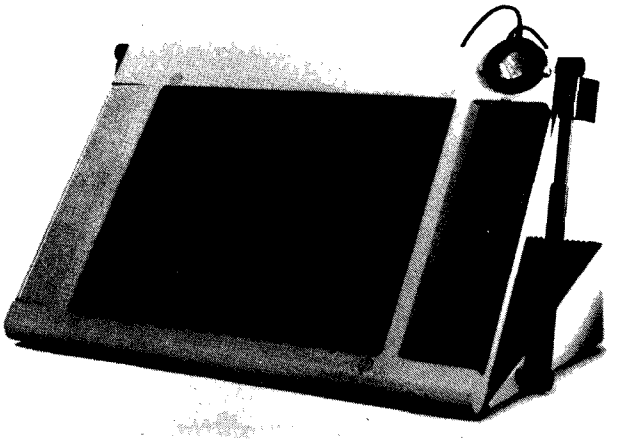
It was a pleasure for the Peripherals Group of DCD to be able to join DSD on their New Product Training Tour last month and talk with you about the 9876 Thermal Graphics Printer and the 9874 Digitizer.

In case you missed the presentation (or slept through it) I'll briefly summarize our comments on the 9876 and the 9874.



9876:

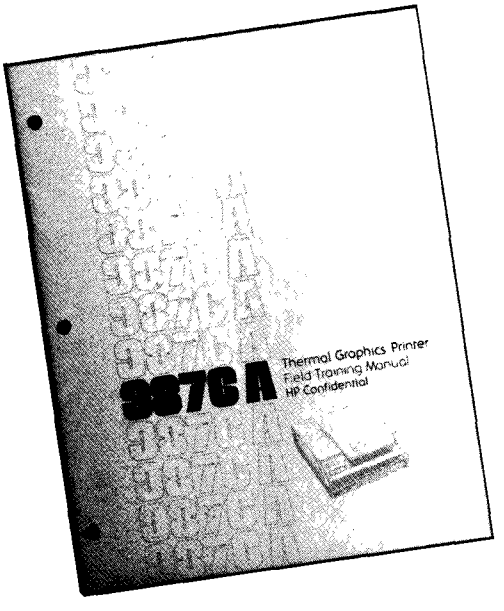
1. Supported as an alphanumeric printer on all 264X series terminals with Opt. 240 (available September 1). This option includes the terminal duplex register for the terminal (13238A) and a special cable. The cost of this option is $325.00.
2. Supported as an alphanumeric and graphic output device on the 2647 and 2648 terminals via HP-IB. Multiplot on the 2647 allows shrinkage of the CRT graphics to fit on the 560 dot wide printer. A special ROM (Option E76) will be available from DTD's Specials Group which will rotate the 2648 graphics 90° when it is sent to the 9876. This allows a full size representation of the 2648 CRT to be printed. This option should be available in November and will cost $100.00.
3. Supported as a system printer for the HP 1000 with the HP-IB interface and driver DVR-37.

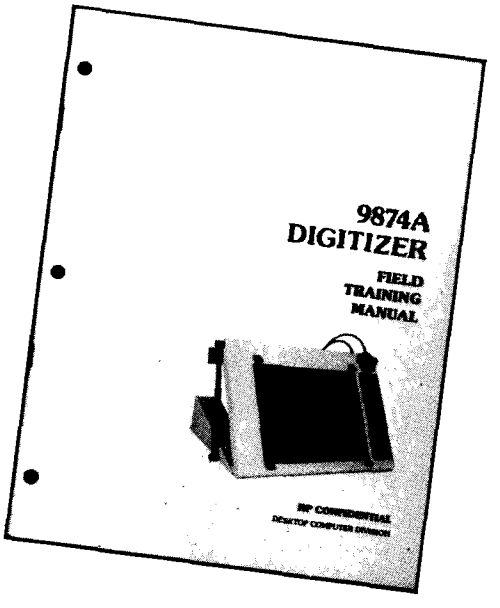


9874:

1. Supported on the 2647 terminal via HP-IB. Commands to the 9874 are sent from BASIC language programs written on the 2647.
2. Supported on the HP-1000 via HP-IB. Device subroutines for the 9874 are included in the GRAPHICS/1000 Software.

There are field training manuals for each of these products which were written expressly for the Computer Group sales force. Contained in these manuals are examples and sample programs for use with terminals and HP 1000's. I think you will find most of your questions answered by these manuals. If you have any further questions please call us at DCD. Our sales support people will do their best to answer any questions you might have.





DISC MEMORY NEWS

Sales Aids

DISCo Inferno

By: Rich Bowles/DMD

HEWLETT hp PACKARD

NEELY SALES REGION [illegible]

August 8, 1979

Mr. Bob Hoke, Marketing Manager
Hewlett-Packard Company
Disc Memory Division
Post Office Box 39
Boise, ID 83707

Dear Bob:

About 2 months ago, a 3000 Series II with one 7920 and one 7925 was involved in a fire that totally destroyed the system. After 2 days of work to uncover the system, the discs were found. All of the mag tapes were destroyed from the heat and flames. The only data left was that on the discs. They were cleaned and sent back with a warning that they were unsafe to be put into a drive. With careful planning and many hours of work, 75% to 80% of all the data was recovered for the customer.

This shows the high reliability of the 79XX disc drives and disc packs once again, and that HP equipment can stand up to almost anything.

We thought that you might like to hear this and might be able to use some information of this type (maybe even, to raise the specs).

Sincerely,

HEWLETT-PACKARD COMPANY
NEELY SALES REGION

Ted Weist

Ted Weist
Customer Engineer

TW/sc

cc: Jack Dannenberg

Need we say more? Thanks, Ted!

When To Order a 7925S with Option 250

By: Mark Minne'/DMD

When adding a 7925 disc drive to a customer's system (which already has an installed MAC* family disc drive) you need to know if the system has a 13037 disc controller which will support the 7925 disc drive. If you have one or more 7925 disc drives operating on the system already, order 7925S *without* the Option 250. Don't order the Option 250 if the customer has one of the following systems:

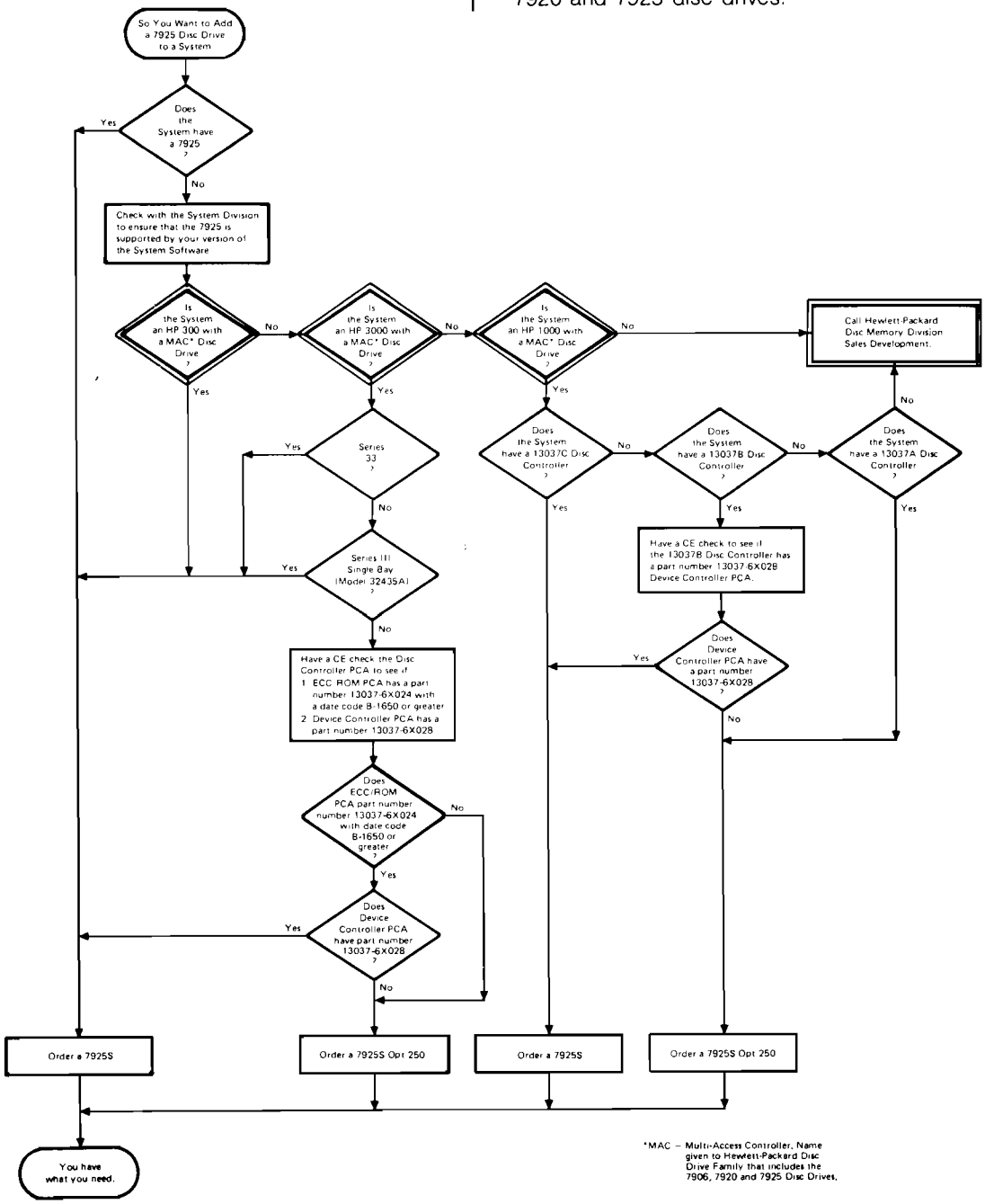
- HP 300
- HP 1000 with a 13037C disc controller
- HP 3000 Series 30
- HP 3000 Series 33
- HP 3000 Single Bay (Model 32435A)

Another general rule-of-thumb that applies for most other cases:

- HP 3000 systems delivered *after* June 1, 1978, don't require the Option 250.
- HP 1000 systems delivered *after* September 1, 1978, don't require the Option 250.

In all other cases you should check the part numbers and date codes of the PCA's (Printed Circuit Assemblies) in the 13037 disc controller to determine if the Option 250 is required. When in doubt, the following flowchart should help to answer your questions about adding a 7925 to a customer's system.

*MAC— Multi-Access Controller. Name given to Hewlett-Packard disc drive family that includes the 7906, 7920 and 7925 disc drives.



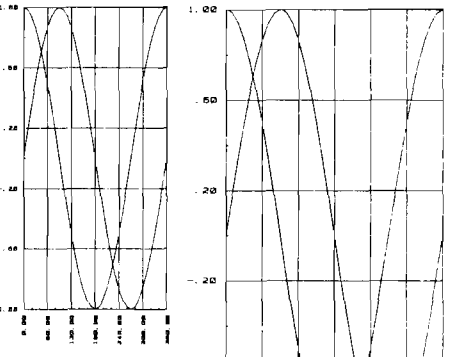
When to Order the Option 250

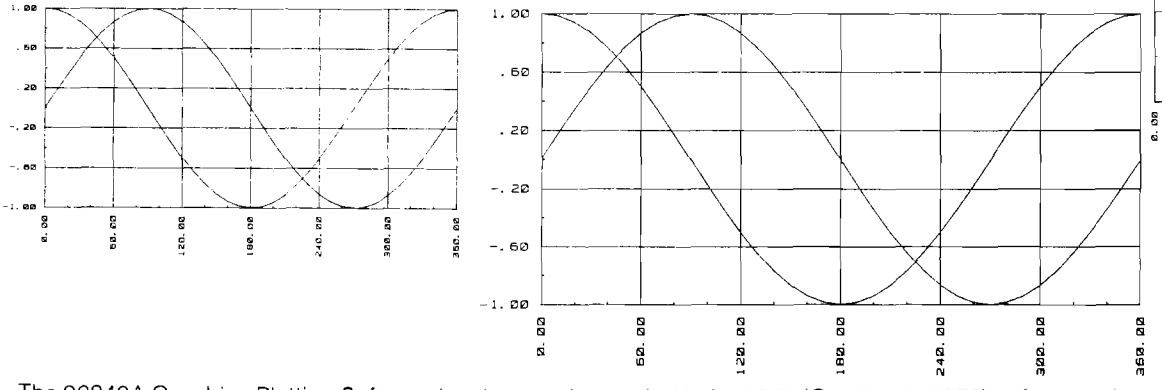
DATA SYSTEMS NEWS

Product News

90° Rotation for 7245A Plotter/Printer Graphics Plotting Software Output now Supported with GRAPHICS/1000

By: Mike Scott/DSD





The 92840A Graphics Plotting Software has been enhanced with the 1940 (October 1, 1979) software release to support a 90° counterclockwise rotation of a picture on the 7245A Plotter/Printer. The significance of this enhancement is that for many applications, this new capability will allow for a more effective utilization of the plotting area available on the 7245A.

This enhancement was made possible by developing a second device subroutine for the 7245A that rotates all the vectors 90° counterclockwise. The user selects whichever device subroutine offers the best viewing area. The two device surface areas supported are:

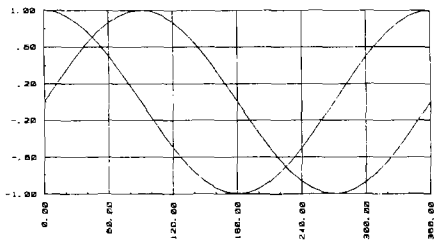
	X-direction	Y-direction	Default Aspect Ratio
First device subroutine	180 mm (7.09 in.)	270 mm (10.63 in.)	.67
Second (new) device subroutine	274.75 mm (10.82 in.)	188.6 mm (7.43 in.)	1.46

Obviously, the best way to visualize what I'm describing is to show you some graphs created with these two device subroutines! The first two graphs (A and B) have an aspect ratio (length/width) of 1.46, therefore the second device subroutine gives the best utilization of the available plotting area. The second set of graphs (C and D) have an aspect ratio of .67, therefore the first device subroutine is the preferred choice. The default aspect ratio of the second device subroutine (1.46) is very similar to the 9872 or 7221 plotters (1.52), and therefore graphs with an aspect ratio of approximately 1.5 can be output to any of these devices with a maximum utilization of the plotting area.

Customers who have software support services for the 92840A will receive the software and manual updates for this enhancement. Customers who already have the 92840A software but not the software support will have to purchase another copy of the 92840A if they would like this new capability.

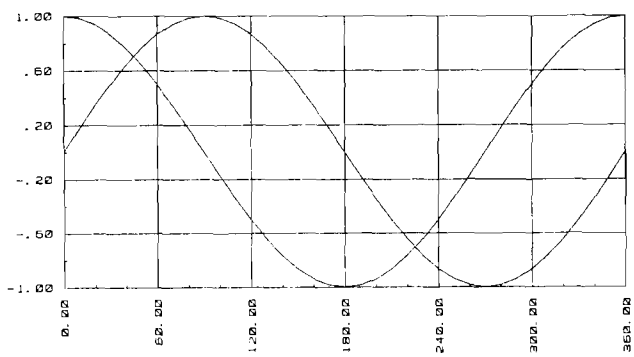
GRAPH A

Aspect Ratio = 1.46
First Device Subroutine



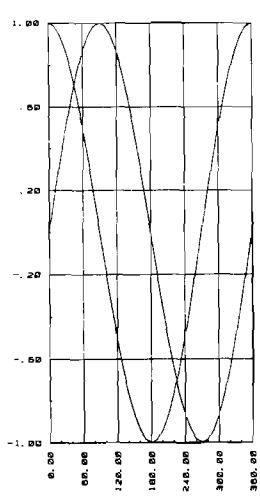
GRAPH B

Aspect Ratio = 1.46
Second Device Subroutine



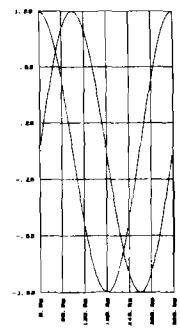
GRAPH C

Aspect Ratio = .67
First Device Subroutine



GRAPH D

Aspect Ratio = .67
Second Device Subroutine



Paper Advance with 9872S and 7221S Plotters now Supported with GRAPHICS/1000 Graphics Plotting Software

By: Mike Scott/DSD

Paper advance operation for the 9872S and 7221S Graphics Plotters is now supported with the 1940 (October 1, 1979) software release of the 92840A Graphics Plotting Software. Several articles in the August 1 *Computer Systems Newsletter* (P42-46) described the new 9872B/S and 7221B/S plotters. Further information on the plotters can be obtained from the training manual — contact San Diego Division if you don't have one.

Four different Graphics Plotting Software subroutine calls (PLOTR (1), PLOTR (4), GCLR, and GPON) will advance the paper on a 9872S or 7221S one full page and if the cutter has been enabled, the plotter will cut the last page off the roll. Plotter specific commands (HP-GL for 9872S, ESC codes for 7221S) can be sent directly to the plotter if the user would like to advance paper in half-sheets or turn the cutter on or off. Chart advance and paper cutting can also be controlled manually.

Contrary to one of the articles in the August 1st issue of the *CS Newsletter* (p. 43) the 9872B and 9872S plotters *do not* work with the 92840A Graphics Plotting Software prior to the 1940 software release. The 1940 software release of the 92840A now works with the 9872A, 9872B, 9872S, 7221A, 7221B, and 7221S. Customers who have software support services for the 92840A will receive both the software and manual updates for these new capabilities. Customers who already have the 92840A software but not the software support will have to purchase another copy of the 92840A if they need chart advance support for these new plotters. Sell those software support services!

GRAPHICS/1000 supports an ever-expanding collection of cost-effective graphics peripherals:

Softcopy Devices

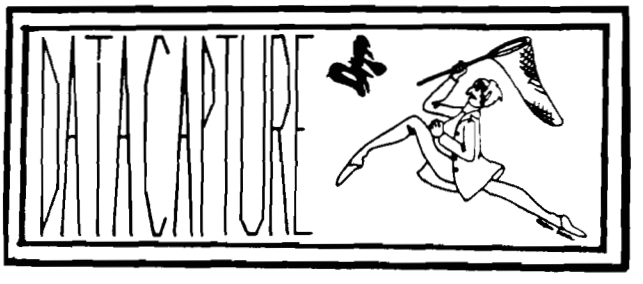
2648A Graphics Terminal (RS232, raster)

Hardcopy Devices

2608A Line Printer (raster, impact)
7221A/B/S Graphics Plotters (RS232, 4-Pen, 11" × 17")
7225A Graphics Plotter (HP-IB with 17601A, 1-Pen, 8.5" × 11")
7245A Plotter/Printer (HP-IB, 8.5" thermal roll paper)
9872A/B/S Graphics Plotters (HP-IB, 4-Pen, 11" × 17")

Input Devices

9874A Digitizer (HP-IB, 11" × 17")



DATACAP/1000 Performance Data!

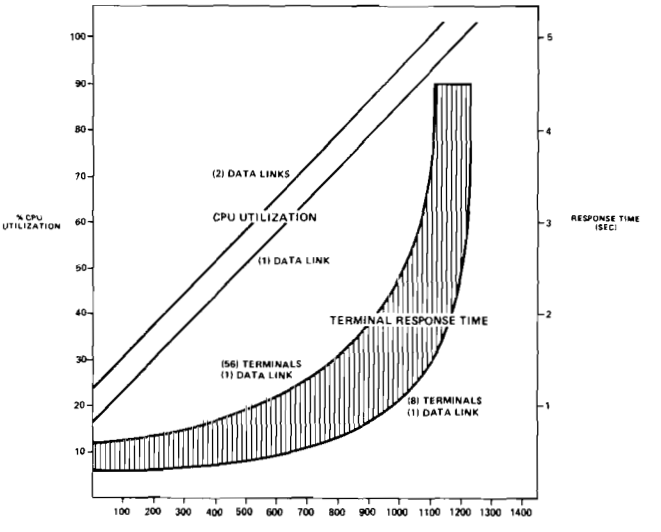
By: Ben Heilbronn/DSD

The long awaited testing of the DATACAP/1000 has been under way in the past few weeks and we're anxious to share the results with you. We will be publishing a performance brief with much more detail but I think a review of the following data will show that the quick information given here will be immediately useful. Also, an article with more technical detail will be submitted very soon which should answer many SE questions.

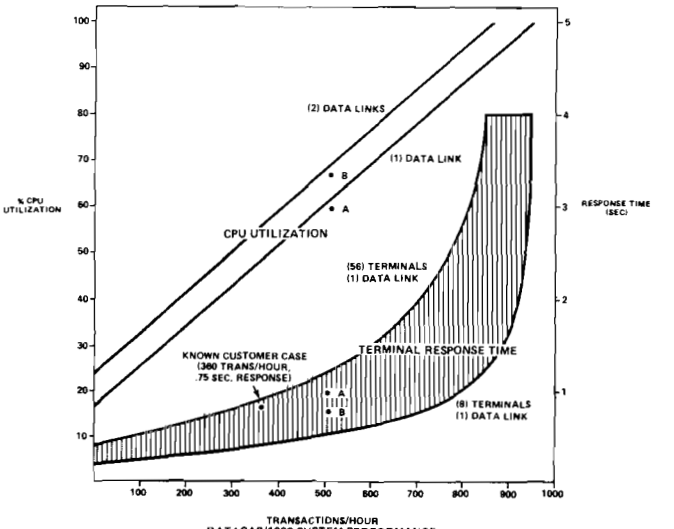
Performance testing was accomplished with the use of SIMUL, a piece of software which simulates a person making inputs on a 3075A/3076A terminal. Tests with 8, 16, 32, 48 and 56 terminals on a single multipoint line along with 32 and 56 terminals split between two multipoint lines were run. Not only does each SIMUL terminal act as a 3075A/3076A does, but it also simulates what an operator would do in that it responds with predefined entries transmitted after specified reaction times. Varying the reaction time allows for the different transaction rates tested.

An entry consists of a person's reaction time, the form of the input — be it keyboard, badge, or card reader, and the actual text of the entry. A set of entries answering specific DATACAP questions, sandwiched between one to select and one to complete a DATACAP transaction make up a SIMUL transaction. DATACAP was run on an E-Series CPU with high speed fault control memory. Sufficient memory partitions were setup to eliminate the need for swapping. Refer to the DATACAP manual for partition sizes.

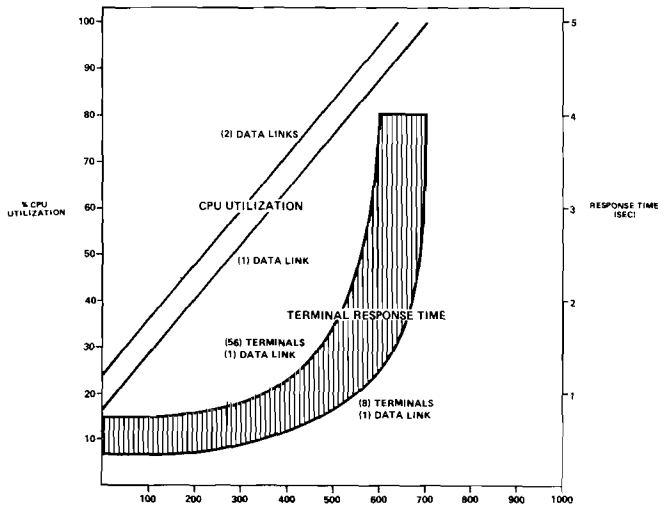
Three basic DATACAP transactions (TR1, TR2 and TR3) were tested. All three used the same entries consisting of employee (10 byte string), workorder (10 byte string), and part numbers (10 byte string), hours worked (type real), and quantity worked (type integer). TR1 processed the entries to a disc file using masks and range checking only. TR2 validated the work order number against an IMAGE data base and logged the data to mag tape. TR3 used IMAGE, mag tape logging, a user validation subroutine and disc file storage in a rather strenuous system test. The throughput rates of the transactions versus the *average* response time and CPU utilization are shown on the graphs.



DATACAP/1000 SYSTEM PERFORMANCE
TRANSACTION #1: DISC STORAGE, DATACAP VALIDATIONS ONLY (NO IMAGE DATA BASE, NO LOGGING)



DATACAP/1000 SYSTEM PERFORMANCE
TRANSACTION #2: IMAGE VALIDATION AND LOGGING TO MAG TAPE



DATACAP/1000 SYSTEM PERFORMANCE
TRANSACTION #3: IMAGE INTERRACTION (FIND, UPDATE, ADD), LOGGING TO MAG TAPE, USER VALIDATION SUB-ROUTINE, AND DISC STORAGE

Graphical Interpretation: The ranges shown are composites of the different tests run. In general, the CPU utilization graphs indicate a dependency on the transaction running (1% overhead per terminal) and the number of multipoint lines used, each line accounting for about 8% overhead. In the case of response time, the vertical width is due to the terminal counts. Lower response times were achieved through the use of fewer terminals, i.e., the response time for eight terminals running TR1 every two minutes was .35 seconds as where the response time for 16 terminals running TR1 every four minutes was .49 seconds. The result of adding a second multipoint line on tests of 32 and 56 terminals showed a decrease in the response time. The labeled points on Graph #2 indicate a response time of .90 seconds at 58.8% CPU utilization (points A) using one multipoint line. The respective figures were .68 and 63.2% (points B) with the use of two multipoint lines. Both transaction loads were 490/hour.

An actual customer case was tested which required 360 transactions/hour, and compared with the graphical data to see where it fit in. The transaction was a combination of TR1 and TR2, but with 2.5 instead of 5 entries/transactions. The response time indicated graphically lies around .75 seconds with 48.55% CPU usage. The actual tests showed respective figures of .81 seconds and 44.3% CPU usage. Atrributing the lower CPU figure to a shorter transaction, these figures are very much in line.

This testing has definitely shown that DATACAP provides a *very viable* performance capability other than for the most stringent time and attendance applications (which can be supported with very simple custom programming. More on this later.) We hope to make this testing capability available to the SE's so that custom benchmarks for specific customer application requirements will be possible in the field which could be a powerful sales aid. In the meantime we will try to support your *key* benchmark requirements here at the factory.

DATACAP/1000 Upgrade Bargain

By: Sharon Jacobs/DSD

Upgrades to 92903A Datacap are now available. We are especially eager to upgrade *ALL* current Datacap customers to RTE-IVB, new IMAGE, and 92080A DATACAP. Not only will your customers be more easily supported they will be able to take advantage of the many features of these new products. We feel so strongly about this that we will endeavor to make this total upgrade for your customer at close to zero cost!!

So, those of you whose customers were DATACAP pioneers, call Sales Development for details on how to order.

WE TAKE CARE OF YOUR CUSTOMERS!

Competition

DEC Catches Up! Announces CSS-Like Support for Software!

By: Phil Ebersole/DSD

It took almost two years, but DEC has now figured out that HP's group-wide Customer Support Service (CSS) was such a good thing that they just had to have it! In an early September press release, DEC announces a new level of software support known as *DECsupport*. The new DEC service features the following SE services:

1. A telephone support service for programmers (like HP's PICS).
2. Software Preventive Maintenance visits (like HP's Account SE visits).
3. On-site remedial support (like HP's on-site SE assistance).

As you can see, DECsupport is almost a carbon copy of HP's Customer Support Service. And with IBM announcing *their phone-in consulting service* last spring (4300 announcement), what is it they say: "Imitation is the most sincere form of flattery?"

DEC's new service begins October 1. Although all the details haven't come in yet, the table below gives a fairly good idea of just how HP's CSS compares with the DEC support service, based on information in the press release. And as soon as we have price information, we'll pass it along. The one price we do have is listed in the table below. As you can see, DECsupport is expensive!)

In the meantime, you can quote CSS to your customers with the knowledge and confidence that this level of service has not become the *industry standard*. HP offered it first, and now both of our major competitors have been forced to announce similar services in the past eight months. Can DG be far behind?

DEC Support	HP's Customer Support Service
Telephone Support • 8–5 (24 hrs in 1980) • One center (Denver) • Immediate response • Toll-free line	Phone-in Consulting Service • 8–5 • Local Centers worldwide • 4-hour response
Software Preventive Maintenance • Scheduled visits	Account SE • Quarterly scheduled visits
On-Site Remedial Support	On-Site assistance
Delivery of Software Updates and Patch information	Delivery of Software/ Firmware/Manual Updates
?	Software Status Notification
Software Performance (Bug) Reports	Software Maintenance Requests
Typical Price $400/month (RSTS/E)*	Typical Price $250/month (RTE-IVB)

Comparison of the newly-announced DECsupport Service and HP's Customer Support Service for Software

*Source: Computerworld, September 17, 1979.

Sales Aids

What is the Value of a Software Update To a Customer?

By: Phil Ebersole/DSD

By the time you read this, your software support customers will have received the 1926 software update to RTE and the various HP 1000 subsystem products. How much value do updates such as these hold for your customers? To find the answer, consider The 1926 HP 1000 Software Revision, which included:

1. 15 "Minor" Enhancements
   These are changes such as improved support of the 2608A by GRAPHICS/1000 (support of text output primitives), modem support by the Multiplexer under RTE-IVB, improvements to the RTE-IVB Generator, etc.
2. 55 (SSB Documented) Bug Fixes
   These are corrections to known software problems that were previously documented in the HP 1000 Software Status Bulletins (SSB's).
3. 25 Other Bug Fixes
   These are corrections to problems discovered by the lab which were not documented in the SSB.
4. 18 Manual Revisions (complete manuals) and 19 Manual Change Notices
   These manual updates document the new features incorporated in the software as well as correcting documentation errors in the manuals themselves.
5. The 1926 Software Update Notice
   This document describes all changes made in the 1926 updates and instructs the System Managers in how to update their systems.

As you can see, *both the reliability and the usefulness* of your software support customers' systems have been considerably improved by the 1926 update. And remember that software support customers receive four updates like this every year!

Exceptions to the Same Level of Support Rule

By: Phil Ebersole/DSD

The golden rule to follow when selling software support services is that the *same level of software support must be purchased for all HP software/firmware on the system.* This consistency rule applies to all four possibilities of software support:

1. Customer Support Service (CSS): "T" products (e.g. 92068T)
2. Software Subscription Service (SSS): "S" products (e.g. 92068S)
3. CSS Extension Service: "V" products (e.g. 92060V)
4. SSS Extension Service: "W" products (e.g. 92068W)

For example, if CSS is purchased for the operating system, (i.e. 92068T for RTE-IVB), then CSS must be purchased for all subsystems present on the system (i.e. 92069T for IMAGE/1000, 92840T for GRAPHICS/1000, etc.).

The Exceptions:

There are three exceptions to this rule:

1. Type II software products such as RTE-M and GRAPHICS/1000 do not have SSS Extension Products ("W" products). This is because SSS updates for these products may be copied free of charge. Thus, no monthly support product is necessary for copied Type II software if the original software is supported under SSS.
2. Firmware-only products such as VIS have SSS support ("S"products) only. Thus, SSS for firmware-only products must be quoted for every system under support *regardless of the level of support purchased for the software.*
3. The Diagnostic Packages (24396A-F) also have SSS support only, and furthermore, they are Type II software products Therefore, it is necessary to quote the diagnostic subscription service (24396S) for the *first system* under support only.

An Example:

Suppose the customer buys two HP 1000 Model 45's, their systems include RTE-IVB, GRAPHICS/1000, M & C Software, the Diagnostic Package, and VIS. And furthermore, suppose the customer desires CSS.

The support quote for system #1 would be (remember that software support is sold in *MONTHLY UNITS*):

Qty.	Model	Description
12	92068T	RTE-IVB CSS
12	92840T	GRAPHICS/1000 CSS
12	92066T	M & C CSS
12	24396S	Diagnostics *SSS* (exception #3)
12	12823S	F-Series Firmware *SSS* (exception #2)
12	12824S	VIS Firmware *SSS* (exception #3)

The support quote for system #2 would be:

Qty.	Model	Description
12	92068V	Extends RTE-IVB CSS
12	92840V	Extends GRAPHICS/1000 CSS
12	92066V	Extends M & C CSS
12	12823S	F-Series Firmware *SSS* (exception #2)
12	12824S	VIS Firmware *SSS* (exception #2)

Note that no support is quoted for the diagnostic package on system #2 since it is a Type II software product (exception #1).

RTE-IVB Loader & Debugger Enhancements

By: John Koskinen/DSD

There are two key product enhancements coming along for your customers on CSS and SSS in the October software update.

RTE-IVB LOADER

New Feature: More human engineering on the programmer interface and more information displayed from errors and listing command; current page links for variables.

Benefit: Larger programs can be loaded than with only base page variable links; more productive programmers.

RTE-IVB DEBUGGER

New Feature: Trace command on multi-word instructions and EXEC CALLS; 10 breakpoints; multi-line listings; multi-point terminal support; register display.

Benefit: More productive programmers.

Are HP's Software Support Services *Really* that Expensive?

By: Bob Niland/ESR

I. INTRODUCTION:

One problem with selling support services appears to be the intangible nature of the PERCEIVED VALUE of the support products. This document will attempt to make the value of software services more visible by comparing them to hardware support and by analysis of a case study.

II. THE SEEMINGLY HIGH COST OF SOFTWARE SUPPORT:

Most SR's and SE's are quite comfortable with selling, and customers are happy to buy, hardware support (BMMC), BMMC for a typical system (2177C, 2621A, 7970B, 2608A) is about .7% of hardware purchase price per month, or 10% per year.

Software Subscription Service (SSS), on the other hand, is about 2% per month, or 24% per year.

And Customer Support Service is even higher at 4% per month or 50% per year.

The questions that might arise from this are: Is SSS worth twice BMMC? Is CSS worth 5 times BMMC?

III. THE FEATURES MATRIX:

The BMMC and SSS/CSS products provide different benefits, so lets begin by comparing apples to apples. Our legend for the matrix is:

AVL	Available at additional cost.
HW WTY	90 day Hardware Warranty.
BMMC	On-going Basic Monthly Maintenance Contract.
T&M	Time and Materials maintenance.
SW WTY	90 day Software Media Warranty (yes there is one).
SSS	9XXXXS Software Subscription Service.
CSS	9XXXXT Customer Support Service.
CONS	S.E. On-site Consulting.

Coverage Provided	HW WTY	BMMC	T&M	SW WTY	SSS	CSS	CONS
HDW/SFW installation	YES	YES	YES	NO	NO	NO	YES
HDW/SFW design defects	YES	YES	YES	NO	YES	YES	NO
HDW/MEDIA workmanship	YES	YES	YES	YES	YES	YES	NO
HDW/SFW notification	AVL	AVL	NO	NO	YES	YES	NO
HDW/SFW manual updates	NO	NO	NO	NO	YES	YES	NO
HDW/SFW fix updates	YES	YES	YES	NO	YES	YES	NO
HDW/SFW enhancements	SOME	SOME	SOME	NO	YES	YES	NO
HDW Preventative Maint.	YES	YES	YES	—	—	—	—
Extended coverage hours	NO	AVL	AVL	—	—	NO	NO
Account CE/SE	NO	YES	NO	NO	NO	YES	NO
Phone In Consulting	NO	NO	NO	NO	NO	YES	NO
On-site assistance	YES	YES	YES	NO	NO	YES	YES
TOTAL "YES" FEATURES	6	7	6	1	6	9	2

CSS Includes More Support Features:

As you can see, the CSS support includes more support features than BMMC. On the basis of "counting noses" it appears that SSS is about equal to BMMC, and CSS offers 1.5 as many features. On the basis of feature couting, we have not satisfied our questions from section 2.

IV. CASE STUDY:

This is an example of a real customer's experience with HP software support.

Software coverage for the period Aug. 78 — to — Aug. 79:

Product:	Monthly charge		Annual total
91780T	RJE/1000 CSS	$ 55.00	$ 660.00
92063T	IMAGE/1000 CSS	35.00	420.00
92067T	RTE-IVA CSS	265.00	3,180.00
92101T	BASIC/1000D CSS	40.00	480.00
Total cost for CSS:		395.00	4,740.00

(SSS for the same products would be $165/mo, or $1,980/year.)

Value Received

During the period, covering releases 1840, 1901, 1913, and 1926, the customer received one full year of 92830A Software Notification Service (SNS) worth $240.00.

64 manual changes were made to the covered products, including 23 complete (new or revised) manuals. At an average purchase price of $5.00, the customer received $115.00 worth of manuals.

The software update were delivered on a total of 38 re-usable mini-cartridges, worth $684.00 at $18.00 each. This customer is a heavy user of mini-cartridges, and this update "surplus" meets about 1/3 of his annual mini-cartridge requirements.

The updates included 116 modules. The software covered consists of 124 modules. Since HP sells updated (option 001) and right-to-reproduce software for about 40% of full list, and the customer has $9500.00 (list) worth of software, the 116 modules (less media value) represent:

116/124*9500*.40 = $3500.00-684.00 = $2870.00

The customer used 24 hours of PICS time. At $62.50/hour, this would have cost him $1500.00 at the consulting rate.

The customer used 54 hours of Account SE time, or $3375.00.

The customer had one on-site assistance event, which would have cost $500.00 at the 22976B consulting rate.

Value(s) received:	SSS	CSS
SNS	$ 240.00	$ 240.00
Manuals	115.00	115.00
Re-usable media	684.00	684.00
Software updates	2870.00	2870.00
PICS	—	1500.00
Account SE time	—	3375.00
On-site assistance	—	500.00
Total benefit	$3909.00	$9284.00
Support cost to customer	−1980.00	−4740.00
Benefit in excess of cost:	+1929.00	+4544.00

CSS is Worth Twice its Price

The customer is getting about *TWICE* his money's worth compared to the cost of buying all the services individually at list prices. In fact, for the "benefit excess" to have been zero, the customer would have to be able to obtain manuals, media, and SE time at cost, and get the software free (repro cost only).

IV. THE IMPACT OF SERVICES ON THE CUSTOMER'S OBJECTIVES:

Before making the final evaluation of BMMC vs CSS in this section, let's review the comparative costs of hardware and software to the customer. Assume a $100,000.00 HP 1000 and two programmers, one senior at $24K/year, the other junior at $16K/yr. This customer will be paying about $10K/yr for BMMC, $5K/yr for CSS, and about $50K/yr for the salaries & fringes.

The customer's objective in purchasing an HP computer is NOT to be the proud owner of working hardware. It is to produce and run useful applications programs. During the system development phase (when it makes sense to be on CSS), having BMMC has only a small effect on programming. Good code scribblers should be on a 50% think, 30% code, 20% debug and test duty cycle. If the customer were on T&M hardware maintenance, a down computer might stay that way for 3–5 days before a CE could be scheduled to fix it. This would affect all of the test/debug time and some of the coding time, but the programmers could keep working productively.

On the other hand, if he is not on CSS, and has one of the following example problems, *his programmers are DOWN* as far as the application is concerned.

A. The system seems to have run out of disc space because no one is aware of the need to issue a :PACK command every week or so.

B. The programmers generated a new system to include the AN/SP5-Q black box interface, but it crashes during cold-start.

C. They wasted time writing scientific subroutines which were already in the library. Someone misplaced the RLIB manual, and they didn't know it existed or what was in it until the local "best effort" SE called them back two weeks later.

D. The application program is occasionally failing during test. They think it's an HP system bug, but they're not sure, and the local office can't schedule a consulting day for 2 weeks. . . .

CSS Keeps Expensive Programmers Productive

The point is, that particularly if this is a new customer, having programmers down is more expensive than having hardware down. In our example site, having down hardware and programmers who are only 60% productive will cost $80.00/day until the system is back up. If the programmers are down, it will cost $200.00/day. Of course, not having software support will save them $20.00/day, so they're really only losing $180.00/day, however, that's still 2.25 times worse than having the hardware down.

VI. CSS IS A GOOD DEAL

Conclusion:

Let's add up all the factors. CSS has 1.5 times as many features as BMMC. The customers get their money's worth with BMMC, they get 2.0 times their money's worth with CSS. The consequences of being down are 2.25 worse with software than with hardware. All together we have:

$$1.5 * 2.0 * 2.25 = 6.75$$

Which is a favorable ratio for a product which has a relative cost of 5 times BMMC, and an absolute cost of the same or less for any given system.

DATA SYSTEMS DIVISION CURRENT SALES AIDS — 8/1/79

By: Ted Proske/DSD

Sales Literature — Order from Corporate Literature Depot

Literature Stock No.	Pub. Date	Title and Description
NEW AND REVISED HP 1000 COMPUTERS LITERATURE		
5953-4202	5/79	**HP 1000 Computers Hardware Data,** 88 pp B&W data book, that replaces previous HP 1000 Computers Hardware Data book, adds coverage of new SIS and VIS instructions and FEM board. REVISION OF PREVIOUS DATA BOOK.
5953-4203	6/79	**HP 1000 Computers Selection and Configuration Guide, effective July 1, 1979,** 52 pp B&W selection, configuration, and pricing guide that replaces previous HP 1000 Computers Selection and Configuration Guide; adds coverage of new SIS and VIS instructions and FEM board. Also adds coverage of new HP 1000-compatible peripherals, interfaces, RTE-IVB software, DATACAP/1000 software, and new software support services. REVISION OF PREVIOUS GUIDE.
5953-4207	7/79	**HP 1000 Product Compatibility Guide, effective July 1, 1979,** 12 pp Blue and White. REVISED to reflect latest additions to product line and give better information on terminal configurations.
NEW HP 1000 COMPUTER SYSTEMS LITERATURE		
5953-3099	6/79	**HP 1000 Family News: Announcing new computing power, new user friendliness, and a unique new applications tool for manufacturers,** a 6 pp four-color flyer, intended as a direct mail or first level response piece covering VIS, RTE-IVB, and DATACAP 1000.
5953-4224	6/79	**DATACAP/1000, A powerful tool for fast and easy creation of factory data collection systems — without programming,** an 8 pp, four-color brochure.
5953-4226	5/79	**Fiber Optic HP-IB Link, New high performance remote instrumentation interface for demanding applications,** a 4 pp, four-color flyer.
5953-4227	6/79	**Fiber Optic HP-IB Link Products,** a 4 pp data sheet on the 12050A link and 39200 series cable.
5953-4209	4/79	**IMAGE/1000, Data base management software for HP 1000 Computer Systems,** a 16 pp, four-color product applications brochure.
5953-4218	2/79	**An at-a-glance look at the HP 1000 Family,** a small 12 pp four-color flyer, die cut in a system shape, intended as a direct mail or first level response piece.
5953-3096	2/79	**GRAPHICS/1000, Powerful, modular, device-independent software for graphics input/output with HP 1000 Computer Systems,** a 12 pp, four-color brochure containing general discussions of graphics applications.
REVISED HP 1000 COMPUTER SYSTEMS LITERATURE		
5953-4200	6/79	**HP 1000 Computer Systems Technical Data,** 48 pp B&W data book that replaces previous HP 1000 Systems data book; provides coverage of new systems; peripheral accessories, distributed systems, and software data sheets are in separate data books. REVISION OF PREVIOUS DATA BOOK.
5953-4201	6/79	**HP 1000 Computer Systems Configuration and Site Preparation Guide,** 52 pp B&W configuration, pricing, and site preparation guide; provides coverage of new systems, peripherals, interfaces software, and software support products. REVISION OF PREVIOUS GUIDE.
5953-3002	8/79	**HP 1000 Computer Systems for factory data acquisition, measurement,and control,** 16 pp full color brochure that relates HP 1000 Computer Systems, to industrial measurement and control applications; discusses eight applications, measurement and control capabilities, DS/1000, and fiber optic link. REVISION.
5953-4210	4/79	**HP Real-Time Executive Software,** a 12 pp four-color brochure covering RTE-II, RTE-M, and RTE-IVB with session monitor. REVISION.
UNCHANGED HP 1000 COMPUTER SYSTEMS LITERATURE		
5953-3088	1/79	**HP 1000 Automatic Electronic Test Applications,** 16 pp full color brochure that relates HP 1000 Computer Systems to electronic testing applications; discusses seven applications.
5953-3001	3/78	**HP 1000 Computer Systems Computational capability for science, engineering, and industry,** 16 pp full color brochure that relates HP 1000 Computer Systems, especially the Model 45 System, to use in computational applications; discusses eight applications.

Literature Stock No.	Pub. Date	Title and Description

REVISED HP 1000 COMPUTERS AND SYSTEMS LITERATURE

5953-4215	6/79	**The HP 1000 family. Advanced computing power for manufacturing and engineering,** 36 pp full color brochure covering the entire HP 1000 Computers and Computer Systems family, including the new DATACAP/1000 software, RTE-IVB, VIS, and other related new products; intended as an attractive, comprehensive overview of the HP 1000 product line, now with maroon cover.
5953-4202	6/79	**HP 1000 Computers and Systems Peripherals Data,** 44 pp B&W data book that covers peripherals usable with HP 1000 Computers and Systems, excluding terminals and measurement and control interfaces, processor, and subsystems. REVISED
5953-4205	4/79	**HP 1000 Computers and Systems Distributed Systems and Communications Data,** 68 pp B&W data book that covers DS/1000 software-firmware and interfaces, RJE/1000, CRT and printing terminals, multipoint and multiplexer software and interface, other data communications interfaces, and data capture peripherals. REVISED
5953-3084	7/79	**HP 1000 Computers and Systems Mature software data,** 44 pp data book covering RTE-II, RTE-IV, and other software that is available, but out of the mainstream of ongoing development efforts, and thus is not recommended for new applications. REVISED
5953-4206	6/79	**HP 1000 Computers and Systems Active software data,** 80 pp B&W data book that covers RTE-IVB, GRAPHICS/1000, IMAGE/1000, DATACAP/1000, and other software, except software pertaining to distributed systems and data communications. The software covered in this book is in the mainstream of ongoing development, and thus is recommended for new applications. REVISED

SOFTWARE LITERATURE

5953-3097	5/79	**AN 400-1, Factory Data Collection, A Quality Assurance Early Warning System,** 28 pp, two-color. NEW
5953-3088Z	12/78*	**AN 400-2, Factory Data Collection, An example of how to implement an HP 1000-based labor and job status reporting system,** 16 pp, B&W, NEW
5953-4211	4/79	**IMAGE/1000 Performance brief,** 12 pp, two-color discussion of 92069A IMAGE/1000 performance testing for throughput and response. NEW
5953-3086Z	11/78	**92067X RTE-IV Software Sources Product,** 1 pp B&W data sheet.
5953-0813	7/77	**HP 1000 Computer Systems — Building an Inventory Control Data Base AN 212-1,** 16 pp, two-color.
5953-0814	4/77	**HP 1000 Computer Systems — Building an Order Processing Data Base AN 212-2,** 18 pp, B&W.
5952-1615	3/76	**Process Control Software Review,** 8 pp reprint of Instrumentation Technology article by Van Diehl.

This is the date that appears on AN 400-2; actual publication date was 5/79.

5952-9949	9/76	**Network techniques for Multiple Minicomputers,** 4 pp reprint of article by Dave Borton.

COMPUTERS, ACCESSORIES, INTERFACES, AND SUBSYSTEMS LITERATURE

5953-4222	6/79	**AN 402-1, VIS, High performance matrix processing for computation intensive applications,** 6 pp, two-color. NEW
5952-9929	4/76	**HP Journal Artcles on: 21MX Processors — Microprogramming — Software,** 64 pp of HP Journal article reprints.
5953-3070	10/78	**AN 281-1 Microprogramming — a way to get higher performance from HP 1000 Computers,** 12 pp, full-color cover, two-color inside. NEW
5953-0890	12/76	**Unravelling the mystery of user microprogramming,** 16 pp reprint of three-part article by Bob Frankenberg in June, July, and September 1976 issues of Mini-Micro Systems magazine.

HP-IB IN HP 1000 COMPUTERS LITERATURE

5953-2800	7/79	**AN 401-1, HP 1000/HP-IB Programming Procedures,** 72 pp, two-color on buff paper. NEW
5953-2801	5/79	**AN 401-2, 59307A VHF Switch — HP 1000 Computer, HP-IB Programming Guide,** 8 pp, two-color on buff paper. NEW
5953-2802	4/79	**AN 401-3, 5345A Electronic Counter — HP 1000 Computer, HP-IB Programming Guide,** 12 pp, two-color on buff paper. NEW
5953-2803	6/79	**AN 401-4, HP 5342A Microwave Counter — HP 1000 Computer, HP-IB Programming Guide,** 12 pp, two-color on buff paper. NEW
5953-2804	4/79	**AN 401-5, 5328A Universal Counter — HP 1000 Computer, HP-IB Programming Guide,** 16 pp, two-color on buff paper. NEW
5953-2805	4/79	**AN 401-6, HP 3438A Digital Multimeter — HP 1000 Computer, HP-IB Programming Guide,** 4 pp, two-color on buff paper. NEW

Literature Stock No.	Pub Date	Title and Description
HP-IB IN HP 1000 COMPUTERS LITERATURE (CONTINUED)		
5953-2806	4/79	**AN 401-7, HP 3455A Digital Multimeter — HP 1000 Computer, HP-IB Programming Guide,** 10 pp, two-color on buff paper. NEW
5953-2807	4/79	**AN 401-8, 59309A Digital Clock — HP 1000 Computer, HP-IB Programming Guide,** 4 pp, two-color on buff paper. NEW
5953-2808	4/79	**AN 401-9, HP 6002A Power Supply — HP 1000 Computer, HP-IB Programming Guide,** 8 pp, two-color on buff paper. NEW
5953-2809	4/79	**AN 401-10, HP 3437A System Voltmeter — HP 1000 Computer, HP-IB Programming Guide,** 18 pp, two-color on buff paper. NEW
5953-2810	6/79	**AN 401-11, HP 3495A Scanner — HP 1000 Computer, HP-IB Programming Guide,** 16 pp, two-color on buff paper. NEW
5953-2811	7/79	**AN 401-12, HP 3482A Spectrum Analyzer — HP 1000 Computer, HP-IB Programming Guide,** 20 pp, two-color on buff paper. NEW
5953-2812	6/79	**AN 401-13, HP 3325A Synthesizer/Function Generator — HP 1000 Computer, HP-IB Programming Guide,** 16 pp, two-color on buff paper. NEW
5953-2813	6/79	**AN 401-14, HP 4262A LCR Meter — HP 1000 Computer, HP-IB Programing Guide,** 10 pp, two-color on buff paper NEW
5953-2814	7/79	**AN 401-15, HP 8672A Synthesized Signal Generator — HP 1000 Computer, HP-IB Programming Guide,** 12 pp, two-color on buff paper. NEW
5953-2815	4/79	**AN 401-16, HP 436A Microwave Power Meter — HP 1000 Computer, HP-IB Programming Guide,** 12 pp, two-color on buff paper. NEW
5953-2817	5/79	**AN 401-18, HP 59306A Relay Actuator — HP 1000 Computer, HP-IB Programming Guide,** 8 pp, two-color on buff paper. NEW
5952-3023	6/78	**HP 1000 Computer Systems The Hewlett-Packard Interface Bus: A versatile interconnect system for instruments and controllers — General Information,** 12 pp one-color, adapted and updated from 1978 HP Catalog.
5952-1578	5/76	**AN 201-1 Automatic Q-A Evaluation of Precision Resistors,** 4 pp, one-color HP-IB Minicomputer application note.
5953-0864	7/77	**AN 201-4 Performance Evaluation of HP-IB using RTE Operating Systems,** 16 pp B&W HP-IB application note.
5953-0863	11/77	**AN 201-6 Computer Interconnections A choice of ways to link HP 1000 Computer Systems to HP 9825A Desktop Computers,** 22 pp B&W HP-IB Application note.
5953-3004	3/78	**AN201-7 HP 1000/HP-IB High performance software for the HP 3455A/3495A subsystem,** 4 pp two-color HP-IB application note.
MEASUREMENT AND CONTROL PRODUCTS LITERATURE		
5952-5530	6/77	**HP 1000 Computer Systems Affordable power to help increase productivity in the real-time world of measurement and control. Measurement and Control Specifier,** 6 pp two-color brochure.
5952-8506	4/77	**Measurement and Control Peripherals Technical Data,** 55 pp B&W data book covering 9603R, 9611R, 2313B, 91000A, 91063A, and other measurement and control interfaces and related software.
5952-8541	6/77	**HP 2240A Measurement and Control Processor An intelligent analog/digital subsystem to simplify product test and equipment control,** 6 pp full-color brochure.
5952-8542	4/78	**HP 2240A Measurement and Control Processor Technical Data,** 48 pp B&W data book. REVISION OF PREVIOUS DATA BOOK
5953-3091	12/78	**HP 2240A Measurement and Control Processor Extended Performance Option Technical Data Supplement,** 12 pp B&W. NEW
5952-8543	4/78	**HP 2240A Measurement and Control Processor Configuration Guide,** 18 pp B&W. REVISION OF PREVIOUS GUIDE
5952-8544	4/78	**HP 2240A Measurement and Control Processor Measurement and Control Examples AN 224-1,** 22 pp B&W. REVISION OF PREVIOUS AN 224-1
5952-8546	4/78	**HP 2240A Measurement and Control Processor Signal Conditioning: HP 22914A Breadboard Card AN 224-2,** 8 pp B&W.
5952-8547	7/78	**HP 2240A Measurement and Control Processor — HP 2240A with HP 9830A Desktop Computer Performance Brief,** 4 pp B&W. NEW

Literature Stock No.	Pub Date	Title and Description

AUTOMATIC TEST SYSTEMS LITERATURE

5952-8545	1/78	**HP-ATS Automatic Test Systems Systems, services and products for automatic testing,** 12 pp two-color brochure
5952-8532	1/78	**HP-ATS Automatic Test Systems Integration Services Configuration Guide,** 30 pp B&W.
5952-8531	1/78	**93282A through 93285A and 92426A Integration Services for Automatic Test Systems,** 6 pp B&W data sheet.
5952-8525	8/77	**9411A Switch Controller,** 2 pp B&W data sheet.
5952-8526	8/77	**9412A Modular Switch,** 8 pp B&W data sheet.
5952-8527	8/77	**9413A VHF Switch,** 4 pp B&W data sheet.
5952-8528	8/77	**9414A Matrix Switch,** 8 pp B&W data sheet.
5952-8524	1/78	**9415A Digital Test Unit,** 8 pp B&W data sheet.
5952-8530	8/77	**HP Switch Products and Digital Test Products Configuration Guide,** 30 pp B&W.

OTHER LITERATURE

5953-0881	9/77	**29402B System Cabinet,** 4 pp B&W data sheet.

Video Tapes (Transmit a HEART (COCHISE) I2 order to Video Products, 95, Division 0700 Palo Alto at $30 per tape)

NOTE: These videotapes are for HP use only; although they can be **shown** to customers, **they must not be sold or given away**.

Tape No.	Issue Date	Title/Description
90289Z	7/74	HP's new 21MX Computer Series
90309Z	10/74	HP 9600 Real-Time BASIC Measurement and Control Systems
90360Z	4/75	HP 9700 Application: U.S. Department of Interior
90557Z	8/76	The 21MX as HP-IB Controller
90650Z	10/77	DS/1000
90797Z	6/78	DSD April NPT Highlights — Part I, B&W (HP 1000 Systems, F-Series Processor, RTE-IV, GRAPHICS/1000, Multipoint, HP 2240, etc.) for ICON.
90798Z	6/78	DSD April NPT Highlights — Part II, B&W (HP 1000 Systems, F-Series Processor, RTE-IV, GRAPHICS/1000, Multipoint, HP 2240, etc.) for ICON.
90783Z	5/78	HP 2240A Analog Enhancements.
90684Z	5/78	Lot sizing Part I, Economic Order Quantity-Theory and Practice (color) (for manufacturing applications).
90786Z	6/78	San Diego Division April NPT Highlights (B&N) introducing the 9872A, 7221A, and 7245A plotters.
90795Z	6/78	DSD NPT Demos Part I (F-Series Processor, RTE-IV, GRAPHICS/1000 and Multipoint).
90796Z	6/78	DSD NPT Demos Part II (Demonstration of MACS).

NOTE: The following additional video tapes comprise an in-depth series on the topic of manufacturing control, and, as such may be useful in supporting sales of HP Computer Systems, IMAGE, and DATACAP into manufacturing control applications. Customers must obtain these tapes by contacting:

Mather & Plossl, Inc.
P.O. Box 32490
Decatur, Georgia 30032

90701Z	9/77	An overview (of manufacturing control) for the manager.
90702Z	9/77	The system (of manufacturing control).
90703Z	9/77	Ordering techniques.
90704Z	9/77	Material requirements planning mechanics, part I.
90705Z	9/77	Material requirements planning mechanics, part II.

Tape No.	Issue Date	Title/Description
90706Z	9/77	Material requirements planning applications.
90707Z	9/77	Material requirements planning enhancements.
90708Z	9/77	Material requirements planning problems.
90709Z	9/77	Material requirements planning financial applications.
90710Z	9/77	The master production schedule — Development.
90711Z	9/77	Master production schedule uses.
90712Z	9/77	Forecasting techniques.
90713Z	9/77	Managing the forecast.
91714Z	9/77	Lot sizing (determining when more of an item should be ordered, and how much).
91715Z	9/77	Developing bills of material.
91716Z	9/77	Structuring bills of material.
91717Z	9/77	The lead time syndrome.
91718Z	9/77	Capacity planning.
91719Z	9/77	Capacity control.
91720Z	9/77	Safety stock, time, and capacity.
91721Z	9/77	Selecting, scheduling and loading work.
90722Z	9/77	Shop floor control.
90723Z	9/77	Designing and implementing systems.
90724Z	9/77	Return on the system investment.
90725Z	9/77	Making manufacturing control effective.
90726Z	9/77	Record accuracy.
90727Z	9/77	Essentials of inventory management.
90728Z	9/77	Practical considerations in inventory management.
90729Z	9/77	Establishing the business plan.
90730Z	9/77	Making enough with less in process.
90731Z	9/77	Making the right things.
90732Z	9/77	The real handles on manufacturing.
90733Z	9/77	Organizing for results.
90734Z	9/77	Traps to avoid.
90735Z	9/77	Techniques of record accuracy.
90736Z	9/77	Coping with the real problems.
90737Z	9/77	Manufacturing control in the small plant.
90738Z	9/77	Manufacturing control, the last frontier for profits.

Slide Kits & Miscellaneous Sales Aids (order from: Division 22/Bldg 42U/Cupertino/ Attn: Chris Carney with a Heart order only, at the cost noted below)

Kit No.	Issue/Rev Date	Media	Transfer Cost	Title/Description
BS-10	11/77	Overheads	$ 40.00	DS/1000 Pitch
BS-11	2/78	35 mm Slides	10.00	DS/1000 (19 slides)
BS-12	4/78	35 mm Slides	100.00	NPT/1000 (223 slides)
BS-13	4/78	Overheads	100.00	Micro Prog. Seminar
BS-14	10/78	35 mm Slides	22.00	Computation (43 slides)
BS-15	10/78	35 mm Slides	11.00	OEM Policy (21 slides)
BS-16	12/78	Belt Buckles	5.00	HP 1000
BS-17	2/79	System Photos	30.00	8 System Photos
BS-18	6/79	35 mm Slides	250.00	New DSD Customer Product Slide Kit (433 slides)
BS-19	6/79	35 mm Slides	50.00	Customer Management Seminar
BS-20	6/79	35 mm Slides	30.00	Computers in Manufacturing
BS-21	7/79	35 mm Slides	65.00	Measurement & Control (2240, HP-IB, Fiber Optic w/o 1000 pitch — 125 slides)
BS-22*	6/79	10 oz. coffee mug	2.25	Customer Seminar Premium
BS-23	6/79	Murals	400.00	6-40x60 NPT color photos (usually used in conjunction w/BS-19)

**Minimum order quantity for BS-22 is 12 coffee mugs*

DSD Pocket Guide

NOTE: The DSD Pocket Guide is provided free of charge for use by FEs, SEs, RSMs, DMS, System analysts, and Staff Engineers who need a compact in-the-field price reference aid. It is not available to other HP or non-HP people, and must be used with caution because it contains little or no information on prerequisites. The information in the Pocket Guide, augmented by more data on prerequisites and configuration considerations, is provided in the following sales literature pieces (literature numbers are listed in the literature section):

- HP 1000 Computer Systems Configuration and Site Preparation Guide
- HP 1000 Computers Selection and Configuration Guide
- 2240A Measurement and Control Processor Configuration Guide

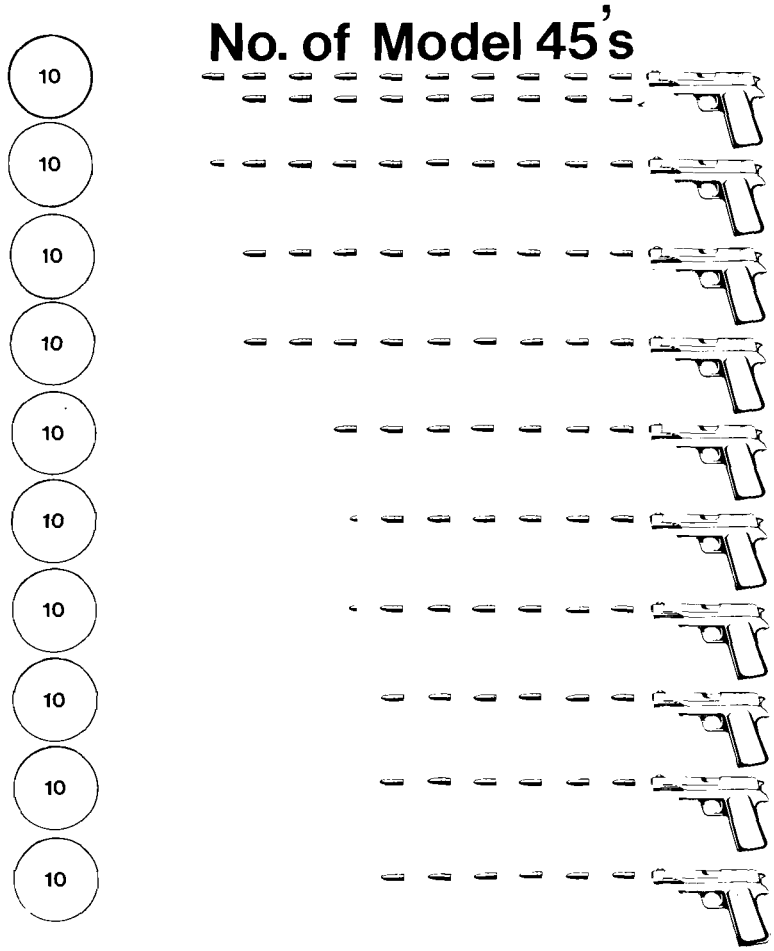
Division News

HP 1000 Model 10 Contest Over — Winners Announced

By: Orrin Mahoney/DSD

The HP 1000 Model 10 contest ended as planned on July 31, and because it was a close race for the final three places it has taken us a while to publish the final standings. First place with nineteen, yes nineteen, Model 45's sold this year is *Sol Asbagh* from Neely Santa Clara. The other nine winners are shown below. There were many other close contenders and Data Systems wishes to thank all of you for making the HP 1000 Model 45 our largest selling system for the month of July. Contest prizes will be awarded in conjunction with the fall sales meetings.

HP 1000 MODEL 10 CHALLENGE



Sales Rep.	Region
S. Asbagh	Neely
J. Friedman	Eastern
J. Clauson	Eastern
F. Rombach	Germany
J. Kollataj	S. Africa
J. Bereda	MSR-EAST
A. Brogi	Italy
A. Ashat	Israel
J. Hughes	Midwest
H. Reinhardt	Germany

DATA TERMINALS NEWS

Division News

DTD Training Program

By: Robin Leigh/DTD

The terminal training program at Cupertino (see Grenoble for HPSA training) for the fall of 1979 and 1980 is as follows:

A. SE Level I

This is for all HP employees who have recently completed the Corporate/CSG Overview class, and expect to act as a SE in either the technical, commercial or horizontal area.

After completion of the SE Level I, they will have a basic understanding of the capabilities and operation of all current products in HP's terminal lines (Boise, DTD, Grenoble, Loveland, San Diego and Vancouver).

	Week Of:	Week Of:
Dates:	September 24, 1979	January 7, 1980
	October 15, 1979	January 28, 1980
	November, 5, 1979	March 10, 1980
	November 26, 1979	April 21, 1980

Length: 5 days
Classes held: DTD/Cupertino
Class size: Limited to 16 students

B. SE Level II

This is for all terminal field personnel who have completed SE Level I, or have equivalent experience and knowledge of the terminal product lines, and will be acting as area terminal SE's.

	Week Of:	Week Of:
Dates:	October 22, 1979	February 4, 1980
	October 29, 1979	February 11, 1980
	December 3, 1979	March 17, 1980
	December 10, 1979	March 24, 1980
		April 28, 1980
		May 5, 1980

Length: 10 days
Classes held: DTD/Cupertino
Class size: Limited to 12 students

C. ATT advanced Terminal Training (SR's) (formerly Terminal Specialist Class)

This course is for computer product field personnel who have *completed the Corporate/CSG Overview* and is expected to function as a Terminal Specialist Sales Representative or an experienced Sales Representative who has a large terminal sales potential in their territory.

After completion of this course the SR will have a basic understanding of HP's terminal product lines (Boise, DTD, Grenoble, Loveland, San Diego and Vancouver).

	Week Of:	Week Of:
Dates:	October 8, 1979	January 28, 1980
	November 12, 1979	March 17, 1980
	December 17, 1979	April 28, 1980

Length: 5 days
Classes held: DTD/Cupertino
Class size: Limited to 16 students

D. TSTT — Technical Systems Terminal Training

There will be a one-week terminal class with a technical systems orientation. This will be attended by SR's enrolled in the Technical Product Training Program. For this class the student will obtain basic understanding of the terminal and its use with technical systems.

Dates: January 1980

Length: 3-5 days
Class held: Cupertino
Class size: Same as Technical Product Training Class

E. CSTT — Commercial Systems Terminal Training

There will be a one week terminal class with a commercial systems orientation. This will be attended by SR's enrolled in the Commercial Product Training Program. From this class the student will obtain basic understanding of the terminal and its use with commercial systems.

Dates: January 1980

Length: 3-5 days
Class held: Cupertino
Class size: Same as Commercial Product Training Class

For registration — please telex *Roxanne Hetzel*/CSG Training Registrar COMSYS no. 5000, with a copy to *Robin Leigh*/DTD Training Coordinator COMSYS no. 4200.

NOTE: If any sales regions use a central regional Training Coordinator — please continue to do so. It will be the responsibility of the regional Training Coordinator to make sure registrations are made by telex to *Roxanne Hetzel*/with a copy to *Robin Leigh*/DTD.

Product News

Downloading the BASIC Interpreter?

By: Kalli Louis/DTD

Can the 2647A BASIC Interpreter on cartridge tape (02647-13301) be downloaded from the CPU into the terminal? The answer is no. The BASIC Interpreter is written in binary loader format. This format can be read in through the cartridge tapes directly into the terminal's program memory. "So what!" You say, "Data can be sent from the CPU to the terminal in a binary format. How does that prevent me from downloading the BASIC Interpreter into the terminal?" When the BASIC Interpreter is loaded into the terminal's program memory via Data Comm is in ASCII loader format and the Data Comm must have ASCII loader format to load the terminal's program memory.

264X DC1/DC2 Handshaking

By: Dave Williams/DTD

The HP DC1/DC2 handshaking process prevents block data transmission losses at a high speed (4800 baud) between the TERMINAL and the CPU. For successful TERMINAL-CPU handshaking, the CPU software must support the handshaking process used in block data transfers.

The DC2 character must be recognized as a request to send data and the DC1 character must then be sent to trigger the transfer after the CPU's buffers have been allocated to receive the data.

The G and H straps on the keyboard interface PCA are used to control the terminal's response to block transfer requests. The table below outlines the G and H strap settings and resultant handshaking for 264X terminals:

Switch G	Setting H	Block Operation
Closed	Closed	Data transfers used DC1/DC2 handshake. Other transfers are triggered by the receipt of a DC1 character.
Closed	Open	Data is sent when the ENTER key is pressed. Other block transfers are triggered by the receipt of a DC1 character.
Open	Closed	All block transfers require a DC1/DC2 handshake.
Open	Open	No DC1/DC2 handshake is required for any block transfer.

Note: In half duplex operation, a line turnaround is substituted for a DC1 character.

For the occasion when the 264X terminal is connected to a non-Hewlett-Packard system that does not support the DC1/DC2 handshaking process, both the G and H straps should be opened to inhibit terminal handshaking.

In this situation, a baud rate of less than 4800 baud may be required to prevent character losses during data transfers.

GENERAL SYSTEMS NEWS

Product News

The Samurai 250

By: Scott D. Oki/GSD & Kimio Kashiwagi/YHP

The HP 250 goes to Japan! Yes, we now have a Katakana version of the HP 250 hardware, operating system and QUERY. This new product (45258A) is fully supported from YHP.

In addition to the Katakana version, you and your customers (major accounts) might also be interested to know that the HP 250 hardware and operating system software has been localized for France, Germany, Sweden, Denmark, Spain Italy and the United Kingdom.

HP 250 Text Processing — Our First User Contributed Library Program

By: Jim Carlson/GSD

If you've had customers inquire about word processing on the HP 250, here's a user contributed program that might help.

Written by BAEDP, and modified by the HP 250 Documentation group, the EDIT word processing program was used to produce some of the HP 250 applications software documentation.

The program allows input, editing and printing of documents of any length. It has two features which make it somewhat easier to use than conventional text editors. First, the text is kept exactly as it appears on the screen. What you see is what you get when it is printed. To input or change text, simply make the text on the screen appear exactly as desired.

The second feature is that softkey commands are used to perform text formatting such as insert, delete, center, fill, right justify, etc. No need to remember special codes; just press the keys under the display for special formatting.

There are only two cautions about the use of the text processor. It's a contributed library program and not supported by HP. And it drives the 2631A Printer which does not provide a typewriter quality print out.

If you would like a copy of this program, simply send an initialized flexible disc (for the HP 250) to *Arden Schlichting* at GSD, Cupertino. Include a note with your name and address the fact that you want the "FCD Text Processor." You will receive the program on your disc along with a Zeroxed copy of the user's instructions.

New Release of HP 300 SE Programs Library

By: Ann McCown/GSD

The HP 300 SE Programs Library has been updated to run on the A.02.03 version of the HP 300 Operating System. Programs such as IBMFCOPY (the IBM format flexible diskette copier) and FRECOVER (the file recovery utility) cannot be moved from the earlier version of the library to the

new hardware. Conversely, you cannot move these programs from the new library to A.01.01 or earlier systems. The BASIC and RPG language programs can be moved from old systems and recompiled; however, some bug fixes to the BASIC Compiler in A.02.03 will generate compiler errors on some ICALLs which used incorrect data types for parameters and got away with it in A.01.01. Also, some bugs in some of the programs have been fixed.

In addition, some new contributions have been added — most notably a DBLOAD and DBUNLOAD for databases. THE DBUNLOAD can optionally run DBRECOVER to attempt to recover a database with a file integrity error. Also, there is a program to do job streaming.

There has been one point of confusion about the HP 300 SE Programs Library. It is a subscription service by itself, with part number 5955-3220. It is NOT included as part of the SE Support Kit Subscription Service (5955-3232)! The library must be ordered specifically — you do not get it automatically. To order it, send a COMGRAM to *Ralph Sierra* at the Software Distribution Center (SDC) in Cupertino. If you think you should receive the update to the library, and it does not arrive fairly soon after you see this article, call *Ralph Sierra* and verify that you are signed up for the subscription.

Multi-User MFG/250

By: Scott D. Oki/GSD

MFG/250 takes full advantage of the multi-user capabilities of the hardware and system software. Now, up to six users can access the same program concurrently! The multi-user feature complements the structure of the software very nicely.

The software has been segmented functionally so that softkey menus correspond to functional areas such as engineering, stockroom, accounting and materials/ production. Such functionality naturally lends itself to remote processing in each of the respective areas. In this case, different users can be running different programs while accessing the same data base.

A common use of the multi-user capability is in the adding/editing of data in the data base and the reporting of the data. The software handles the adding/editing of data of up to six users by building transactions which are processed during the next batch update. (The update can occur as often as desired; the design center is daily at the end of the day.) Eight hundred transactions can be input before an update is required.

Transactions are built/edited on a first-come, first-served basis. The software can also handle user output requests concurrently provided you have a sufficient number of printers; or, if printers are limited, output requests will be queued automatically.

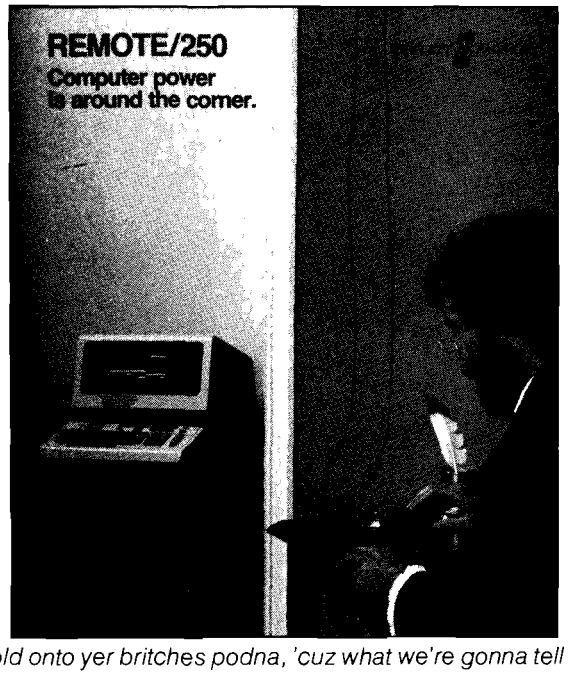
The user can exit from the queue if he does not want to wait. Most reports also have a condensed form which can be printed to the CRT for immediate review. In addition, the report parameters can be built into a transaction and the report run automatically at the end of the next batch update.

There are three functions that require exclusive access to the data base, consequently locking out multi-user capability. The first is when making gross changes to the data base, i.e., update and recovery. Secondly, during system parameter changes, i.e., control file changes require exclusive use of the pack. Finally, when implementing mass-memory configuration changes where, in a multi-user environment, more disc volumes may be required than there are disc drives to hold them. (This only occurs for history reports since the history data is on a set of flexible discs.)

With these few limitations in mind, you can now sell multi-user MFG/250 . . . sell multi-user MFG/250 . . . sell multi-user MFG/250 . . . sell multi-user MFG/250.

HP 250 Now a Six Shooter

By: Scott D. Oki/GSD



"Hold onto yer britches podna, 'cuz what we're gonna tell ya will make yer suspenders pop." Revision D to the operating system has arrived! With it, the HP 250 has a chamber of six

silver bullets. It allows up to six users working concurrently on an HP 250 (main console and five REMOTE/250s).

To begin with, some new DROMS were added to the operating system disc to make possible the introduction of the multi-user capabilities. IMAGE 2 contains record locking capabilities. Matrix operations executable in BASIC are located in the MATRIX DROM. And the new ALIEN DROM provides read only access to data stored on IBM 3740-formatted, 256 Kbyte discs.

Other significant changes to the SYSTEM include enhancing the ASSIGN statement to control concurrent data file access. A parameter specifies exclusive, update or read only mode. Also, the following STRUCTURED programming constructs have been added:

IF. . . . THEN. . . .ELSE
WHILE. . . .END WHILE
LOOP. . . .EXIT IF. . . .END LOOP
REPEAT. . . .UNTIL
SELECT. . . .CASE. . . .END SELECT

A special "HOP" key has been added that allows a user to avoid single-stepping through subroutines.

Several new BINARIES and UTILITIES have been added. There is now a binary version of the DUPL utility. XCOPY allows any file (including data base) to be copied; the one exception is run-only. The DBMODS utility allows some modification to a data base without executing a BDUNLD and DBLOAD. Cross reference listings can be obtained through the XREF utility.

As you can see, with the release of REVISION D, a true multi-user capability exists on the HP 250. So keep those six shooters loaded and take aim on selling multi-user systems!

HP 3000 Software Compatibility

By: Chosen Cheng/GSD

Complete software compatibility among all HP 3000 systems is a major contribution. This is significant because HP 3000's present a common user interface on totally different hardware.

Compatibility is the result of dividing MPE into two sections:

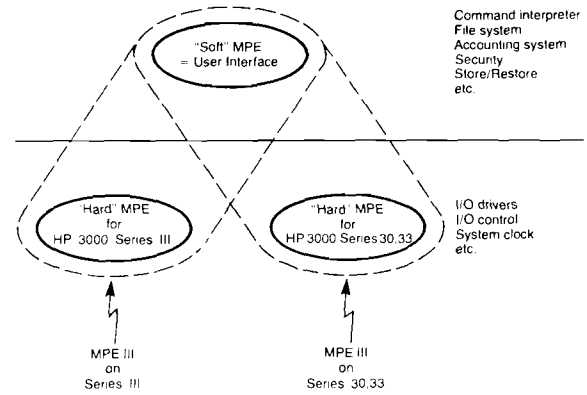
- one that is hardware dependent ["Hard"(ware) MPE] — i.e., unique to Series 30/33 or Series III
- one that is not hardware dependent ["Soft"(ware) MPE] — i.e., identified for Series 30, 33, III

This enabled our designers to customize for each computer system only those sections of MPE relating to the differences in HP 3000 hardware (about 15-20%).

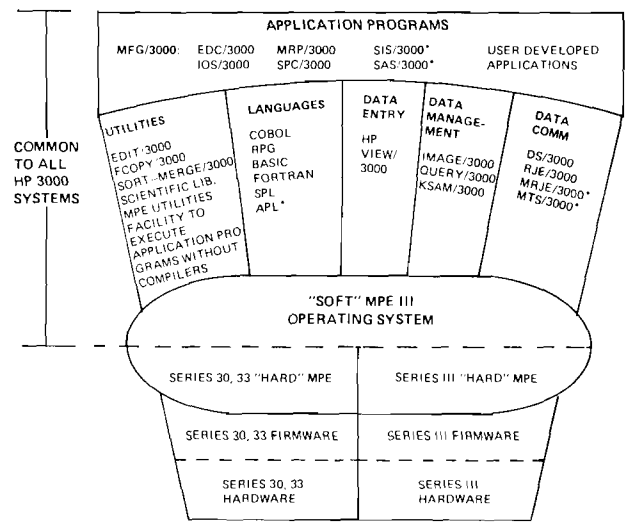
Sections changed include input/output drivers for peripherals and the system clock.

The rest of MPE (80-85%) is the non-hardware dependent section ("soft" MPE). "Soft" MPE is exactly the same code on all HP 3000 systems and is the user interface known as "MPE III".

Thus all HP 3000 systems under MPE III have an identical user-interface and compatible software:



One of the key HP 3000 strategies is software compatibility. You've just seen how this has been accomplished; the following chart shows all of the available HP software:



*Available only on HP 3000 Series II and Series III systems.

Manual Update Conversion Strategy: Sell MUS Now!

By: Carolyn Morris/GSD

Please notify your customers that as of January 1, 1980 manual updates will be distributed exclusively through CSS, SSS or MUS. In the past, HP 3000 customers have received manual updates at no cost by contracting GSD. This method of distribution will be discontinued after the first of the year, and request for individual updates will be returned with a letter to that effect.

Data Systems Division has already discontinued the free update service. GSD is providing a grace period for HP 3000 users because of the very high volume of requests for updates received each month.

Urge your customers to subscribe to the Manual Update Service as soon as possible so that they can be assured of timely and accurate documentation. Automatic updating will relieve them of the need to track changes in documentation. They no longer have to order updates or new editions in order to stay current. Your early contact will help your customers to make a smooth transition to our new support services.

QUERY/250 Now Stand-Alone

By: Scott D. Oki/GSD

With REVISION D of the operating system, the QUERY/250 utility program will reside on its very own distribution disc, separate from the rest of the operating system. This was done for a very good reason . . . we're running out of room! On-going enhancements to the operating system have increased its size to almost 1 megabyte.

Operating System	95K
DROMS	73K
Miscellaneous	40K
Utility Programs	520K
Customer Diagnostics	57K
QUERY	160K
	944K

That left very little room for workfiles, so QUERY moved to its own disc. Customers will now receive three discs with their HP 250 order: one QUERY disc and two copies of the Operating System disc.

What is FOS/3000?

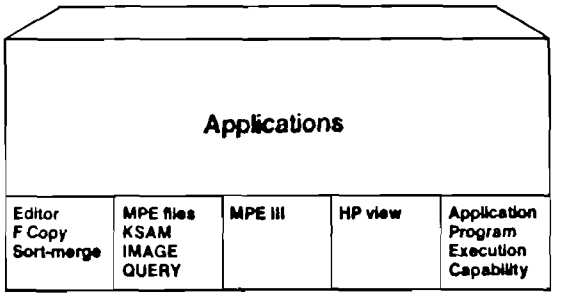
By: Rich Edwards/GSD

Standard on each HP 3000 System (Series 30, 33, III) is the Fundamental Operating Software (FOS) which consists of:

- Multiprogramming Executive III (MPE III) Operating System
- Text editor (EDIT/3000)
- File copying utility (FCOPY/3000)
- Sort and Merge package (SORT-MERGE/3000)
- Data base management system (IMAGE/3000)
- Data base inquiry language (QUERY/3000)
- Keyed Sequential Access Method Software (KSAM/3000)
- Forms management software (HP VIEW/3000)
- Facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000).

Thus each base HP 3000 business system — without the purchase of additional software — can execute application programs written with IMAGE, KSAM, and VIEW. Additional software need only be purchased for program development (6 high-level languages), data communications, or HP developed applications such as MFG/3000.

SOFTWARE STANDARD ON EVERY HP 3000



A foundation for your applications

Example: A customer develops an inventory control application on a Series 33 at the customer's central site. The application, written in COBOL, uses HP VIEW/3000 and IMAGE/3000. To run this application on any HP 3000 Series 30, 33 or III at additional sites, the customer merely purchases a base HP 3000. Software is totally compatible between the systems and the FOS on each system includes all the software needed to run the application.

How to Order the HP 300 Communicator

By: Ann Marcos/GSD

The HP 300's new 2-word P-Label hardware release and A.02.03 software release are being introduced to the field. They will result in improved performance and reliability. Information on these new releases is given in the latest issue of the HP 300 Communicator (issue #2). If you do not subscribe to the SE Support Kit and wish this information, the Communicator can be ordered by sending an Internal Order Form to:

Ralph Sierra
Software Distribution Center
19310 Pruneridge Ave.
Cupertino, California 95014

Part # 31000-90045
Kardex 09
Entity 06
Selling Division 50

New Datacom Software on Special MIT: 1918+Datacom

By: Tom Black & John Chisholm/GSD

As you know, GSD has just announced several major new data communications enhancements for the HP 3000:

- DS and RJE on the INP (Series 30, 33, III)
- MRJE enhancements, including JES 3 and ASP compatibility (Series III)
- MTS enhancements (Series III)

A special MIT called 1918+Datacom will be issued containing these important enhancements. 1918+Datacom will contain EVERYTHING on 1918, PLUS all of the above datacom enhancements!

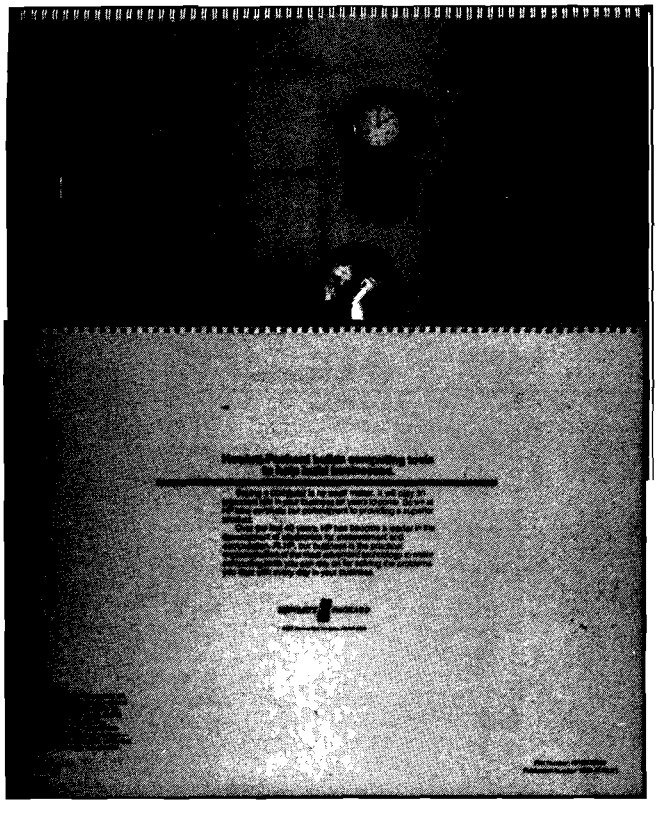
1918+Datacom will potentially be of interest to any customers using MTS or MRJE on the Series III, so be sure to have your field support engineer install it on those systems. In addition, 1918+ will be required for use of the INP. If a customer will be using 1918+Datacom, we recommend that 1918 be installed first. This is because 1918 contains significant MPE enhancements as well as some datacom enhancements of its own. 1918+Datacom will be available as soon as possible after 1918 is released.

GOOD SELLING!

Sales Aids

Ordering MFG and OM Report Brochures

By: Jim Geer/GSD



A fair amount of confusion has arisen over how and where to order the MFG and OM reports brochures — they're the large, spiral-bound brochures. These special-purpose sales aids are intended to provide qualified prospects with detailed information on these solutions for manufacturers and distributors.

Where to order the reports brochures is simple: Computer Parts Center, Division 15. (They are *not* stocked by Corporate Literature Distribution in Palo Alto.)

The how, especially what Part Number, is a point of confusion. But first, remember that all reports-brochure orders are placed via the HEART system. Following is the correct ordering information:

	Part Number	Cost
• MFG/250 Reports Brochure	45180-90080	$3.25
• OM/250 Reports Brochure	45190-90080	$4.50

The Part Number appears in the bottom-right corner on the back cover of each reports brochure. Please disregard the Publication Number listed below the appropriate Part Number.

This element of confusion aside, the response to these brochures has been excellent. The large format makes it possible to practically demo the applications packages without a system. The benefits of the software solutions are highlighted with sample reports and a description of them.

Hopefully, the reports brochures will make selling HP 250s, MFG/250 and OM/250 easier for both you and your OEMs.

September HP Journal Features HP 3000/33

By: Rich Edwards/GSD

Looking for a good technical piece on HP's application of Silicon-on-Sapphire technology to the HP 3000 product line? The September issue of the *Hewlett-Packard Journal* features the Series 33 with 6 articles.

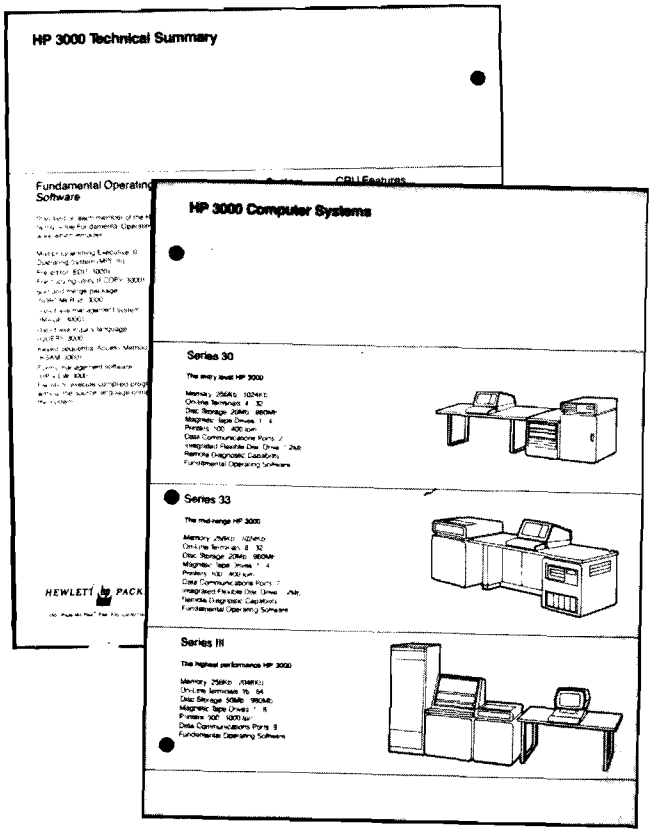
Articles discuss how the SOS technology was coupled with MPE to create a low cost HP 3000 system, how MPE was adapted to the new hardware, the service aspects of the system including new diagnostics, and the achievement of meeting worldwide regulatory requirements for safety and electromagnetic interference. Also, the RSVP program for remote computer troubleshooting is described with details on how problems can be diagnosed before a service person is sent on site.

The new Series 30 shares the same architecture with the Series 33, so this issue of the HP Journal will be a good sales piece for technical specifiers examining either SOS-based HP 3000.

GOOD READING AND GOOD SELLING!

New HP 3000 Illustrated Data Sheet

By: Rich Edwards/GSD



Have your customers been looking for a single sheet with a summary of the HP 3000 technical data? You now have just what they need in a compact format. Line drawings of the systems (Series 30, 33 and III) with minimum and maximum configurations complement a page of technical data.

This is a good systems summary to be used stand alone or with the flyer "Systems Overview" in direct mail or seminars. Note that the identical material is included in the four-color brochure, "Management Summary".

The data sheet is in disbribution as a free stand-alone 2-color piece, part number 5953-0585.

HP 3000 Management Summary Brochure a Sure Winner!

By: Pete Sinclair/GSD

What can follow the outstanding success of the AN INTRODUCTION FOR MANAGERS brochure? . . . it has to be the superb new MANAGEMENT SUMMARY brochure being introduced on the September NPT. This new brochure offers a number of key features that are sure to make it a bigger success then its predecessor. Among these features are:

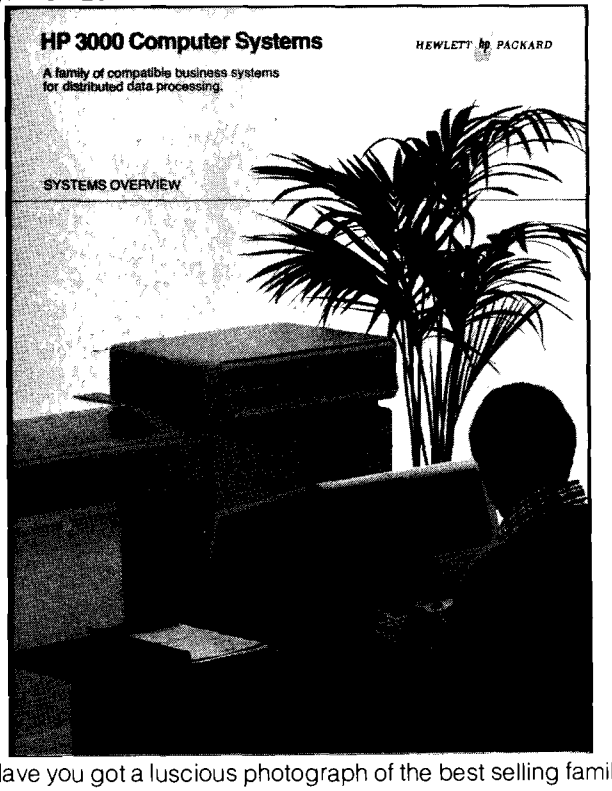
- An orientation on the HP 3000 product — its capabilities, distributed processing nature, performance, quality, and lasting value.
- It gives the reader a pride in ownership feeling, a feeling that "I have to have one of those too", by focusing in on the quality of each and every HP 3000 system component.
- Personal interviews with managers in a variety of companies who speak candidly on why distributed data processing, reliability, flexibility, functional capabilities, support, and price/performance led them to the HP 3000 solution.
- A comprehensive data sheet on all three HP 3000 systems, providing software, hardware, and configuration details on each of the members of the HP 3000 family.
- The professional "Major Computer Company" image portrayed from cover to cover, detailing how HP can be the customer's total solution to his data processing needs.

This new brochure will give you the tool that you need to easily convey to your prospects what the HP 3000 family has to offer them and how it can be their data processing solution. It is your solution toward selling the HP 3000 solution. Make sure that you have a copy of the new MANAGEMENT SUMMARY brochure (available at your office soon) on hand when you call on your new prospects!

GOOD SELLING!!!

HP 3000 Pin-up

By: Rich Edwards/GSD



Have you got a luscious photograph of the best selling family of compatible business systems for distributed data processing on your wall yet? What are you waiting for? Inside the HP 3000 "Systems Overview" flyer, shown above, is the family portrait, in "living color":

The flyer/poster is being distributed in the HP 3000 Business Systems Field Sales Notebook during the current NPT Tour. It is in distribution now as a piece of free sales literature, part number 5953-0583. The flyer is designed to be an excellent mailer and seminar handout. Get the 1980 HP 3000 family portrait up on every customer's wall!

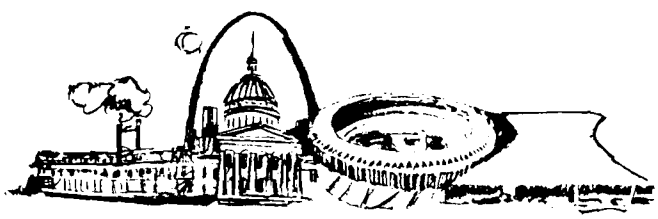
General News

APICS '79 — Annual Conference and Technical Exhibit

By: Martin Gonzalez/GSD

HEAR YE! HEAR YE! HEAR YE!

Announcing HP's Fifth Year at APICS!



If your customers are interested in hearing what industry experts (including a few from HP) think about manufacturing, they should attend the annual APICS convention to be held in St. Louis, Missouri on October 16-19, 1979. If they are interested in seeing what's new in solutions to manufacturers' problems, they should visit the HP exhibit and see MFG/3000, the Series 30 (KOALA), the HP 1000 with Data Capture terminals, and the HP 250.

APICS (American Production and Inventory Control Society) is the foremost professional organization in the field of Production and Inventory Control (PIC). This technical exhibit and conference is their largest gathering of the year. Materials managers, production managers, and other management personnel numbering over 5,000 are expected to attend. This is an excellent mix of people who can appreciate the applications capabilities of HP's manufacturing systems.

So, it would be beneficial to inform some of your existing and potential customers about this show. And to your customers who plan to attend, let them know about our super exhibit. Customers who need further information should contact:

APICS 1979 Conference Committee,
Watergate Office Building, Suite 504,
2600 Virginia Avenue, N.W.,
Washington, D.C. 20037

If you and/or other Sales Reps and S.E.'s you know do plan to attend the show, please contact me to request exhibitor passes.

PROMOTE APICS and GOOD SELLING!!!

Third Party Market Development Manager

By: Bill Krause/GSD

This past year our commercial sales organization has established an excellent Third Party sales program in the field. In particular we have designated at least one or more Third Party Sales Representatives in each horizontal commercial sales district responsible for finding new Third

Party customers and expanding our sales with existing Third Party customers. The introduction of lower cost Business Computers such as the HP 250, HP 300 and HP 3000 Series 33 further increases the importance of an aggressive, well-organized Third Party marketing and selling program.

Now that we have the field sales resources in place and a broad offering of low cost business systems, it is appropriate to pull together a major marketing program to take advantage of our Third Party opportunities. In this regard, I'm pleased to announce that *Vijay Kapoor* has accepted the assignment of GSD's Third Party Market Development Manager reporting to me. *Vijay's* previous assignments provide him with an excellent background for this assignment, the highlights including:

1. Two years of experience with HP's successful OEM market development group in 1972–74 at DSD.
2. Most recently his assignment as 300 Sales Development Manager directly supporting the commercial sales force.
3. Seven years of overall experience at HP in computer marketing assignments.

I am sure *Bob Kadarauch* and the entire 300 (Office Systems Program) team will miss *Vijay's* contributions. *Bob Kadarauch* will be communicating with you regarding *Vijay's* replacement, and in the meantime *Vijay* will be phasing into his new assignment over the next two–three weeks.

Please join me in wishing *Vijay* success in this challenging and important assignment.

A Promise to Think BIG

By: Vijay Kapoor/GSD

By any yardstick, the third party market is very important for HP's business systems. *Size*. It is already the largest single source of business for us. *Growth Rate*. It is growing faster than any other segment. *Long Term Importance*. It is well recognized as the way to go in the future.

This is what you and your customers have been telling us for sometime. Now, in my new function (as GSD's Third Party market development manager) I'm looking forward to the personal challenge of providing you with the level of complete factory support that you deserve and expect. I hope to fully staff the department up within the next few weeks.

Third Party Sales People — help me set the right priorities

In the meantime, while I'm trying to come up to speed, you third party sales reps can help me focus in the right direction. There are a number of areas we can put our initial emphasis on. Let me classify them four ways

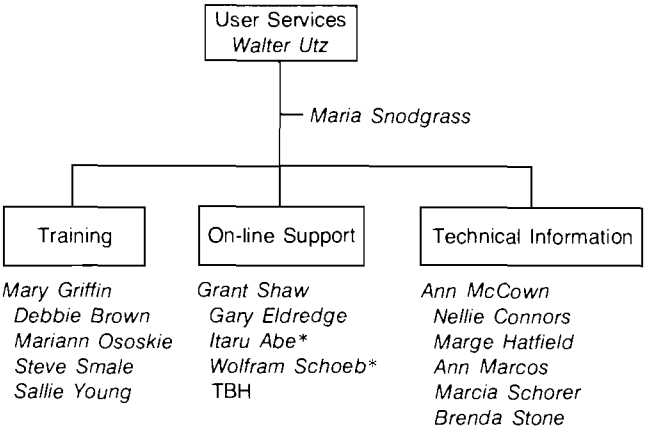
1. Help you get *new* business
   — ads, sales literature, seminar material
2. *Formalize* the third Party Program
   — write down how HP does business
   — policy handbook, etc.
3. Third Party *SR* support/training
   — organize periodic SR meetings
   — training
4. Market Development of HP's *Current* Customers
   — software information clearinghouse
   — customer education (including OEM Newsletter)

I would welcome hearing from you regarding ideas, priorities etc. on the above topics — or new topics that we should be working on. Give me a call, or write to me. I'm very excited to have been given this responsibility and look forward to providing you with the professional, result-oriented support that you are entitled to.

HP 300 User Services

By: Brenda Stone/GSD

The following chart shows the organization of HP 300 User Services:



*On loan for training.

The HP 250 Marketing Group Arrives in Cupertino

By: Jerry Peterson/GSD

At GSD-CUPERTINO, HP 250 Marketing Manager, *Jerry Peterson,* opens the first shipment from Fort Collins and finds a remarkably well-preserved *Jim Carlson,* HP 250 Product Marketing Manager.

HP 250 Marketing is set up to support you at Cupertino! We're conducting HP 250 sales training classes here (our first class was September 4, 5), hosting customer visits and manning the telephones to help you close 250 orders. We're in the process of recruiting a Sales Development group and as you can see from the attached Organization Chart, we've made good progress. *Caren Kelman*, a recent MBA graduate from MIT Sloan School of Management, will be joining us about October 15. *Kim Voots*, from HP's Rolling Meadows office, will be joining us November 1 bringing a year's worth of 250 field SE experience. *Charles Dixon*, who has been in charge of the Corporate Management Seminar at Palo Alto, joins us November 1 as well. Watch your next issues of the *CS Newsletter* for more information as these folks get on board and we assign region responsibilities.

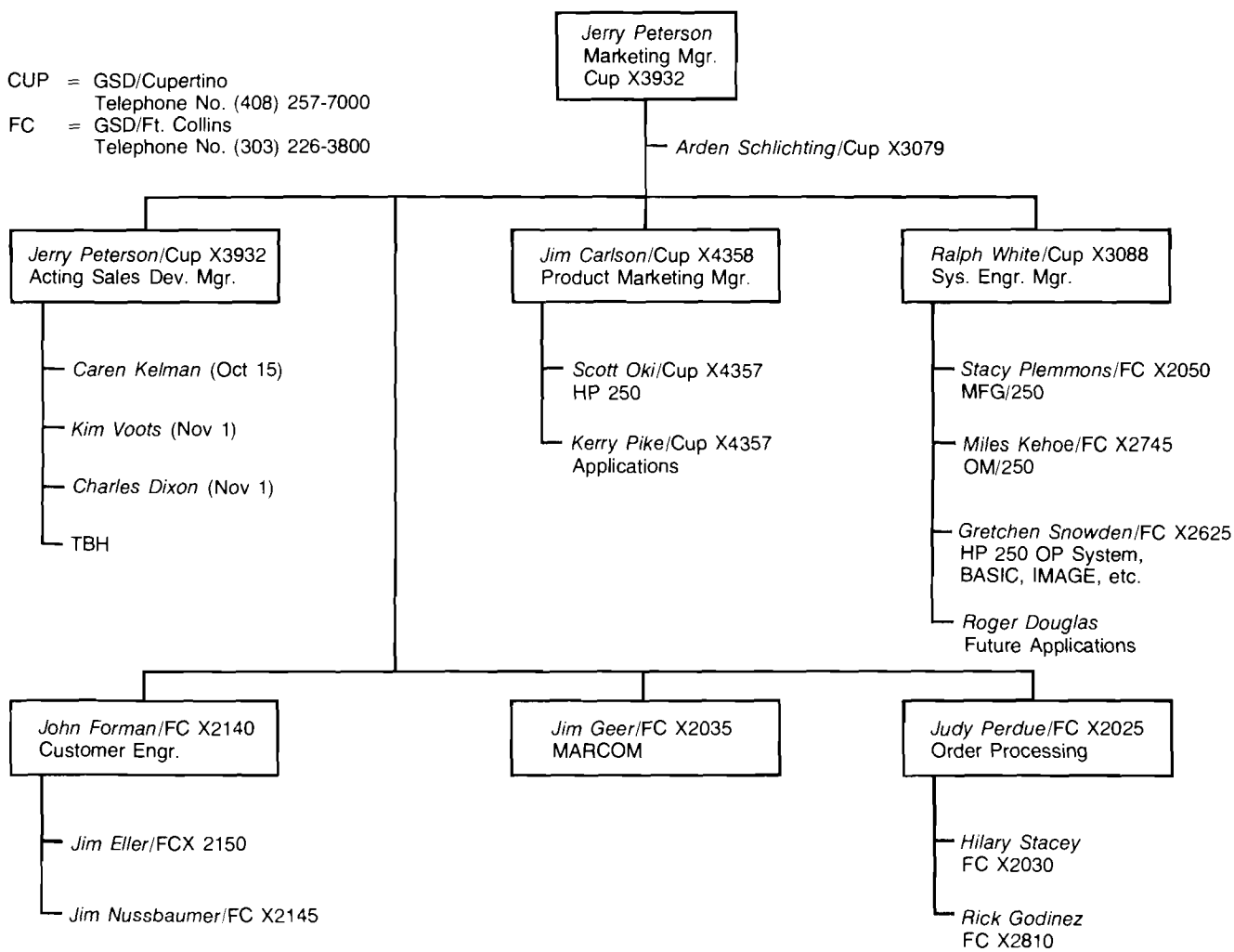
In the meantime, *Jim Carlson, Kerry Pike, Scott Oki, Ralph White* and I will do our best to help you close these HP 250 orders.

The Systems Engineering Group will also be moving here during October and should be "on-line" November 1. Customer Engineering will move here over the next few months as the HP 250 lab gets established in California.

Judy Perdue's Order Processing group will continue to operate in Fort Collins to be close to our manufacturing operation. Call *Judy* or *Hilary Stacey* directly if you have questions about deliveries.

Speaking of deliveries, I hope you've all noticed that HP 250 availability has dramatically improved over the past 3 months. Production has done a great job of shipping 250s, both at Forth Collins and Boeblingen. Call us — we can deliver!

The following chart shows your field contacts in HP 250 Marketing. We'll keep you updated as people move in:



HP 3000 Performance Specialists On the Loose!

By: Gwen Miller/GSD

Another HP 3000 Performance Specialist class has been successfully completed at GSD by Systems Engineers representing Neely, Eastern, Midwest, Europe, and Japan. The class was taught by *Ted Workman* and *Russ Yost* of the GSD MPE Support group, with *Chuck Storla*/Rolling Meadows (a previous PS graduate!) as a "guest" lecturer. The Performance Specialist training program is an integral part of our ongoing commitment to better performance and customer satisfaction.

The class consisted of one week of accelerated training on MPE internals followed by two weeks of training in performance measurement and use of performance tools. Specific topics included benchmarks, problem solving skills, performance consulting, and application design consulting. (And, as the photos show, there was also some practice in creative T-shirt design!)

Some of the offices represented are now offering performance consulting as an SEO product. We have added the names of these latest graduates to the list of previously trained Performance Specialists for your reference. All these SEs are ready, willing, and able to help customers solve performance problems and derive optimum performance from their HP 3000 systems.

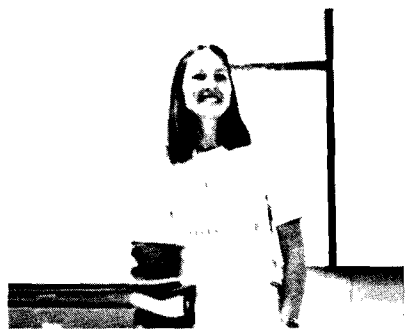
Check with your local SE management team for pricing and availability of these services in your area.

GSD Trained Performance Specialists

NORTH AMERICA

Neely	
Marc Cousins	Santa Clara
**Bob Shields*	Santa Clara
Jack Howard	Airport
**Darla Schmid*	Airport
Jim Spuires	Fullerton
Dan Coats	Bellevue
Ed Splinter	Airport
**Bernadette Reiter*	Inglewood
Eastern	
Sam Patsy	Rockville
Dennis Becker	Manhattan
Jerry Schwartz	New Haven
**Don Kavulick*	King of Prussia
**Don Schildt*	King of Prussia
Midwest	
Chuck Storla	Rolling Meadows
Dave Martin	St. Paul
**Russ Smith*	St. Paul
Alan Knodoff	Farmington Hills
Southern	
Don Van Pernis	Orlando
Jim Knoop	Richmond
Linda Jackson	Atlanta
MEXICO	
Dale Virgil	Mexico City
CANADA	
Ingrid D'Tomasso	Toronto
Wendy Byford	Montreal
AUSTRALIA	
John Klimczack	Sydney
EUROPE	
France	
Robert Abehassera	Orsay
Sweden	
Matts Joenson	Stockholm
Norway	
Per Olav Stenseth	Oslo
Netherlands	
**Willem-Jan Van der Veldt*	Amsterdam
Switzerland	
**Jean-Marc Berney*	Geneva
United Kingdon	
**Kim Leeper*	Winnersh
Germany	
Uwe Hinrichs	Hamburg
Horst Metz	Munish
ASIA	
Taiwan	
Iming Chen	Taipei
Singapore	
Lee Chin Hong	
Japan	
Chikara Suka	Tokyo

*New Performance Trained Specialists



GSD Ships the 3000th HP 3000

By: Kay Emerson/GSD

GSD celebrated the shipment of the 1000th HP 3000 in January, 1978. Since then, with the phenomenal sales success (thanks to all of you in the field) of the 1978 introductions of the Series III and Series 33, we have just shipped the 3000th HP 3000.

The 3000th system was shipped September 28, 1979 to General Electric's Large Motor & Generator facility in Schenectady, New York. It is their second HP 3000 at this site and part of a large network of both commercial and technical systems installed throughout the country. This system, utilizing our MFG/3000 package, will handle all of the manufacturing applications for that facility.

Matt Schmutz, HP 3000 Program Manager, and *John Celii*, Sales Development Manager, will present plaques to GE to commemorate the installation of this system.

HP is planning a publicity campaign on this event. Watch for press releases in your area. More details will follow in the next issue of the *CS Newsletter*.

Applications

HP 300 Sales Take Off in Denmark

By: Lars-Ole Hansen/HPSA

In Denmark, the HP 300 has really proved to be an efficient machine for developing new application software, which is shown by this little story:

Early in November 1978 HP Copenhagen was contacted by the Technological Institute of Denmark, Department for Business Economics. They were hired as consultants by a small manufacturer of sporting clothes, who wanted to have a computer system for its commercial applications.

Twenty vendors were asked to give a proposal for the deal, including IBM, NCR, TI, Burroughs, DEC, DG, etc.

HP made a quotation, together with a good, loyal software house, for an HP 300 system to provide the following applications:

Order-entry
Invoicing
Accounts Receivable
Accounts Payable
Financial accounting
Stock control

All of these modules process a lot of statistics and reports.

In February we received a letter telling us that we were among the last 3 bidders, and they wanted to have a demonstration and a reference list (which we didn't have at that time).

After the demonstration, the customer was convinced that it should be an HP system.

Late in February the order was signed with one restriction: The system should be up and running not later than June 1st, 1979. That demand was so tough that we didn't want the order, but the software house was convinced that they could do it, so off we went.

Of course, there were a few problems with a brand new operating system, but with good support from *Peter Rosenbladt* in BBN we succeeded in making it almost in time. The system was a little delayed but was installed on June 11th running. In the company's holiday period the system was installed at the software house site for doing some modification and changing of the operating system, and then 3 weeks later reinstalled ready to run full applications (and the software house then had time for entering all transactions for the customer for the whole period of June).

The same software house now has 3 more 300's installed.

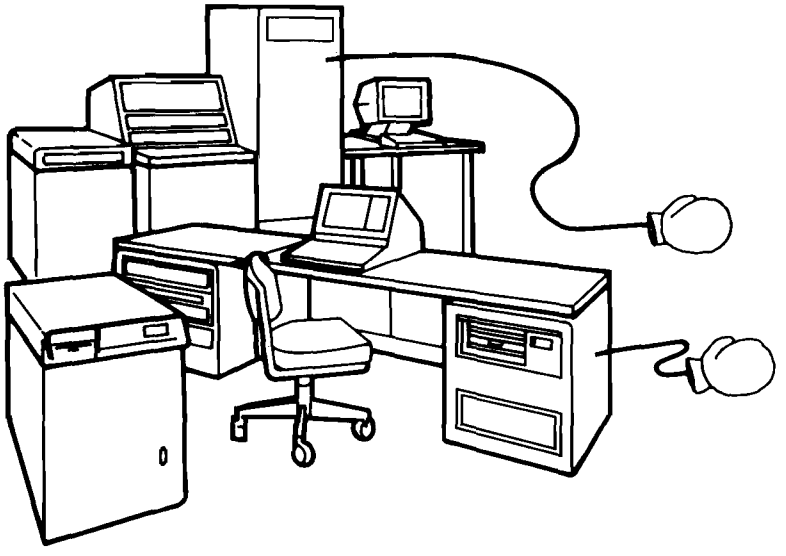
This proves how effective the HP 300 is.

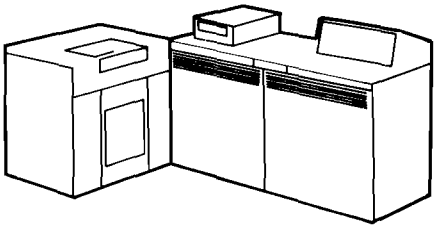
There are plenty of HP 300 sales waiting for us!

Competition

Winning With the HP 3000 Against IBM's System/38

By: Jay Rose/GSD





The System/38 is the new system from IBM's General System Division. It is an aggressively priced upgrade path for System/3, System/32, and System/34 installations. In terms of price, performance, and capabilities, it is very similar to the HP 3000. Can we sell successfully against the System/38? Yes — and this article will show how.

The August 1 issue of the *CS Newsletter* had an article describing the System/38 and noted that IBM is marketing it as a simple to operate and interactive computer system. Well, since then, IBM has announced a delay of nine months in the delivery of the System/38. IBM is having more difficulty than they expected in creating their version of a simple to operate, interactive system. That should make the HP 3000 shine a bit brighter in everyone's eyes.

This delay accentuates an area of HP advantage. Delivery of an HP 3000 is in the neighborhood of sixteen weeks. For a System/38, the first shipment is nine months away and for most customers delivery appears to be two years away! Also related to the delay is the issue of proven reliability. Thousands of HP 3000 systems are already solving customer problems, and MPE offers years of refinements. The System/38 has not left the factory yet, and the delay indicates that IBM is still pretty far away from an adequate system.

When the System/38 was introduced a year ago, IBM described its performance as being comparable to the 370/138, which is slightly more powerful than the HP 3000 Series III. However, recent trade articles indicate that poor performance is a major cause of the System/38 shipment delay. The current performance level is estimated to be one-fourth of the design target, equivalent to a System/3 model 15 (see *"Electronic News"*, August 6).

The HP 3000 has been designed with communications in mind. It can communicate to host mainframes via MRJE/3000 and RJE/3000, and to other HP 3000 systems via DS/3000. The System/38 can only communicate interactively to an IBM host running IMS or CICS (two IBM teleprocessing monitors). The HP 3000 offers more options for networking.

What languages do your customers program in? The System/38 only offers them a new version of RPG. The HP 3000 not only offers RPG, it also offers COBOL, FORTRAN, BASIC, SPL, and APL (Series III only). Six to one!

The HP 3000 is a family of compatible systems. HP is committed to offering systems with a broad performance range yet able to operate the same applications software object code. This protects the customer's investment in software development. The System/38 has neither the broad performance range nor the stated commitment to create one. Conversion efforts would be required to move from System/3, System/32, and System/34 computers to a System/38, and to move from a System/38 up to a 4300, 370, or 303X system. The System/38 is an island.

IBM is offering software tools for converting System/3 RPG II to System/38 RPG III. However, this does not provide for the substantial differences between the systems. The System/3 is batch oriented and uses ISAM files for data management. The

System/38, being online oriented and with a data base management system, would require the conversion effort to redesign application systems and files. The HP 3000 can offer a phased conversion to System/3 users. By using KSAM and the batch processing capabilities of the HP 3000, conversion can be rapid. After conversion is completed, the user can then begin implementing data bases and interactive processing in his applications. To further ease the conversion effort, HP offers a System/3 to HP 3000 conversion manual and course, and field developed programs for converting RPG source code. Don't let conversion worries keep a System/3 user from enjoying an HP 3000.

This article is only a summary of suggested selling strategies against the System/38. For a more detailed discussion, see the IBM SYSTEM/38 REPORT that is being sent to all District Managers, worldwide.

Feature	System/38	HP 3000
Delivery	9 months to two years, assuming IBM can meet their new schedule	16 weeks
Proven Reliability	None shipped to-date, slipped schedule due to problems with operating system (see August 13 COMPUTERWORLD)	Over 3000 systems installed to-date
Communications	Interactive to a mainframe host that has IMS or CICS with SDLC communications protocol	MRJE and RJE to mainframe, DS/3000 to other HP 3000 systems
Languages	RPG III	RPG Plus COBOL, FORTRAN, BASIC, SPL, and APL
Family of Compatible Systems	No!!	Yes!!

HP 3000 vs Tandem: A Comparison of Operating Systems

By: Pete Sinclair/GSD

In 1976, Tandem Computers introduced the Tandem 16 line of transaction processing computers. A unique feature of this system is its ability to be comprised of up to 16 parallel hardware units. If any single unit fails, an alternate unit or processing path is automatically selected to bypass the defective unit. The ability to add more processors and other hardware easily to the basic system not only provides more failure protection, but it also allows an extensive growth path for the customer. The base system, containing two processors, begins at $150,000 with prices approaching $4,000,000 for a complete 16-processor system. Tandem systems have sold best in markets where uninterrupted transaction processing and extensive growth potential are required.

The operating system that runs on all Tandem computer configurations is called Guardian. When it is coupled with Tandem's advanced hardware features (multiple proessors and selector channels, overlapped disc seeks, etc.), the result is a very efficient transaction processing system. Response time, even with large system loads, is typically less than three seconds. A software optimizing tools, XRAY, is also offered to help customers tune their system for maximum performance. Guardian has proved to be quite stable for its young age, matching the dependability resulting from the duplicated hardware in the system.

Guardian, while being an excellent performer in a transaction processing environment, has a number of potentially serious limitations when placed in a multiprogramming situation:

- The system does not support batch or time sharing, only transaction processing.
- Guardian provides no account structure or resource accounting.
- Only three languages are supported: TAL (like SPL), FORTRAN, and COBOL.
- Program code size is limited to a maximum of 128 kilobytes (compared to 2 megabytes with MPE).

The net result of these possible limitations is that Guardian may not be a very effective solution for a mixed application, multiprogramming environment.

When selling in a multiprogramming environment, MPE should give you the edge you need over Tandem. Going head-to-head with Tandem in a strictly transaction processing application, though, could prove challenging. Tandem's dependable and fast hardware and operating system is a near optimal fit for this environment. But when the customer needs to do batch, multilanguage software

development, and possibly provide timesharing services in addition to performing transaction processing duties, an HP 3000 with MPE should be able to sell itself as the optimal solution to the customers needs.

GOOD SELLING!

HP 3000 Competitive Analysis: Tandem's Guardian/Expand Network Software

By: Steve Zalewski/GSD

In October, 1978, Tandem announced a networking software operating system named Guardian/Expand. This extension of their basic Guardian operating system allows up to 255 systems to be interconnected. The systems may each have up to 16 processors and can be geographically dispersed. Tandem had carried forth many of the features of a single Tandem system into their network software:

1. If there is a problem with any link, there is automatic rerouting along an alternate path (if one is provided).
2. Automatic store and forward — Any system can communicate with any other system in the network. There need not be a direct link between the two systems. The Network Control Process (NCP) determines the minimum travel time route between the two systems.
3. Any user can access any resource on any system (disc, peripherals, files). The access is done transparently.
4. The user can request that their application be run on a remote system.

On paper, the Guardian/Expand software compares quite favorably with Distributed Systems/3000 (DS/3000). Looking below the surface, there are several major areas of concern:

1. No dial-up connections are allowed. All links must be hardwired or over leased lines.
2. There is no database on the Tandem systems, only keyed sequential accessed files (like KSAM).
3. Automatic rerouting sounds good but it does require an alternative route. This means some kind of a ring configuration or multiple leased lines or hardwired links between the same two systems.
4. No file passwords. Access is given to a particular user name to read, write, execute, and/or purge. There is no security to the item level that is available with IMAGE/3000. For example, with an IMAGE/3000 database, read access of an employees' name could be given without giving read access of the employees' salary or job history.
5. You cannot give a user different passwords for each system in the network. For the systems to which you want the user to have access, you must use the same user and group names, and password as he/she uses on the local system. There is also only a single password per user; no group or account passwords.
6. Guardian/expand is expensive. The cost is $10,000 per network plus $1500 per system for microcode. Compare this with the software cost using DS/3000:

Number of systems in the network	Total DS/3000 costs	Total Tandem costs	Difference
2	$ 4200	$13,000	($8800)
3	$ 5400	$14,500	($9100)
4	$ 6600	$16,000	($9400)
5	$ 7800	$17,500	($9700
10	$13,800	$25,000	($11,200)

When all the features are compared, DS/3000 gives more flexibility and security than Tandem's Guardian/Expand and at a much better price. DS/3000 is still number one in data communications software.

GOOD SELLING!

HP GRENOBLE NEWS

Training News

Full European Terminal Training at Grenoble!

By: Maurice Poizat/HPG

A comprehensive training program has been set up for all HP terminal product lines. It is available at Grenoble for our European Computer Product Field personnel.

It consists of a set of courses covering DTD, Boise (263X), Grenoble, and later Vancouver products, as well as additional peripherals from San Diego and Loveland (plotters and digitizers as used on the 2647A).

The courses are the following:

- ATT (Advanced Terminal Training) It is a one week course for HP employees who have first been through the Corporate/CPG Overview, and will be acting as Sales Representatives with a medium to high terminal quota.
- *TSTT* (Technical Systems Terminal Training) It is a one week course for HP employees who have just been through the Corporate/CPG Overview, and will be acting as Technical Systems Representatives.
- *CSTT* (Commercial Systems Terminal Training) It is a one week course for HP employees who have just been through the Corporate/CPG Overview, and will be acting as Commercial Systems Sales Representatives.

After completion of one of these courses, the SR's will have a good understanding of the capabilities of the terminal products in their respective marketplace.

For SYSTEMS ENGINEERS:

- *SE I TT* (SE Level I Terminal Training) It is a one week course for HP employees who have just been though the Corporate/CPG Overview and will be acting as Systems Engineers in either the technical, commercial or horizontal area.

After completion of this course, the SE's will have a basic understanding of the capabilities and operation of all the current terminal products (262X, 263X, 307X, and relevant accessories and external peripherals).

- *SE II TT* (SE Level II Terminal Training) It is a two week course for all terminal field personnel who have completed the SE Level I course, or have an equivalent experience and knowledge of the terminal product lines, and will be acting as area terminal SE's.

After completion of this course, the SE's will have a thorough understanding of the terminal products operation, programming and use in a systems environment.

At this level, they will be able to teach the Customers 2645A, 2648A, 2647A users courses and consult customers for any terminal application.

- *SE III TT* (SE Level III Terminal Training) The one week 2649 customer course (13294A) offered to terminal SE's who have completed the SE II training.

For Customer Engineering and Technical Support Engineers

- *CE/TSE Class* It is our already currently available class covering 264X and 263X hardware (2 weeks).

Schedule for Terminal Training at Grenoble:

ATT (1 week)	: Nov 5; Dec 3; Jan 7; Feb 25
TSTT (1 week)	: Feb 4; May 5
CSTT (1 week)	: Jan 28; Mar 31; Jun 16
SE I TT (1 week)	: Nov 12; Jan 14; Mar 10; Jun 2
SE II TT (2 weeks)	: Nov 19; Apr 14
SE III TT (1 week)	: June 23
2649 Customer Course (13294A) (1 week)	: Dec 10; Mar 3; Jan 9
CE/TSE Class (2 weeks)	: Nov 12; Mar 17

Class Size: 10 Students Maximum

For More Information: Contact your Terminal Support Group at Grenoble.

For Registration: Contact: *Jacqueline Vessilier*, GRE
(76) .25 81.41
COMSYS: 6300

YES, WE DO OFFER KEY TRAINING FOR OUR KEY TERMINALS!

HP 3000 and Data Capture. Why Not!

By: Serge Daoust/DTD

Straightforward and easy describes it best. Skeptical? Well let me put my money where my mouth is.

Let's assume that your customer has a data capture application that requires the employees to enter an I.D. badge followed by the number of hours the employee has worked. Your customer would also like to use the prompting lights to prompt his employees. Furthermore, the Multifunction Reader is to be disabled when keyboard input is expected, and the keyboard disabled when the I.D. badge is to be read. The input is to be recorded on a file, keeping a running count of the total number of hours worked by each employees.

The following BASIC/3000 program illustrates how your customer could program such an application using the 3075/3076 Data Capture Terminals in no time at all. The entire program consists of 16 statements. The other statements are remark statements to document the program.

Wasn't that straightforward and easy? We think it is. Don't hesitate to call us if we can help you on those Data Capture Terminal sales.

HP 3000 AND DATA CAPTURE TERMINALS
WE WORK HAND-IN-HAND

```
100 FILES JOB
110 REM ***
120 REM *** INITIALIZE VARIABLES AND USER DEFINED FUNCTIONS
130 REM ***
140 GOSUB 570
150 REM ***
160 REM *** INITIALIZE MULTIFUNCTION READER TO READ PUNCH CARDS
170 REM *** AND DISABLE DISPLAY
180 REM ***
190 PRINT FNR$(0,K$)+FNC$(0,D$)
200 REM ***
210 REM *** ENABLE THE MFR, DISABLE THE KEYBOARD AND TURN OFF ALL
220 REM *** PROMPTING LIGHTS THEN TURN ON THE "A" PROMPTING LIGHT.
230 REM ***
240 PRINT FNC$(0,K$)+FNC$(1,B$)+FND$(0,B1$)+FND$(1,A$)
250 REM ***
260 REM *** READ THE EMPLOYEE I.D. BADGE NUMBER.  NOTE THAT NO
270 REM *** INPUT PROMPT IS DISPLAYED SINCE DISPLAY IS DISABLED.
280 REM ***
290 INPUT B
300 REM ***
310 REM *** IF I.D. EQUALS 9999 THEN TERMINATE PROGRAM
320 REM ***
330 IF B=9999 THEN 520
340 REM ***
350 REM *** DISABLE THE MFR, ENABLE THE KEYBOARD, TURN OFF THE "A"
360 REM *** PROMPTING LIGHT AND TURN ON THE "B" PROMPTING LIGHT
370 REM ***
380 PRINT FNC$(0,K$)+FNC$(1,K$)+FND$(0,A$)+FND$(1,B$)
390 REM ***
400 REM *** READ THE NUMBER OF HOURS THE EMPLOYEE WORKED
410 REM ***
420 INPUT H
430 REM ***
440 REM *** WRITE THE TOTAL NUMBER OF HOURS WORKED TO THE FILE
450 REM ***
460 READ #1,B;S
470 PRINT #1,B;S+H
480 GOTO 240
490 REM ***
500 REM *** ENABLE ALL DATA CAPTURE TERMINAL MODULES
510 REM ***
520 PRINT FNC$(1,D$)+FNC$(1,B$)+FNC$(1,K$)
530 STOP
540 REM ***
550 REM *** INITIALIZATION STATEMENTS
560 REM ***
570 A$="A",B$="B",C$="C",D$="D",E$="E",F$="F",G$="G",H$="H",I$="I"
580 J$="J",K$="K",L$="L",M$="M",N$="N",O$="O",P$="P",Q$="Q",R$="R"
590 S$="S",T$="T",U$="U",V$="V",W$="W",X$="X",Y$="Y",Z$="Z",B1$="["
600 DEF FNC$(O,P1$)='27"-c"+CHR$(48+O)+P1$
610 DEF FND$(O,P1$)='27"-d"+CHR$(48+O)+P1$
620 DEF FNR$(O,P1$)='27"-r"+CHR$(48+O)+P1$
630 RETURN
640 END
```

More On Demoing 307X Terminals

By: Guenter Kloepper/HPG

In the July 15th issue of the *CS Newsletter*, we showed you how easy the 307X escape sequences were to master. Now let's see how you can use them to make a simple, yet effective demo, using a minimum of hardware. All you need is:

- 2647A with the ASYNC DC (02640-60086) or GP ASYNC (02640-60143) interface board
- 3075A or 3076A with multifunction reader
- If using 3075A, you need 2 × 13232 A/N Cables and 1 × 13232U (to cross the send and receive lines)
- If using a 3076A you need to make up a cable to connect pins, B, C and H of the hooded connector to BB, BA and AB respectively, on the communications board in the wall-mount cradle.

The relevant jumper settings in the 2647A are:
Keyboard I/F: switches G, H, U open
all others closed

If using GP ASYNC I/F: A11, A10, A9 closed
all others open

2647A should be set to: REMOTE, HALF DUPLEX, NO PARITY, 2400 BAUD 3075A/3076A switches should be set as follows:

BANK I: SW 7 up, all others down
BANK II: SW 5, 6, 7, 8 up, all others down
BANK III: SW 5, 7 up, all others down

The following BASIC program simulates a labor data capture situation with the following steps:

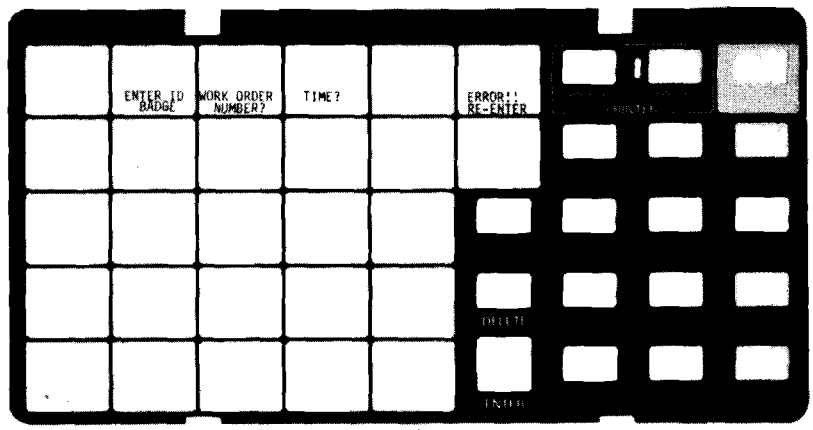
1. Employee enters punched TYPE III badge to identify himself/herself (you can use a punched card if no badges are available).
2. Employee enters 4-digit work-order number
3. Employee enters time to be allocated to that work order.

```
10 REM *** ASSIGN DATACOMM LINE TO FILE #1
20 ASSIGN "da" TO #1
30 REM *** RESET 3075A/3076A
40 PRINT #1;"ESE"
50 REM *** ENABLE CARD READER AND DISABLE KEYBOARD
60 PRINT #1;"E-c1r0K"
70 REM *** TURN ON 'A' PROMPTING LIGHT
80 PRINT #1;"E-d1A"
90 REM *** WAIT FOR INPUT FROM 3075A/3076A
100 READ #1;N
110 REM *** CHECK FOR VALID RANGE ON BADGE ID NUMBER
120 IF 100<N AND N<999 THEN GOTO 180
130 REM *** IF INVALID, TURN ON 'E' LIGHT ('ERROR')
140 PRINT #1;"E-d1E"
150 REM *** GO BACK AND WAIT FOR NEW INPUT
160 GOTO 100
170 REM *** IF VALID, TURN OFF 'E' AND 'A' LIGHTS AND TURN ON 'B' LIGHT
180 PRINT #1;"E-d0e0a1B"
190 REM *** ENABLE KEYBOARD AND DISABLE READER
200 PRINT #1;"E-c1k0R"
210 REM *** WAIT FOR NEXT INPUT
220 READ #1;W
230 REM *** CHECK FOR VALID RANGE ON WORK ORDER NUMBER
240 IF 1000<W AND W<9999 THEN GOTO 300
250 REM *** IF INVALID, TURN ON 'E' LIGHT
260 PRINT #1;"E-d1E"
270 REM *** GO BACK AND WAIT FOR NEW INPUT
280 GOTO 220
290 REM *** IF VALID, TURN OFF 'E' AND 'B' LIGHTS, AND TURN ON 'C' LIGHT
300 PRINT #1;"E-d0e0b1C"
310 REM *** WAIT FOR NEXT INPUT
320 READ #1;T
330 REM *** CHECK FOR VALID RANGE ON TIME
340 IF 0<T AND T<8 THEN GOTO 400
350 REM *** IF INVALID, TURN ON 'E' LIGHT
360 PRINT #1;"E-d1E"
370 REM *** GO BACK AND WAIT FOR NEW INPUT
380 GOTO 320
390 REM *** IF VALID, TURN OFF 'E' AND 'C' LIGHTS
400 PRINT #1;"E-d0e0C"
410 REM *** PRINT CAPTURED DATA ON 2647A SCREEN
420 PRINT "EMPLOYEE #";N;"  WORKORDER #";W;"  TIME :";T;"HOURS"
430 REM *** START OVER
440 GOTO 60
```

The program will log (on the 2647A screen) the results of the transactions as follows:

```
EMPLOYEE # 345   WORKORDER # 1234   TIME : 2.5 HOURS
EMPLOYEE # 345   WORKORDER # 8745   TIME : 2.1 HOURS
EMPLOYEE # 345   WORKORDER # 4562   TIME : .25 HOURS
EMPLOYEE # 345   WORKORDER # 8523   TIME : .5 HOURS
EMPLOYEE # 345   WORKORDER # 7412   TIME : 3.5 HOURS
```

The label that would be used for this transaction would appear something like this:



Here then, is a program which performs some BASIC Data Capture, validation and reporting. Not bad for a 20-liner . . . took all of 40 minutes to do for a neophyte programmer.

Applications

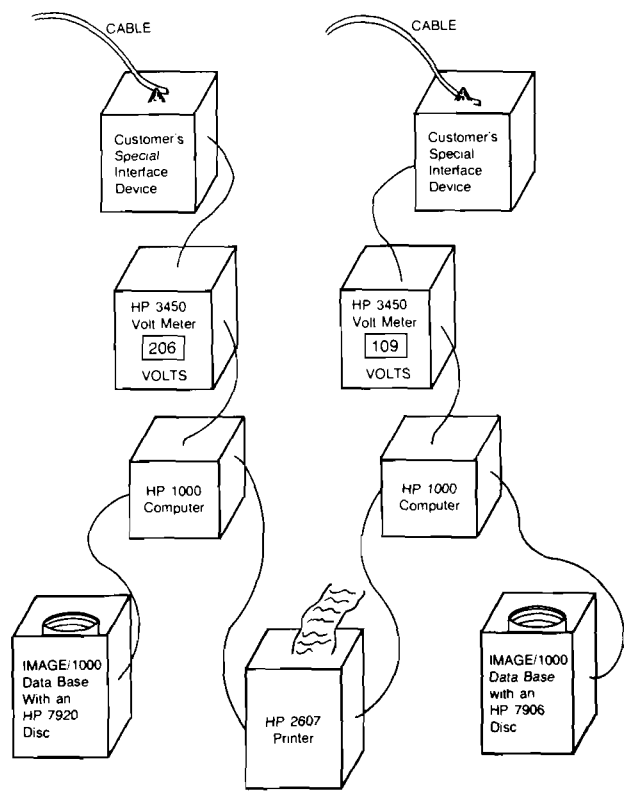
Automatic Cable Testing for a Minicomputer Manufacturer

By: Nancy Blachman and Alic Rakhmanoff/HPG

In the Netherlands, a minicomputer manufacturer is presently using four HP 1000's with RTE IV, two in each of the two factories to test the quality of the cables it produces. Having saved a large amount of man-hours with this set-up, they have decided to mechanize the production of the cables.

Before installing HP 1000's, this company tested all of its cables manually. Now, the cables are inserted on to an interface device manually. The connection is made in a rather ingenious way such that the cables need not be stripped. The cables are pushed onto a sharp interface device. With the aid of a 12604B, the capacity and resistance of the wires are measured. The results are stored in an IMAGE data base on two 50 megabytes discs and two 20 megabytes discs. Not only has the test taken less time, but the data is recorded more accurately and can be sent to the final customers without wasting manhours.

Why did this company, a producer of minicomputers, buy from HP? Well, it was not difficult to sell them on HP. No special techniques has to be used by the salesmen. In fact, the salesmen hardly said anything at all. They were familiar with HP measuring equipment and knew about its quality as well. They particularly liked the HP interface to an HP 3450 digital voltmeter. What a compliment to HP, having a manufacturer of minicomputers buy from HP!



Presently, the two HP 1000's are not interconnected. The same configuration is used in another factory in the Netherlands. They will be connected with a DS/1000 when the firm fully automates its production of cables.

CS GROUP NEWS

Product News

Introducing the 7310A Graphics Printer

By: Tom Tremble/SDD

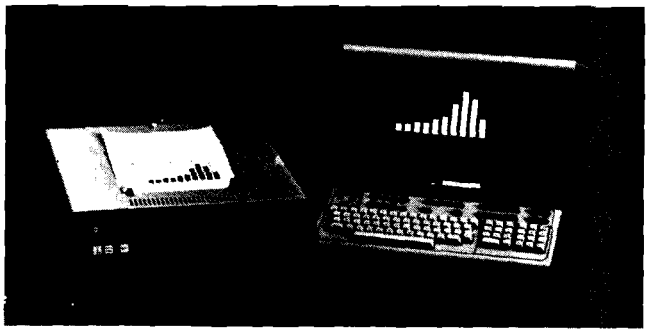
The 7310A offers quiet, high speed output of forms, printing, and raster graphics in any working environment. Designed for high-resolution, low volume printing applications, the 7310A makes an ideal printer peripheral for alphanumeric and graphics terminals, for desktop computers, and for HP computer systems.

Interfaces

The 7310A supports four interfacing environments: HP-IB for 2647A, 2648A, and 2649I terminals, and desktop computers; RS-232-C/V.24 and RS-423-A for remote printing on HP computers; and 8-bit duplex for 2645A, 2641A, and 2640B terminals.

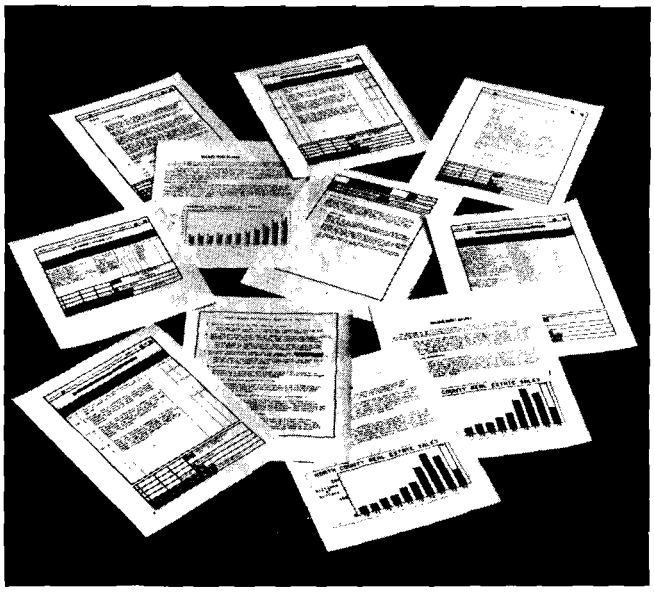
Graphics

For graphics, the 7310A offers 720 dot output, exactly matching the resolution of the 2647A and 2648A Graphics Terminals. As a result of its higher throughput speeds, the 7310A produces raster graphics copies in less time than has been possible in the past.



Forms

The 7310A provides forms printing from HP alphanumerics terminals and from HP computers. The 7310A produces high contrast output on either blue or black thermal paper. Reverse printing (inverse video), underline, and boldface character enhancements provide a close matching with forms needs.



Inverse and underline fields are printed just as they appear on the terminal display; blinking and half bright are printed in a special bold font to draw attention. Automatic programmable paper cutting and stacking allows the user to produce output of any length from 2 to 20 inches. About 35 sheets may be stacked under normal office conditions, less in lower humidity environments.

Text

Efficient text printing provides fast copies of single-page documents, program listings, and reports. High quality characters are created through the close dot spacing, making individual dots appear as solid lines. The standard unit comes with both a fixed and proportionally spaced USASCII character set. The proportional spacing enhances readability for professional presentation. Programmable character height allows the user to produce titles and footnotes in characters from 50% to 200% of normal character height. When large characters are printed using the boldface enhancement, a very attractive title line is created. A full range of printer control functions are supported, including top, bottom, left, and right margins, line spacing, and graphics image windowing and clipping commands.

One complete line at a time is printed at a speed of 200 to 500 lines per minute depending upon line length and character density. Text which includes boldface, reverse

print, or underline is produced at slower speeds. The high quality proportional set prints at a speed of 100 to 250 lines per minute.

The 7310A's USACII character set may be printed using either the FIXED CELL character spacing or with PROPORTIONAL CELL character spacing. The selection is made with a rear panel switch or by a simple escape sequence command. Fixed cell spacing, shown in this paragraph, provides equal area for each character and should be used for printing forms and other high speed printing needs.

Proprotional spacing text, shown here, should be used for important reports and other high quality work. Characters are printed using only the space neccesary for each character. Since less space is used, about 15-20% more characters may be printed on each line. The result is an extremely pleasing printed page. Of course, all character enhancements may be used in **any combination** with all character sets!

In addition to the 128-character USASCII set, the standard 7310A also contains the HP Roman Extensions character set which provides 24 international language character sets, each programmatically selectable as the secondary or primary set. No-charge language options allow the 7310A to be configured with one of the international languages as the primary set, providing compatibility with 2640 series international terminals (e.g., 2645S). Optional sets include Katakana, 2640 series math and line drawing sets, and APL programming characters.

Whether it's printing, forms, graphics, or all three, that your customer needs, the 7310A offers an impressive number of important features, quietness, speed, and a range of interfaces.

Sales Aids and Demonstration Aids Available

In order to assist you in demonstrating the full capabilities of the new 7310A Graphics Printer from the San Diego Division, a demo tape is now available. The demo tape part number is 07310-18001 and can be ordered from the San Diego Division. This demo tape is designed to operate the 7310A with the 2647A and 2648A, displaying the maximum 7310A features and unit flexibility.

The data sheet has also been published to assist you in providing promotional information and technical specifications to your customers. It may be ordered as part number 5953-4048 from the literature depot. The data sheet outlines the forms, graphics, and text capabilities of the 7310A, describing the features which enhance these applications. Hard copy samples of specific applications are included as visual display tools. In addition, a detailed interface configuration is provided to make interface selection easy.

All product ordering information and prices are included.

Overhead Slide Capability Now on the 7225A

By: Rick Warp/SDD

Effective October 1, the ability to make overhead slides will be added to the 7225A Graphics Plotter. This is being done by the addition of a command to select the pen velocity (VS), much as presently exists in SDD's other plotters. The VS command allows the plotter to write at a speed compatible with overhead transparencies.

In order to make full use of this capability, SDD offers the 17055A Overhead Transparency Kit ($85 U.S.) to provide the pens, film, solvent, and instructions for making your own overhead slides. In addition, the 2647A supports this capability through Multiplot.

7245A Option 001 Now Standard

By: John Koon/SDD

The Option 001 will become standard on all 7245A plotter/printers on October 1, 1979. This option provides additional HP-GL graphics instructions, allowing easier specialized graphics applications programming, e.g. circles, arcs, user unit labelling direction instruction. Option 001 also includes the raster dump capability from 2648A/47A graphics terminals.

The basic U.S. price remains $4600, complete with the Option 001 capabilities included in the unit as standard.

The 7310A Graphics Printer Training Manual Distributed

By: Mary Zoeller/SDD

You'll want to read all about the 7310A in the field training manual distributed this week to your sales office. If you have not received your copy, please call San Diego Sales Support. We will promptly forward a manual, and we will be glad to provide any assistance or information you might require.

San Diego Sales Support
San Diego Division
(714)487-4100

The sections of the training manual are:

Features and benefits of the 7310A
- Explanations of Demoing with Graphics Terminals and Desktop Computers
- Raster graphics Tutorial
- Control Codes and Escape Sequences
- Comparative Product Matrix
- Configuration Matrix
- Sales and Demonstration Information

The manual provides a good view of 7310A features, and detailed information on its operation with specific computers/controllers, providing an easy reference guide in the future.

If additional information or questions arise, SDD Sales Support will be pleased to assist you.

The 7310A Graphics Printer on the October 1 Price List

By: Tom Tremble/SDD

Complete configuration and price list information is included in the field training manual. The USA price for the 7310A is $4750. The 7310A is included on Exhibit A-1, Exhibit A-3, and Exhibit A-4 of the Computer Purchase Agreement.

Configuration Guide

System	System Interface	7310A Interface	Comments
HP TERMINALS			
2640B/N/S 2641A 2645A/K/N/S Alphanumeric Terminal	8-bit duplex 13238A I/O, 13232J cable (included in Option 240)	Option 240 printer subsystem	Option 240 requires 1 option slot in terminal. Terminal requires Option 007 integrated dual tape cartridges or 13261A device support firmware. Order 7310A language option to match terminal: 2640S, 2645S Option 001 2640N, 2645N Option 002 2641A Option 009 2645K Option 008
2647A Intelligent Graphics Terminal	13296A HP-IB	HP-IB	13296A comes with 1 metre cable. Order additional HP-IB cable accessory desired: 13061A 1.0 metre 13061B 2.0 metre 13061C 4.0 metre 13061D 0.5 metre
2648A Graphics Terminal	13296A HP-IB	HP-IB	13296A comes with 1 metre cable. Order additional HP-IB cable accessory desired (see above). Terminal requires Option 007 integrated dual tape cartridges or 13261A device support firmware.
2649I Intelligent Terminal	13296A HP-IB	HP-IB	13296A comes with 1 metre cable. Order additional HP-IB cable accessory desired (see above).
HP COMPUTER SYSTEMS			
HP 1000[1]	59310B	HP-IB	HP-IB supported by DVR37. HP-IB is the preferred interface; graphics and text printing speed is not limited by the interface. Installation not included.
	12966A-001	Option 050 RS-232-C/CCITT V.24	RS-232-C/CCITT V.24 supported by DVR05. Installation not included.
	Via 2645A system console or 2640-series terminals	Option 240	8-bit duplex interface requires 1 option slot in terminal. Terminal requires Option 007 integrated dual tape cartridges or 13261A device support firmware. Printer can be addressed directly via DVR05, but display cannot be used during printing. Installation not included.
HP 3000	With 2640-series terminals		See HP TERMINALS section above.
HP 300	Use with 2640-series terminals		See HP TERMINALS section above.

[1] 7310A is not supported on the GRAPHICS/1000 software; raster graphics can be printed from the 2648A graphics terminal.

COMPUTER SYSTEMS NEWSLETTER

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