

# COMPUTER SYSTEMS NEWSLETTER

*For HP Field Sales Personnel*

HEWLETT  PACKARD

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Feb. 1, 1978

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# DATA SYSTEMS NEWS

## Competition

### User Ratings of Software Packages — Datapro Report

By: Van Diehl/DSD

Here is a summary of the "User Ratings of Software Packages" from the 1977 Datapro report that was published in the December issue of *Data nation*.

HP is still the only small computer company that has a Data Base Management System listed in the report. A summary of the ratings is given below:

#### HOW USERS RATED THE POPULAR DATA BASE MANAGEMENT SYSTEMS

Package & Vendor	Weighted Average User Ratings							
	Number of users reporting	Overall satisfaction	Throughput/efficiency	Ease of installation	Ease of use	Documentation	Vendor technical support	Training
ADABAS, Software AG of North America	12	3.5	3.5	3.6	3.7	2.9	3.5	3.1
DATA COM/DB, Insyte Datacom Corp.	11	3.3	3.2	3.0	3.4	2.4	3.2	3.2
DBOMP, IBM Corp. DPD	33	3.1	2.9	2.4	2.8	2.4	2.6	2.3
DMS-II, Burroughs Corp.	21	3.1	3.3	3.3	3.6	2.4	2.5	2.7
DOS/VS DL/1, IBM Corp. DPD	23	2.7	2.4	2.5	2.6	2.5	2.9	2.6
IDMS, Cullinane Corp.	16	3.5	3.2	3.5	3.1	3.0	3.8	3.5
IMAGE, Hewlett-Packard Co.	24	3.3	3.2	3.6	3.5	3.1	3.1	3.1
IMS, IBM Corp. DPD	28	2.8	2.4	2.5	2.6	2.7	3.1	2.9
SYSTEM 2000, MRI Systems, Inc.	20	3.2	2.5	3.0	3.1	2.4	2.8	2.8
TOTAL, Cincom Systems, Inc.	91	3.3	3.0	3.2	3.2	2.8	2.9	2.9

But just look at the price of these packages!

ADABAS	\$132,000
DATA COM	\$ 40,000
DMS-II	\$ 12,000 to \$24,000
DLI/E	\$ 315/mo.
IDMS	\$ 42,000 + \$4,200/year
SYSTEM 2000	\$ 35,000
TOTAL	\$ 13,500
	(for small computers)

**IMAGE/1000      \$ 2,500**

And how do we stand regarding RTE? The table below summarizes the data for RTE-III, RDOS (DG), RSX-11M (DEC) and RT-11 (DEC).

	RTE-III	RDOS	RSX-117	RT-11
Users reporting	13	6	32	23
Overall satisfaction	3.2	2.5	3.0	2.9
Throughput/efficiency	2.7	2.8	3.0	2.7
Ease of installation	3.1	2.3	2.6	3.1
Ease of use	2.7	3.2	2.8	3.2
Documentation	2.7	2.5	2.4	2.6
Vendor technical support	2.9	2.3	2.0	1.8
Training	2.7	2.3	2.2	2.2

As you can see the *overall satisfaction* with our system is better than with the other systems.

And with the new RTE enhancements that we will be introducing this year we will be even better!

**HP Computer Museum**  
**[www.hpmuseum.net](http://www.hpmuseum.net)**

**For research and education purposes only.**

## Sales Aids

### Do You Want a Happy HP 1000 Model 20 Customer? ... Don't Forget the "Getting Started With Your HP 1000 System" Manual

By: Van Diehl/DSD

Many users of HP 1000 Model 20's (and maybe some System Engineers and Sales Representatives) are not aware that a configured flexible disc or minicartridge, also called a Primary System, is shipped with every HP 1000 System. The manual "Getting Started With Your HP 1000 System — Model 20/21" (Part #02173-90007) is mostly concerned with showing you how to load, execute and build upon the Primary System.

Once the Primary System is booted into main memory, it offers:

- Immediate operation of the system.
- Demonstration of system capabilities by executing available user programs.
- A base for a larger system as more programs are added on-line through use of relocating loader.
- A capability for creating other systems precisely tailored to your specific applications using the RTE-M generator.

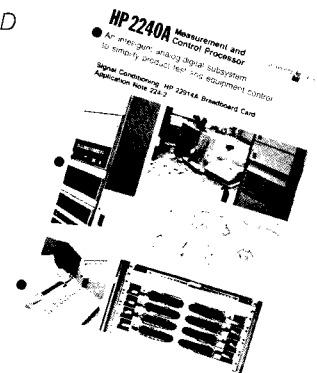
The Primary System is configured with the absolute program loader; power fail and re-start, relocating loader, file manager, softkey configurator, BASIC/1000M, etc.

The Primary System should build in your customer confidence in using the system, before he attempts generation of his specific system.

Please let us know your experiences with RTE-M. The sales of RTE-M are steadily increasing and we still want to improve documentation, training, etc. to make it an even better product.

### 2240A Signal Conditioning Application Note Available

By: Norm Galassi/DSD



To help you sell 2240A's to customers with special signal conditioning requirements, we've published Application Note 224-2 (5952-8546) which shows how to use the HP 22914A Breadboard card. This application note includes circuit layouts for:

- Low Level Amplifiers
- Filters
- Current Loop Inputs
- Current Loop Outputs
- Stepper Motor Interfacing



### Faster Data Formatting for the 2240A

By: Norm Galassi/DSD

You can achieve higher conversion rates of 2240A ASCII data to binary format by using the read and conversion sub-routines R2240 and C2240 which have been added to the HP 92400A DATA ACQUISITION systems library. This technique will give you 0.25 mS conversion times versus 4 mS with the FORTRAN formatter.

# DATA TERMINALS NEWS

## Division News

### Announcing the New 2649A Program

By: Steve Stark/DTD



During the recent regional sales meetings, many of you were told about the HP 2649A Microprogrammable Terminal/Controller program and the many new products being developed at DTD to make this program a resounding success. Well, DTD has delivered again and the HP 2649A SERIES II is here!! (That means it is on the January 1st Corporate Price List...)



We call it the SERIES II because we want everyone to recognize that the new 2649A program is much different than the old one. No more well-kept secrets about the product, no more denials of its existence. We are going to tell the whole world about it and we have plenty to tell.

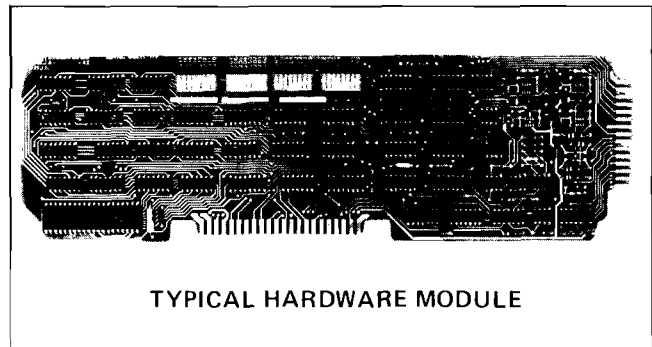
First, we are going to tell everyone about the new capabilities which have been added to the 2649A. To be more aggressive in capturing RAM-based controller/terminal business, we have introduced the HP 13297A Universal

RAM Memory Module. This module, which will support 8 Kb, 16 Kb and 32 Kb of fast RAM memory is priced very competitively. Not only will it provide the user with low cost storage, but it will also make additional slots available for other optional modules (datacomm, display enhancements, etc.).

This is because one HP 13297A-003 module containing 32 Kb of RAM is functionally equivalent to four HP 13292A 8K WCS modules.

The memory in the HP 13297A may be logically divided into two equal blocks of storage with a different starting address for each. Another important feature of the module is that it may be strapped for access from either the top or bottom plane (all of the memory in the module must be accessed from the same plane, top or bottom, however).

We also want to tell everyone about the new HP 13296A HP-IB Interface module. This module, which is compatible with the IEEE-488 standard, offers the user the capability to interface the 2649A to a broad range of peripherals and instruments. The module is built around an SOS-based HP-IB processor which allows data transfers to/from the HP-IB bus to be handled without burdening the mpu in the 2649A.



A note of caution about the HP 13296A which should not be overlooked is that there is presently no firmware to drive it. Thus, the customer is going to have to develop some driver firmware in order to take advantage of it. While this is not an insurmountable task, it will require a programmer with background in both the 8080 and the IEEE-488 bus. When discussing the HP 13296A with a prospect, this point should be made abundantly clear.

One new capability which has been added to the 2649A we would prefer to show the world instead of tell the world. This is, of course, the raster scan graphics capability. All of the hardware and firmware modules of the HP 2648A Graphics Terminal are now available to the HP 2649A user. To configure a 2649A to function as a 2648A, you need the following hardware and firmware:

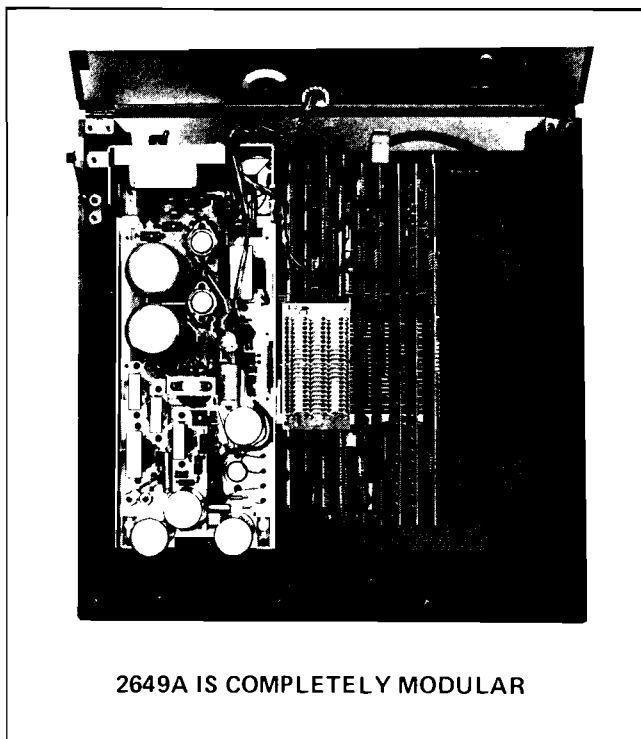
**HP 2649A Microprogrammable Terminal/Controller with:**

- Option-100 Upper Case Roman Character Set
- Option-101 Lower Case Roman Character Set
- Option-202 2648A Keyboard and Interface
- Option-400 24K ROM Module (2 required)
- Option-480 Graphics Controller
- Option-548 2648A Main/Keyboard Firmware
- Option-803 3-Wide Top Plane Connector  
(Recommended)

**HP 13260A Data Communications Interface with:**

- Option-003 2648A Point-Point Datacomm Firmware

**HP 13297A Universal 8K RAM Memory Module**



**2649A IS COMPLETELY MODULAR**

If the dual cartridge tape option is to be added, the following hardware and firmware will be needed:

- HP 2649A-007 Dual Cartridge Tapes
- HP 13261A-003 2648A Device Support Firmware

**Now, The 13290B**

Another reason for calling the new HP 2649A the SERIES II is our totally new approach to program development. In the

past, a prospective user would have faced a substantial front-end investment in program development hardware in order to apply the 2649A. Now, all of this has changed with the introduction of the HP 13290B Development Terminal.

This powerful development tool will provide the user with the capability to edit, assemble, load and debug small to medium sized (250 bytes being small and 4000 bytes being medium) applications programs. The assembler supplied with the HP 13290B will accept source programs written in the INTEL 8080 assembly language and will generate 8080 compatible binary object code!

The debug program furnished with the HP 13290B may be used to examine/modify the contents of memory, examine/modify the 8080 registers, set breakpoints, trace program execution, load/dump user-developed programs and many other useful debugging functions. The configuration of the HP 13290B includes the same basic hardware and firmware as an HP 2645A with cartridge tapes but two 32K RAM boards have been added to allow the user to load and execute applications programs. To take advantage of the debug facilities in the HP 13290B, applications programs must be limited to 44 Kb in size which should be more than sufficient for most users.

The 2649A SERIES II is more than just the introduction of some new products. It is really an entirely *new program* and, as with any new program, it will be promoted on a broad basis.

New advertisements for the HP 2649A will be appearing in major industry publications within the next several weeks and other promotional activities are in the works.

The 2649A data sheet has been recently revised and is being revised again to make it a more useful selling tool. If the data sheet can't answer all of your customers' questions about the 2649A, that's ok, because the *HP 13290A/2649A Reference Manual* probably will.

If you want to get a copy of this sales-oriented reference manual, just clip out the coupon below and send it to Sales Development at DTD, (or order P/N 13290-90003).

<p style="text-align: center;"><b>DATA TERMINALS DIVISION</b></p> <p style="text-align: center;"><b>ATTEN: SALES DEVELOPMENT</b></p>
<p style="text-align: center;"><b>PLEASE RUSH COPY OF THE NEW 13290/2649 REFERENCE MANUAL TO ME.</b></p> <p style="margin-top: 20px;">NAME: _____</p> <p style="margin-top: 10px;">OFFICE: _____</p>

To get on the SERIES II bandwagon is easy. Just follow the directions shown below (especially the last step) . . .

1. Identify those OEM's or end users in your territory who are currently developing microprocessor based (preferably 8080 based) applications.
2. Qualify them on the basis of technical knowledge and experience with microprocessor applications. If they qualify, continue to step 3. If they don't, smile politely and leave inconspicuously.
3. Tell them about the 2649A SERIES II. Let them digest the data sheet.
4. If they are interested and want to know more about the 2649A, let them borrow your copy of the HP 13290A/2649A Reference Manual.
5. If that hasn't satiated their thirst for knowledge, let them borrow your copy of the HP 13255A Technical Information Package (assuming that you had the foresight to order one for your office . . .)
6. If the prospect feels comfortable that the 2649A will do the job, ask the prospect for an order for the HP 13255A TIP and quickly get them enrolled in the HP 13294A Terminal Applications Training Course.
7. Wait until the customer returns from the training course and gets the application up and running on the 2649A. Then pick up the purchase order for the first 200 units!!

The important thing to remember about these directions is that if you skip any steps . . . YOU WILL NEVER GET TO STEP 7.

Our experience has shown that the ONLY way that your customer can be successful with the 2649A is to buy the TIP and attend the training course. Some of your more knowledgeable customers may not understand why they should attend the training course because they may be under the erroneous assumption that they can acquire all of the knowledge needed to apply the 2649A by reading the TIP. They cannot!

The TIP is a reference document and, as such, does not address application of the product. The training course is the only way to obtain the unique knowledge required to apply the 2649A. The course pays for itself because it highlights all of the "hooks and handles" that simplify applications development. This can be translated into shorter development cycles and a better chance for success.

DTD is going to do everything possible to make the 2649A SERIES II a real winner for you. All that you have to do is to get the message to your customers and the 2649A will do the rest for you.

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## **New Colors Conform To HP Standards**

*By: Carl Flock/DTD*

Effective February 1, 1978, all new orders for 2640-Series terminals will conform to Corporate Standard colors.

This means that the darker color on the terminal will have slightly more earth tone and the light color will be more tan. The 2631/35 has the correct colors if you would like to compare samples. We expect that this change will have a positive effect on the coordinated look of our products.

## **We Need You (More Than Ever)**

In the November 1 issue of the *CS Newsletter*, we wrote an article whose purpose was to seek system application feedback from you. Well, no one wants to admit defeat, but the facts are that we have not been deluged with phone calls, TWX's or memos—at least not yet!

To facilitate the dialogue, I suggest you use the form below which will have the purpose of identifying you, the application and the customer (in confidence) and will allow us to contact you for a short interview. Having a cross reference of applications will be great for everybody.

**Main targets are:**

- Non-HP system applications
- OEM specials (also End Users)

Please do not assume that the Division is automatically aware of these non-standard applications.

The main objective we are trying to achieve is a better awareness of what is being done by our customers. The Division and you in the field at large will benefit greatly from it.

DATA TERMINALS DIVISION  
APPLICATION REPORT

NAME \_\_\_\_\_

HP OFFICE \_\_\_\_\_

TELEPHONE \_\_\_\_\_ TWX: \_\_\_\_\_

CUSTOMER \_\_\_\_\_

ADDRESS \_\_\_\_\_

CONTACT (IF ANY) \_\_\_\_\_

HOST SYSTEM \_\_\_\_\_

APPLICATION \_\_\_\_\_

PERIPHERALS \_\_\_\_\_

Just drop us the coupon—we will get in touch with you.



**European Orders for Terminals From DTD Cupertino**

*By: Larry Roth/DTD*

Just a brief reminder that if you are in Europe, you must have Order Processing *override* the Supplying Division and use 42 as the Supplier for the entire order if you are ordering a 2640C, 2641A, 2645R, 2648A, or 2649A terminal with accessories. If you do not override, COCHISE will split the order, routing the terminal to DTD and the accessories to HPG! This would result in your customer receiving a terminal and accessories separately instead of integrated together.

**APO's From DTD**

*By: Larry Roth/DTD*

As a service to your customer, DTD will accept an APO to reserve a production position for your customer for a period of up to thirty days. An additional thirty days will be granted, if requested.

An APO may be placed if you expect a delay in the issuance of a formal purchase order, and if delivery is critical to your customer. Due to our short availability on accessory products, we will only apply the APO to the terminal mainframe.

**February Clearance Sale**

*By: Larry Roth/DTD*

We have the following units available as a special offer:

Product	Serial #	Price
2640A	05644	\$1,895.00
	05645	1,895.00
	05688	1,895.00
	05839	1,895.00
	05840	1,895.00
	05841	1,895.00
2644A	01887	3,495.00
	01888	3,495.00
	01889	3,495.00
	01890	3,495.00
	01891	3,495.00
2644A # 888	00883	3,295.00
	00904	3,295.00

Please contact *Nancy Sanchez* at DTD if you want to order one of these units. Offer good for the above terminals only, subject to prior sale.

**HURRY, HURRY, HURRY!**



# Product News

## **DANGER:** 13232N Cable Should Not Be Used With MUX!

By: Rich Ferguson/DTD

So you say you get a charge out of hooking-up 2640-series terminals to HP 1000 or HP 3000 Multiplexers? If you use the wrong cable, your Mux could get more than just a charge out of it!

Specifically, if you use the 13232N cable, you could blow up the system Multiplexer because of an extra signal wire that is connected in the 13232N cable and which is not hooked-up in the 13232A cable.

Pin #17 (DD signal) is active in the 13232N. In both the HP 1000 and HP 3000 Multiplexers, this pin corresponds to a 5-volt level in the Mux. If you use the 13232N cable and this connection is made, the effect is to short out that 5-volt signal causing the Mux to smoke.

The recommended cable for both HP 1000 and 3000 Multiplexers is the 13232A.

So, the next question is "How do I know which cable I have?" The following table will help you here:

Cable	Name on Hood	Part Number
13232A	103/202 Modem Cable	02640-60043
13232N	U.S. Modem Cable	02640-60131

So, in summary, use the 13232A for system multiplexers and NOT a 13232N, unless you want to call your friendly service engineer.

## **2645A New Device Support Firmware ROM**

By: Wendi Brubaker/DTD

The current production versions of the 2645A-007 terminals and the 13261A Device Support Firmware contain a firmware upgrade. The upgrade replaces the cartridge tape ROM number 1818-0211 with the new 1818-0426 CTU ROM.

The ROM change was made because in a limited number of applications, an operation may appear to fail or hang up. Possible symptoms are:

1. When sending a record containing a single control character (LF, Bell, ENQ) to the terminal the unit may abort an operation if:
  - a. Adjacent LF's were sent while in the RECORD mode instead of the more normally expected CR LF sequence.

- b. Adjacent LF's are typed on the screen using the display functions mode and then recorded on tape. If this record is read from the tape by computer, then subsequently retransmitted to the terminal, an error can occur.

2. A single unprotected character, created in Format Mode and recorded to tape will abort if the CPU attempts to recall the record.
3. When using the Esc&p, the status was not always correctly returned. Specifically, if a recoverable error; (i.e., does not cause the terminal to hang) is encountered on the datacomm, the terminal does not always report the failure. It may transmit an "S" for success when in fact an "F" for failure should have been sent.

If you have not been experiencing any of the above problems there is no reason to order the new ROM.

## **When to Order Device Support Firmware\***

By: Serge Daoust/DTD

If the terminal has:

1. NO cartridge tapes
- and 2. NO printer
- and 3. NO video hardcopy unit that you control from the terminal keyboard

and you want to:

1. Add cartridge tapes (field upgrade)
- and/or 2. Add a printer
- and/or 3. Add a video hardcopy unit that you control from the terminal keyboard

then you must order:

Product no. 13261A for a 2645A terminal;  
 13261A-001 for a 2641A terminal;  
 13261A-002 for a 2645R terminal;  
 13261A-003 for a 2648A terminal.

\* NOTE:

- A. The 2640A/2640B/2644A do not require any additional I/O firmware.
- B. When ordering option 007 (dual cartridge tapes), device support firmware is included in the description of option 007 and will be installed in the terminal. Do not order Product no. 13261A-00X with this terminal.
- C. You do not require device support firmware for a video hardcopy unit that you control from the unit itself.

### Terminal Dependent Options

By: Eric Grandjean/DTD

A number of terminal options are model-dependent. They are all listed in the January Corporate Price List.

Since there may be a certain amount of confusion on the reasons for these options, a clarification is necessary. The basic reason is the fact that firmware (the terminal's operating system) is different between major classes of terminals, and therefore, the ROM's themselves are different.

Below is a synopsis of terminal-dependent options with corresponding ROM part numbers, and locations on supporting Printed Circuit Assemblies (PCA).

COMMUNICATION INTERFACE	13260A (OPT) (STD)	13260B (OPT) (2640X OPT 020)	13260C (OPT)	13260D (OPT)
2640B 2640C 2640N 2640S	PCA 02640-60086	02640-60089(13250A) 02640-60143(13250B)	N/A	N/A
2641A 2645A 2645R 2645S	PCA 02640-60086 RDM 1818-0213 (STD)	02640-60143 1818-0213 (STD)	02640-60105 1818-0214 (STD) 1818-0261 (001) 1818-0288	02640-60107 1818-0214 (STD) 1818-0261 (001) 1818-0288
2645K	PCA 02640-60086 RDM 1818-0371 (004)	02640-60143 1818-0371 (004)	SAME	SAME
2648A	PCA 02640-60086 RDM 1818-0411 (003)	02640-60143 1818-0411 (003)	SAME	SAME
RDM LOCATION	PCA 02640-60192 20	02640-60192 20	02640-60192 20 20 22	02640-60192 20 20 22

DEVICE SUPPORT FIRMWARE 13261A (OPT)					
RDM LOCATION (PCA 02640-60192)		10	12	14	16
2640B 2640C 2640N 2640S	N/A				
2641A 2645A 2645K 2645R 2645S 2648A	(001) (STD)  (002) (STD) (003)	1818-0208 1818-0208 1818-0208 1818-0208 1818-0406	1818-0209 1818-0209 1818-0209 1818-0209 1818-0407	1818-0210 1818-0210 1818-0210 1818-0303 1818-0408	1818-0274 1818-0426 1818-0369 1818-0310 1818-0409

### Hung Up On Handshaking?

By: Tim Haney/DTD

While thrashing through the caves in our R&D Lab, the following information about the G and H straps was found nested deep within an engineer's notebook. We provide it here for your future reference:

#### GH STRAPS ON KEYBD I/F (BLOCK MODE)

##### GH = 00

DATA TRANSFERS DC1 DC2 DC1 HANDSHAKE  
OTHER BLOCK TRANSFERS TRIGGERED BY DC1.

##### GH = 01

DATA TRANSFERS ON ENTER  
OTHER BLOCK TRANSFERS TRIGGERED BY DC1.

##### GH = 10

ALL BLOCK TRANSFER REQUIRE DC1 DC2 DC1

##### GH = 11

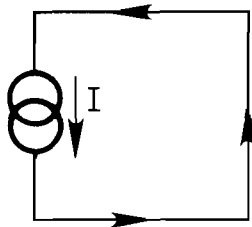
NO DC1 DC2 or HANDSHAKE OF ANY TYPE.

#### NOTES:

1. IN HALF-DUPLEX OPERATION A LINE TURNAROUND CAN BE SUBSTITUTED FOR A DC1.
2. 0 = IN = CLOSED: 1 = OUT = OPEN.

### Current Loop—A Re-Volting Experience!! (Or, . . . Wire We Doing This and Watt Did You Say?)

By: Tom Lee/DTD



At Data Terminals, we re-fuse to believe a 20 mA Current-Loop connection from a 264X terminal to a computer system is not possible. You must take a "Positive Approach" to Current-Loop. After all, it's the current thing to do.

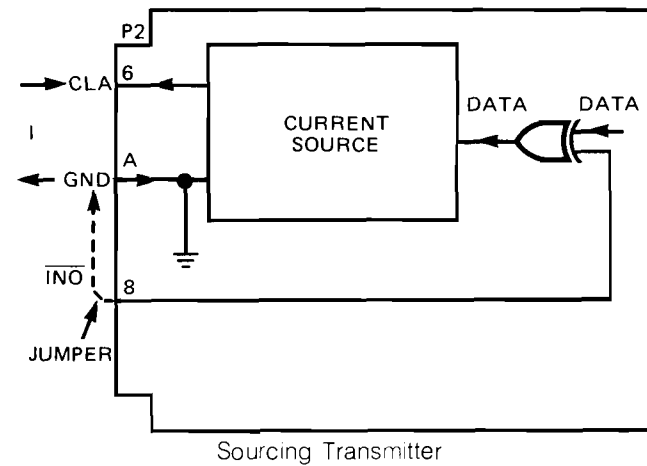
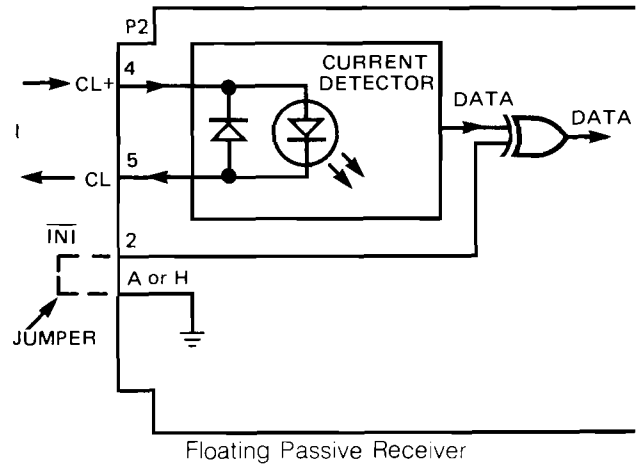
Sales Development has been receiving many questions recently concerning Current-Loop data communications. Unlike RS232C, Current-Loop has no standards as far as cable pin-outs or the type of Current-Loop. Before connecting to a computer using Current-Loop, be sure you have the following equipment in the 264X terminal:

13260B Extended Asynchronous Data Communications Card

13232F Current-Loop Cable (four wire lug connectors on the computer end, hooded connector on terminal end.)

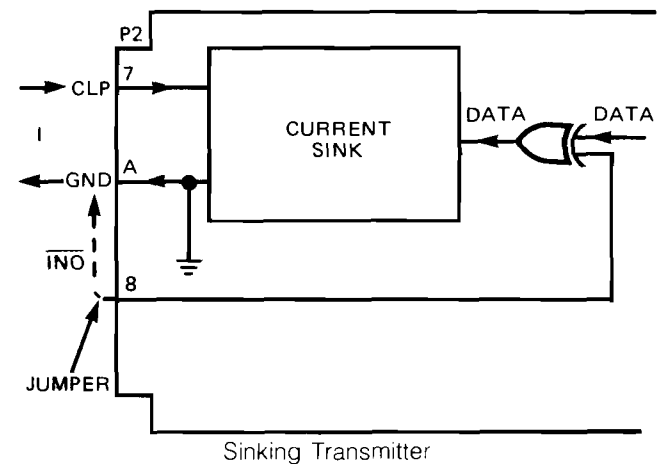
In the past several months, we have encountered three different kinds of Current-Loop;

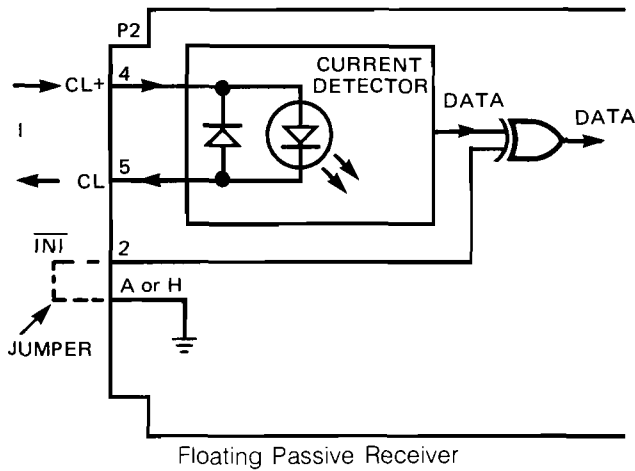
### FLOATING PASSIVE RECEIVER/ SOURCING TRANSMITTER



This is the kind of Current-Loop that is found on the HP 12531D and the special available on our multiplexer. The standard cable from HP does not have to be modified in order to use this kind of Current-Loop.

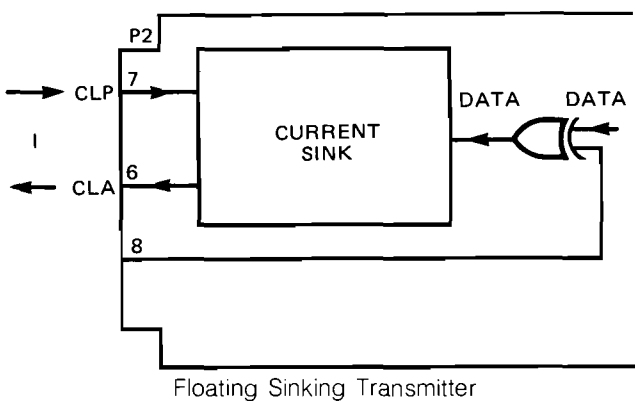
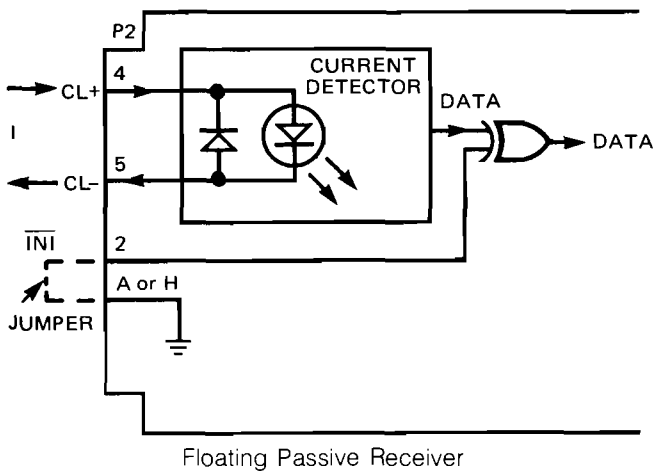
### SINKING TRANSMITTER/FLOATING PASSIVE RECEIVER





We have seen this type of Current-Loop on some DEC systems. The 13232F cable must be modified in order to work. On the hooded end of the cable, move line CLA (pin 6) to CLP (pin 7).

**FLOATING PASSIVE RECEIVER/  
FLOATING SINKING TRANSMITTER**



A third type of Current-Loop that is normally found on Tandem computer systems is a FLOATING PASSIVE RECEIVER and a FLOATING SINKING TRANSMITTER. The 13232F cable must be modified. Then, instead of having the yellow wire (CLA) going to Pin H, it should go to Pin 7. The green lead is CLP, brown is CL- and Red is CL+.

A word of warning!! Be sure to ask your customer what kind of Current-Loop he is using. If possible, look at a schematic. Damage to the computer system or to the terminal can result from hooking the wires up improperly. Another hint: Sometimes you will make connection with a computer system but the characters will be garbage. This is sometimes caused by marks being interpreted as spaces, and spaces interpreted as marks. One of the lines in the cable either must be added or removed in order to invert the signal. (This line is either  $\overline{INI}$  or  $\overline{INO}$ .) Refer to Page A2 in the 13250A/B Operating Manual, Part Number 13250-90004, for further information.

Don't be negative about Current-Loop hookups! Take a load off your mind and OHM up to it!!

**2649A Firmware Options**

By: Steve Stark/DTD

For those of you who peruse the Corporate Price List for entertainment, you have probably noticed that a number of new firmware options have been added to the HP-2649A. Since these new options are very similar in nature, a word of explanation is in order.

One of the ROM's associated with the 2645A main firmware has been changed to provide a higher level of compatibility when communicating via the multipoint data communications interface. The net impact of this change on the 2645A end-user is negligible and should be of no concern.

However, such a ROM change could impact the 2649A OEM or end-user who has developed applications firmware based on the original version of the 2645A firmware. Although highly unlikely, it is conceivable that the new 2645A firmware might be incompatible with existing applications firmware.

In general, it is our objective to keep the number of ROM changes to an absolute minimum. Nevertheless, we recognize that such changes are inevitable. Therefore, we have devised a formal strategy for resolving the problems created for our 2649A customers by these changes. We feel this strategy is both reasonable for the customer and practical to implement by DTD. This strategy is as follows:

1. At any point in time, no more than two versions of a firmware module will be offered for sale as an option to the 2649A; the original version, and the current version.
2. Original firmware options will remain intact throughout the life of the product; i.e. the ROM's furnished will always be the same.
3. Current firmware options will change in order to reflect the latest firmware being shipped with the parent product (2645A, 2648A, etc.) i.e. the ROM's furnished may vary from time to time.
4. An OEM or end-user that utilizes routines in the standard firmware which are accessible through vectors could purchase either version of a firmware module with immunity from change.

- An OEM or end-user that utilizes routines in the standard firmware which are not accessible through vectors (directly accessed) should only purchase the original version of a firmware module in order to maintain the integrity of all routine addresses.

To see how this strategy has been implemented, review the table of current 2649A firmware options shown below, also reflected in the January Price List:

Option	Description	Type
500	2645A Original Main Code	ORIG
502	2645A Current Main Code	CURR
510	2648A Main Code	CURR
545	2645A Current Main/Keyboard Code	CURR
548	2648A Current Main/Keyboard Code	CURR
701	2645A Point-Point Datacomm Code	CURR
711	2645A Multipoint Datacomm Code	CURR
712	2645A Multipoint/Monitor Datacomm Code	CURR
751	2645A Device Support Code	CURR
752	2648A Device Support Code	CURR

Abbreviations:

- ORIG — Original firmware version
- CURR — Current firmware version

Hopefully, this information should clear up any confusion about which firmware options should be ordered in the future.



### Softkey Drawing Example for 2648A Graphics Softkey Application Note #4

By: Eric Grandjean/ITD

The softkeys below will allow you to draw on the screen in normal or inverse video.

Here is how it works:

f1 Draws line to the right

```

    █ N
    █ L
    ⌘+pcD⌘+d+1,0P
    
```

f2 Draws line upwards

```

    █ L
    ⌘+pcD⌘+d0,+1P
    
```

f3 Draws line to the left

```

    █ L
    ⌘+pcD⌘+d-1,0P
    
```

f4 Draws line downwards

```

    █ L
    ⌘+pcD⌘+d0,-1P
    
```

f5 Selects line mode to "SET"

```

    █ L
    ⌘+m3A
    
```

f6 Selects line mode to "CLEAR"

```

    █ L
    ⌘+m1A
    
```

f7 Turns graphics inverse video "ON" (Set)

```

    █ L
    ⌘+dB
    
```

f8 Turns graphics inverse video "OFF" (Clear)

```

    █ L
    ⌘+dA
    
```

Combine f5 with f8 to draw white on black; push f6 to erase white line. Combine f6 with f7 to draw black on white; push f5 to erase black line. f1 to f4 write one dot at a time in direction selected. For angle lines, alternate f1 to f4 keys.

### Softkey Application #13 Revisited

By: Bill Switt/ITD

In the original article, which appeared in the 9/15/77 issue of the CS Newsletter, one necessary item was missing. To suppress the "S" (indicating successful completion) sent by the terminal following a device control sequence or a transfer of information, the DC1/DC2 handshake must be enabled. This is accomplished by making certain that the G & H switches on the Keyboard Interface PCA are closed. The following sequence, when appended to a device control sequence or information transfer, will succeed in clearing all the datacomm flags and suppressing the "S".

Here it is again:

```

    █ L
    ⌘+c177120a1d370dd315d125dd303d117dd177120aE
    
```

### Classroom Graphics

By: Eric Grandjean/ITD

George Klein from our Toronto office reports a very useful application in the area of Education. He has tested it.

One of his customer's mathematics faculty classrooms will be equipped with five 2648A Graphics Terminals to help teach Statistics and Computer Sciences. One of their 2648A's will actually drive twenty-five 11-inch Electrohome TV Monitors. (Yes, on the same line!) Some minor modifications will be made to the Monitors to accommodate the 2648A/13254A composite video signal. Remember, the video output end of the terminal cannot be changed. (See 13254A Data Sheet for specifications of the composite video output signal.)

The response of both professors and students (normally about 50 per class) to this new teaching medium has been enthusiastic. The 2648A will be used in TEK compatibility mode, and will be driven by any of three different host systems (Honeywell 6060, IBM 360/75 or IBM 370/158) via modems. When we say we are compatible, we really mean it and this application proves it.

Thanks, George, for your feedback!

#### Strong Selling Points:

- Compatibility Mode (no initial application modification)
- Separate Alphanumeric and Graphic memory
- Autoplot
- Zoom
- Speed

## 2648A Datacomm Firmware

By: Rich Ferguson/DTD

Many of you have been neglecting to order Option 003 with the 13260A and 13260B datacomm cards when you are ordering a 2648A Graphics Terminal.

Remember, when ordering Option 030 which deletes the standard datacomm in the 2648A, you *must* order Option 003 with the 13260B extended datacomm card. This provides data communications firmware compatible with your 2648A. If you don't, you will receive 2645A-compatible firmware, which doesn't play well in a graphics terminal.

## Erratum Number Two in 2648A Quick Reference Guide\*

By: Eric Grandjean/DTD

I have been told that there are only two errors in our 2648A Pocket Guide! The first one was reported in a previous issue of the *Newsletter*, (Vol. 3, Number 4, December 15).

The second error in the Pocket Guide is on page 6, top of page. The correct codes to define softkeys are as follows:

- 0 (normal)
- 1 (local)
- 2 (transmit only)

To [remotely] define f1 as a normal key in order to execute/display in terminal mode and transmit when in remote mode, the escape sequence would be:

```
⌘&f1k0a...
```

In the example given, the sequence should be:

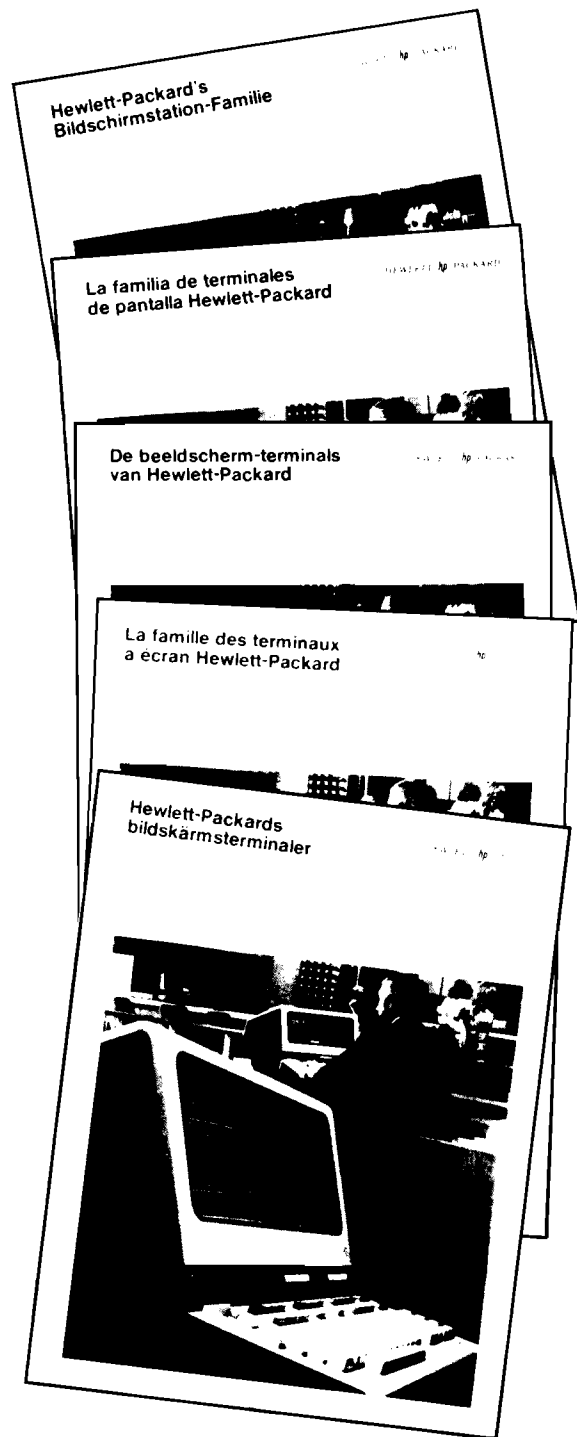
```
⌘&f1k0a13LHELLO-MYACNT⌘
```

To leave you on a more cheerful note, I would like to draw your attention to the escape sequence just below the example. This is a command which allows you to execute a softkey without actually pressing that softkey! For instance:

```
⌘&f1E executes (triggers) f1.
```

This last sequence can also be loaded in a softkey to trigger or execute another softkey.

**\*Editor's Note: This is a correctly typeset version of an article published in the last issue of the *Newsletter*.**



# GENERAL SYSTEMS NEWS

## Product News

### Sales Opportunities for "Big 6" Field Upgrade Kit

By: Fred Gibbons/GSD

A good sales opportunity exists in upgrading current Model 6 customers to "Big 6's" with the 30411B Upgrade Kit. Remember, this upgrade kit allows your customer to expand memory to 512 Kb for \$10,000 plus the amount of memory he wishes to add. This represents a \$15,000 savings over the old Model 6 and 8 upgrade kit which was previously required to expand the Model 6 to 512 Kb. Our data indicates that there are approximately 350 Model 6's installed today, each with the potential of purchasing a memory expansion kit for \$10,000 and two additional memory boards at \$3700 each. This represents a total market potential of \$6 Million.

A few phone calls inquiring about the need for upgrade kits might just be the thing to help you make quota this quarter. Availability on the 30411B is 12 weeks.

**GOOD SELLING!!!**

### 2635A Support on the HP 3000

By: Chosen Cheng/GSD

Because of the popularity of the 2635A there has been considerable interest expressed as to when it will be supported on the HP 3000. Three questions come up most often:

Q. Can I use the 2635A on the system today?

A. Yes, it can be used as system console and add-on terminal with a few limitations.

- As system console (Terminal type 10; no parity; 1200 baud) during initialization the first character

of each line is an extra garbage character—the garbage character is not printed once the system is up.

During system initialization the terminal prints a backslash ( \ ) in response to control-H. Once the system is up the terminal prints a backspace on the same line in response to control-H.

Once supported the garbage character will not print. Control-H will produce a linefeed so backspaces occur on the next line, and the console will operate at 2400 baud.

- As a terminal (Terminal type 10; no parity; 2400 baud) backspace is printed in response to control-H.

Once supported control-H will produce a line feed so backspaces occur on the next line.

Q. When will it be fully supported?

A. Formal support is planned for mid-calendar year 1978.

Q. Should I sell my customer a 2635A today?

A. If your customer can accept availability from Boise of 16 weeks, then order from Boise today: shipment of the unit should coincide with formal support. If the intended use is a system console, the standard 2640B console can be deleted by ordering Option 122 as a special through your Sales Development representative.

If an immediate hardcopy console is necessary for a system sale, contact GSD Order Processing. A very limited number of 2762 Terminals are available on a consult-factory basis only. We recommend that in the short term you sell your customer on using a 264X CRT as the system console.

Call me if you have any questions. The 2635A is a valuable addition to the HP 3000 system configuration and can mean added value to your customers and added sales.

## Multi-Programming and Multi-Tasking on the HP 2026 (I Thought It Was Just a Little Data Entry Machine)

By: Dick Baumann/GSD

Many of you have wondered about the HP 2026 and its ability to run several different jobs at the same time. Well, here's the story.

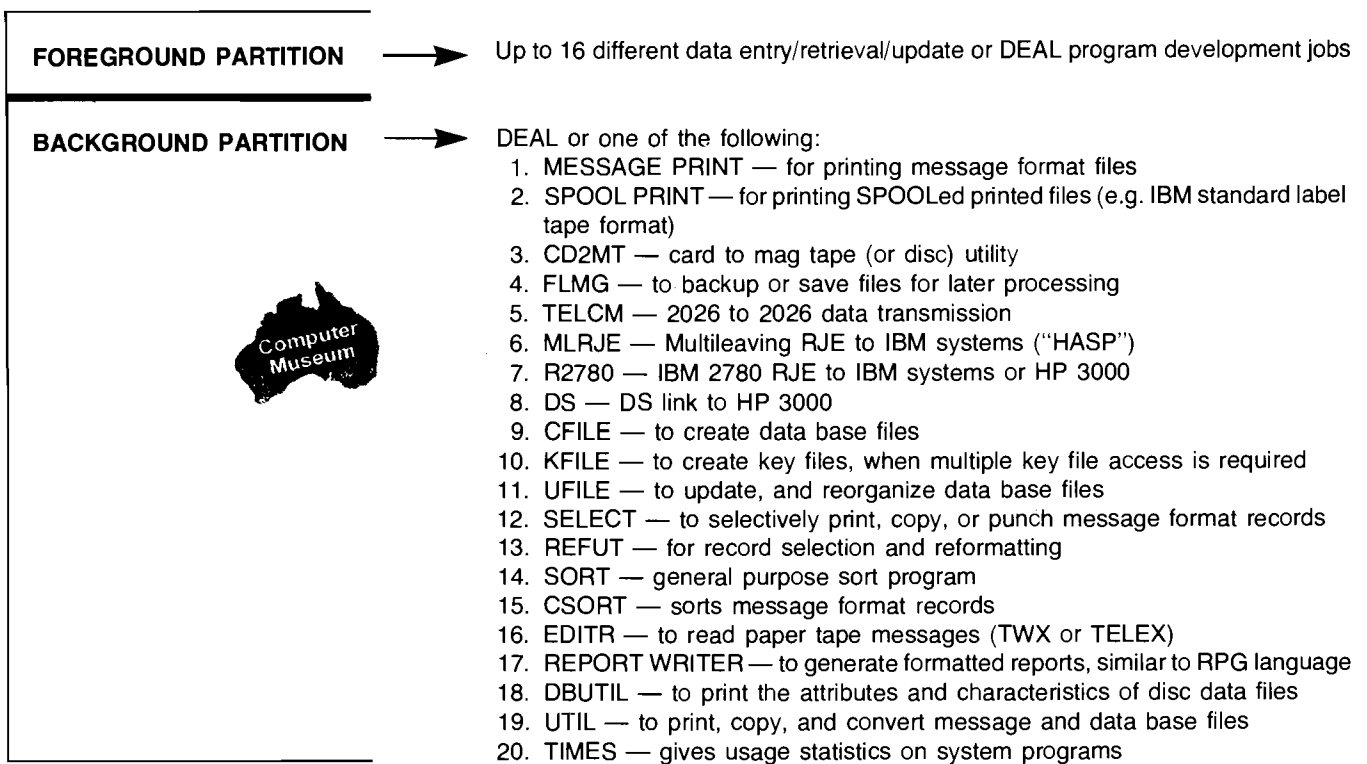
The 2026 is fundamentally a two partition machine. In the *foreground* partition, we run the user-written data entry/retrieval/update application programs. Currently we can have up to 16 HP 2645 data entry terminals on the system, and these may all be running different (or the same) application jobs. Only one of the (up to) 16 application jobs is in memory at any given time. It stays in memory only long enough to execute the edit instructions which apply to a screenful of data for that job currently in memory. Then the next application job will be swapped in, if there is another terminal requiring servicing.

In the *background* partition of memory, we can run any *one* of the programs on the list shown below.

These programs are initiated at the 2026 console. Or we can run DEAL (the Data Entry Application Language) in the background. DEAL is initiated from data entry terminals and, while it's running, any or all of the data entry terminals can use it.

A significant point is that all of the code for any background program is in memory when that program is running. There's no swapping to degrade the jobs which may be running in the *foreground* partition.

What all this means is that the HP 2026 can be running up to 17 different tasks . . . one background program and 16 different user programs. Or, if DEAL is running in the background, any (or all) of the 16 data entry terminals could be doing program development using DEAL. The terminals not doing program development could be running user application programs concurrently. Not bad, huh?



## DS Link Support — Modem or Hardwired???

By: Richard Scott/GSD

This is a frequent DS/3000 question we hear at GSD these days. Here is a checklist to help you when advising customers:

- Modem links (up to 9600 baud) are required for DS/2026 to DS/3000 communications.

- Hardwired serial links (up to 2000 feet) are required for DS/1000 to DS/3000 communications.
- Either type of link may be used for DS/3000 to DS/3000 communications.

Hope this gives you the information you need to advise your customers and build your sales presentations.





## General Systems Literature

By: Jerry Epps/GSD

Several new pieces of GSD literature have been introduced recently, and a number of others have been revised. This list reflects what is currently available. Please use it as your guide when ordering material from the Literature Department.

Stock No.	Code		Date Published
<i>HP 2026 Systems</i>			
5953-0504	BR	HP 2026 System	3/77
-0508	PL	HP 2026 Price/Configuration Guide	3/77
<i>3000 Series I Computer Systems</i>			
5953-0505	BR	Series I Brochure	3/77
-0522	PL	Series I Price/Configuration Guide	7/77
-0536	FL	HP 3000 System Upgrades	10/77
<i>3000 Series II Computer Systems</i>			
5953-0501	BR	HP 3000 Series II (Sm. Co. Mgt. Brochure)	2/77
-0503	BR	Technical Summary—Series II	2/77
-0507	BR	Total Solution APL	2/77
-0509	DS	DS/3000 Software	3/77
-0510	DS	Hardwired Serial Interface	3/77
-0511	DS	Synchronous Single Line Controller	3/77
-0512	DS	2780/3780 Emulation Software	3/77
-0514	BR	HP 3000 Support Services	6/77
-0519	DS	Configuration Guide for Synchronous Modems	4/77
-0529		Presentation folder	8/77
-0530		HP 3000 Auerbach Questionnaire	9/77
-0531	BR	Technical Summary—Series II	1/78
-0532	BR	General Information Manual (GIM)	6/77
-0535	DS	Distributed Systems/3000 Software	10/77
-0538	PL	HP 3000 Price/Configuration Guide	12/77
-0542	FL	HP 3000 Flyer	12/77
-0543	BR	HP Computer Systems (Large Co. Mgmt. brochure)	2/78
-0883	FL	HP Distributed Systems Networks	10/77
<i>Education</i>			
5953-0513	FL	From Grade School to Grad School	3/77
-0523	BR	Computer Solutions for Higher Education	7/77
-0524	BR	Computer Solutions for Elementary/Secondary Schools	7/77
-0525	BR	Computer Assisted Instruction (CAI)	7/77
-0526	BR	Student Information System (SIS/3000)	7/77
-0528	BR	College Information System (CIS/2000)	7/77
<i>Application Notes</i>			
5952-4411	AN145-9	Computer Science Laboratory (Calif. State. Univ.)	10/75
-4415	AN145-13	Computer-Assisted Instruction	11/72
-4423	AN145-21	Small College	4/74
-4424	AN145-24	Community College	3/74
-4506	AN145-23	Educational Consortium	4/74
-4507	AN145-22	Timesharing Computer Network	4/74

**Codes**

AB = Application brief  
AN = Application note

BR = Brochure  
DS = Data Sheet

FL = Flyer  
PL = Price List

# General News

## The GSD Laser-Light Show

By: Gary Stump/GSD

Now that we are all back to work and have hopefully recovered from the holidays, I thought I should follow up on some of your letters and calls regarding the GSD Light Show.

First, I'd like to thank you for the super response to the show. I am really pleased that so many of you enjoyed our presentation. Many of you have requested the music or the soundtrack from the show. Since most of the pieces can be found on record albums available in your nearest record store, I have listed them below, together with the artist and the album. The songs are listed in the order they were used in the show.

Song	Artist	Album
Alpha	Vangeles	Albedo 0.39
Mars	Tomita	Holst's Planets
Mercury	Tomita	Holst's Planets
You've Got a Friend	James Taylor	Available in Several Albums
Jupiter	Tomita	Holst's Planets
Fall of the House of Usher (excerpt)	Alan Parsons	Tales of Mystery and Imagination
Space was scene	—	Jaws Soundtrack
Attack of the Imperial Ship	—	Starwars Soundtrack
William Tell Overture (excerpt)	Rossini	William Tell Overture

I hope you will enjoy the music as much as you enjoyed the show. We are pleased with your response and it was great fun to create the show for you.

Only one problem — now we have got to do a better job next year because it looks like you are going to break all of your targets again. Well, you keep selling and we will have something "SUPER" planned for you.

**THANKS!**



## Distributed Processing — The HP Way

By: Rich Edwards/GSD

A very favorable review of HP's Distributed Systems Network appeared in the December issue of *Small Systems World*. It stresses HP's commitment to buffer the user "from the continuing changes which occur in the network and control software" while allowing "him [to] concentrate on what he really wants to do, and that is OPERATE HIS BUSINESS." Permission to reprint in its entirety was granted by *Small Systems World*. Copyright 1977, *Small Systems World*, Hunter Publishing Co., Chicago, Ill.

## Hardware Review

# Distributed Processing: Announcements and Considerations

by Ken Sherman

**O**n October 20, 1977, Hewlett-Packard made three very significant announcements regarding its offerings in the distributed processing environment.

The first was interconnection of the HP 3000 Series II computers utilizing new DS/2026 software with the HP 2026 data entry computers which formerly communicated only with each other or as RJE stations to large computers via standard IBM-compatible bisynchronous or multileaving HASP protocols.

The second announcement involved the introduction of the HP Distributed System/1000 Software and Firmware (DS/1000) which allows, for the first time, an interconnection between the HP 3000 Series II and the HP 1000 computer system for which typical network configurations are shown in Fig. 1. The tying together of these units with the DS/1000 and DS/2026 software will permit an extensive networking capability where the HP 2026 can function interactively as a virtual terminal to the HP 3000 while the HP 1000, with its store and forward capability, operating as a nodal point in the network, can tie together other HP 1000's, or via a high level network communications, interface to an HP 3000 for additional processing or further connection to a large mainframe. Thirdly, and perhaps the most significant, was a policy statement issued in conjunction with the first two announcements that described the purpose and philosophy behind future distributed network system developments. Basically, HP is committing itself to the future support of message control of packet switching in accordance with Recommendation X.25 of the CCITT, accommodating the Advanced Commu-

nication Control Procedure (ADCCP), communication links capable of supporting the High-Level Data-Link Control (HDLC), and in addition, SDLC links to IBM equipment. The specific offerings which are not available yet, are, at least, in the project stage at this time.

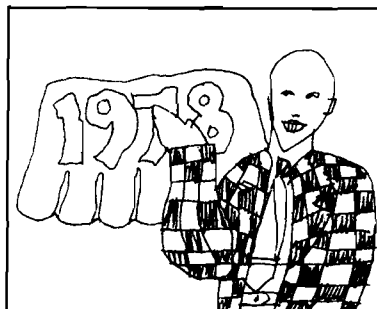
What is most interesting about these announcements is that when taken all together, they show a long range development plan which helps the user buffer himself from the continuing changes which occur in the network and control software, as well as the introduction of more advanced hardware devices. This means that with the degree of specialization being encountered in the software development of distributed systems today, a very large burden is taken off the user and lets him concentrate on what he really wants to do, and that is *operate his business*.

This last point is probably the most significant of all. After over 20 years in the communications business, and the last five years heavily involved in distributed system applications, I have run into many cases where the high which surrounds the

expectation of a new system, with all its capabilities, turns into a grind when the delivered product requires "a few changes" to operate as advertised. The vendor is not to be blamed alone, however, because when the situation is analyzed objectively, usually by someone who is not emotionally involved, it turns out the user himself has contributed to the confusion.

The problem usually encountered is that the user tries to fit his business operations to a computer system which he deems is the best he can buy for the money, when in reality, the computer system should be looked on as a tool which will make the business run more efficiently. This was especially evident when "distributed processing" (a term which still defies an agreed-upon definition) was first introduced, and users immediately started jumping on the bandwagon to streamline their operations with the new system philosophy. Sadly, the software was lacking which would provide the capability to communicate and transfer data between sites efficiently, and even more so, the users themselves planned the implementations poorly. Sites which had grown up independently with their own unique data processing requirements could not be tied to the so-called central sites easily, because there were different standards, rules, interfaces, access methods, etc., used at those sites even though there may have already been existing communication to the central site via some form of batch or RJE interface. The end result was a whole series of crash conversions to achieve compatibility with the new system which in turn caused many of the operations to be performed awk-

*Continued on page 24*



Continued from page 6

wardly, thereby reducing or eliminating the expected improvements which were supposed to be forthcoming.

Another serious problem encountered, one which has only been touched on lightly because of its sensitivity, is the political environment which exists at the time of selection of the new system. Dynasties die hard, and with the distribution of equipment and operations, so goes distribution of control. Many managers, especially in the dp area, were not only afraid of losing at least partial managerial authority, they were also afraid of distributed processing because they grew up in the "big is beautiful" environment of large mainframes, and were now faced with what appeared to be a new technology: minicomputers and distributed networks. The company could no longer revolve around the dp operations. Many will say, "But we have always supported the company to the best capability of the system." On the surface this may appear to be the case, but after analyzing both large corporate multimainframe operations, as well as the small system single machine user, my experience has shown that many of the "you will have to make a change on the input data," or "that type of access can't be made," or "we cannot add another disc," etc., decisions were dp mandated because of dp budget constraints without a higher level review to determine the overall cost of what it would be *not* to make the change. With the proliferation of remote data entry, a relatively minor change of input procedures could significantly reduce the overall processing cost (people are the most expensive recurring cost item in systems), even though the specific dp cost has increased.

What has all of this to do with the new HP announcement? Actually, almost everything if you are considering a distributed processing system. Primary on the list is: Do I really know what I am doing now? Do I know what my users' requirements are? What will my users' requirements be six months and a year from now? Are my users identifying their requirements from what they are using today, or what do they really need to do the job in accordance with company goals? Notice, nothing about computers yet. Then, what functions would I, from a corporate point of view, like to see performed by my system? Is my management philosophically ready to accept some system control moving out into the network? Are the resources available and experienced to support a new system in multiple locations? Can my data base be segmented such that it is

available to all who require it, but physically resident in different locations (or different machines at the same location)? Do I really need distributed processing? Still, no direct reference to a specific computer system. Finally, when I have to make changes in the future, can I make them without impact on the rest of the functions?

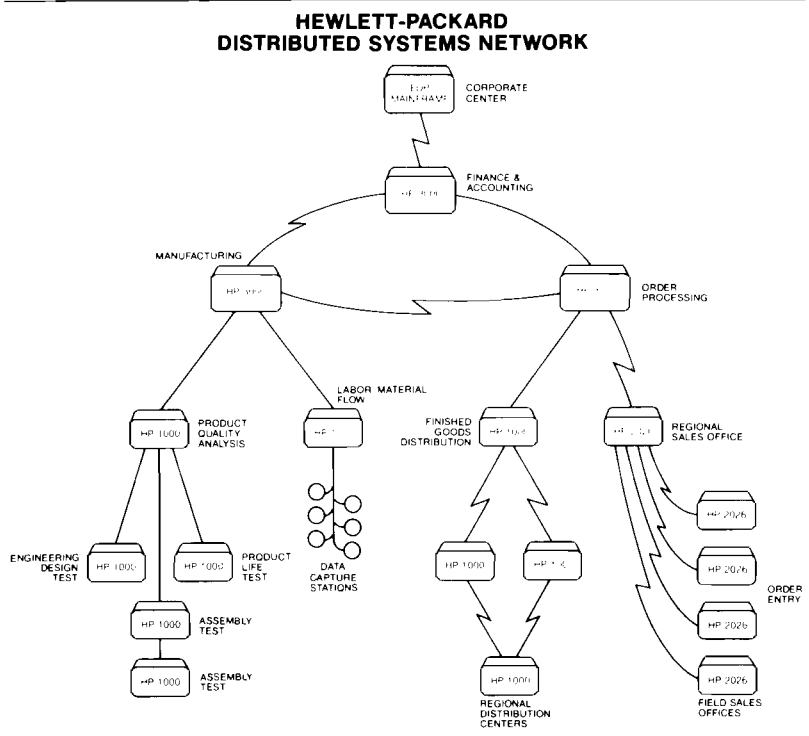
The point being made here is that a company has to decide first what it wants to do, and then find a computer system that can do it. The new HP offerings go a long way toward making those decisions transparent to the system being implemented, and the transparency even extends to the various functional levels of electrical transmission of signals, data link communications, format and control of messages, network access, and user application program generation. The isolation of functions through standardized interfaces not only allows the user to obtain growth with minimal impact, but allows him to take advantage of new vendor offerings without going through a system redesign, or, in other words, orderly and incremental expansion as needed, as opposed to putting in a bigger machine and growing into it.

One final item should be mentioned here, and that is: without management commitment to the philosophy of distributed processing, a system is doomed to outright failure ("See, I told you we didn't

need it") or being more expensive and complicated than the system previously used ("See, I told you the old way was better"). Although it is quite possible this may happen anyway, if the very people who must use the output of the system are against it from the start, it becomes a self-fulfilling prophecy.

Just so we don't end on a negative note with our heads full of the potential pitfalls, we can take heart from what is a classic case of successful distributed processing that has been around for over 15 years, the airline reservation system. Here we have different vendors' equipment (large mainframes at that), different geographic locations, different operational methods, and even different companies, where any reservation terminal at any one airline can access any other airline's reservation data base as if it were its own regardless of location. Why does this system work so well? The involved parties have a vested interest in making it work (each airline derives revenue from reservations made on its own flights, even if made through another airline). If we could get the different departments within our own companies to work together the same way, we would have a greater probability of success. ♦

*Kenneth Sherman is a consultant and lecturer in data communications and computer technology. He holds a BEE from Rensselaer Polytechnic Institute and an MSEE from the University of Southern California.*



# How can you tell if distributed

## Look at the job it's done for us.



With two major factories in Malaysia (more than 3000 people), we cut down on communications costs by linking the Penang plant with our Singapore facility. Here data is consolidated for transmission to the U.S. Accounting, payroll and inventory is handled locally by HP computers. A similar situation exists in Japan, with the plant in Hachioji connected with our main sales office in Tokyo. In Australia and New Zealand, HP sales offices are equipped for both local data processing and long distance communications.

### Hewlett-Packard's Distributed Systems Network

Most North American manufacturing plants and regional offices have HP 3000s to handle their local data processing needs, reducing the burden on the company's central computers. Major offices are linked with HP headquarters in Palo Alto by computerized communications systems. These are powerful enough to give the smaller sales offices plenty of EDP capability for such things as order processing and maintaining customer files.

In Brazil, our Campinas manufacturing plant is linked by computer to the main office in Sao Paulo. This in turn communicates with headquarters in California. Sales offices in Venezuela and Mexico have communications systems with sufficient computer power to handle local accounting and inventory management.

# processing will work for you?

At Hewlett-Packard, we began distributing the computer workload around our factories in 1967. Then, in 1971, we instituted a worldwide systems network that has helped us grow to \$1.36 billion in shipments, with 42 percent of our business in computational products.

Today we make 4000 different products at 40 divisions around the world and have offices in 65 countries. This rapid financial and geographical expansion in a highly technical field made the distribution of our data processing an absolute necessity.

## We began with the basics.

Small systems went to work in our factories, automating the testing of circuit boards and, later, hand-held calculators. The next step was linking these minicomputers with other factory systems so they could relay data and programs. The obvious need then was to tie these computers into an information network so that key managers could make decisions based on accurate, up-to-the-minute data.

As we continued to grow, we connected our widespread sales offices with the factories. Today we have 130 high-speed communications systems in 94 locations, sending compressed data via satellite and phone lines. About 12 million words a day come into our California headquarters. Yet the cost is phenomenally low. For example, we can send a ten thousand word message to Toronto in one minute for 85 cents. On a teleprinter, it would take 16 hours and cost \$800.

## We need a system that can change. So do you.

One major reason our distributed processing approach works so well for us is the same reason it will work for you. It's extremely flexible.

You don't have to choose between a star network, or a circle, or a string. Our way, you can have any or all of them. And you can hook up an HP network for as little as \$5,000. You won't have to throw out your old equipment, either. Some non-HP computers and peripherals are still carrying a share of our workload. There's no reason why your present systems can't do the same for you.

The keystone of our system is the HP 3000, a powerful general business system. It communicates with the HP 1000, a computer generally dedicated to design, test and control applications in the factory. (Both can also link directly with an IBM mainframe.)

Most long-distance communications between sales office and corporate headquarters are handled by the HP 2026, which can also take care of on-site editing. This keeps information (much of it off-loaded from the central computer) on-hand for local use, shrinking the amount of unusable data funneled to headquarters.

We've just introduced new software for the HP 3000 that makes it an even more powerful management information tool. You can, for instance, sit down at your computer in New York and use all the processing power and data base of your Los Angeles computer—or any other HP 3000 in your network. Software is also available to tie HP 1000 systems together in a plant-wide information sharing network. So you can find out exactly what's going on in your business—from the ground up.

## Protecting the biggest investment of all.

Programming—that's where you really spend money. We know that from experience, too. We spent hundreds of man-years developing the operating software for the HP 3000. So we're just as interested in protecting that enormous investment as you are. We do it by designing our new systems to use existing software. They'll run your programs faster and more efficiently. Otherwise, you'll hardly notice the difference.

There's not much point in building good computers unless the peripherals are just as good. That's why we make our own printers, video terminals, disc and tape drives, and data entry devices.

If any part of the system does need servicing, we can fix it. With so many Hewlett-Packard offices around, we can respond quickly when you call.

## The moral of our story.

It's simply this. If you need to distribute your computer workload across oceans or in your plant, you don't have to go out on a limb. The Hewlett-Packard system has a bright future as well as a pretty impressive past. You can find out all about it by calling your local Hewlett-Packard office listed in the White Pages. Or write to Doug Chance, Hewlett-Packard, Dept. 000, 11000 Wolfe Road, Cupertino CA 95014. We'll send you information on Hewlett-Packard Distributed Processing. It could make a big difference in your company's planning.



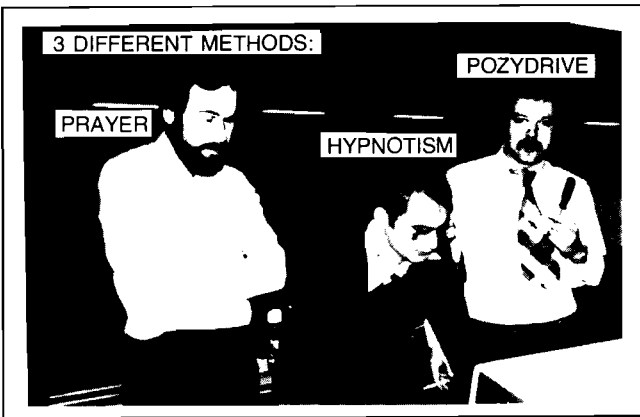
CSG801HP28

# HP GRENOBLE NEWS

## Division News

### Terminals Mini News

By: Francis Marc/HPG



Inge Vabekk  
Oslo

Robert Lambert  
Orsay

Rainer Hampel  
Boeblingen



Francis Umak  
Orsay

Pierre Daubine  
Lyon

A two week "Terminal Specialist" course was given in December. You can recognize seven of the participating FE's (*Armando Foadelli* from Zürich joined us the second week). It should be observed that the French Sales Force 06 sent two FE's to that course and will start selling terminals intensively. We can give again the course on request, at Grenoble or eventually in your own country.

At the same time *George Jardine* was teaching the 2635A to CE's.



Rolf Mecklenburg  
Hamburg

Wolfgang Dembowy  
Frankfurt



Ulrich Grundbacher  
Zürich

Horst Dischinger  
Boeblingen

George Jardine  
Grenoble

Guy Knapp  
Orsay



*Tony Andrew*  
Winnersh

*Peter Stuart*  
Grenoble



*Ed Hayes*  
DTD

*Annie Barbe*  
Grenoble

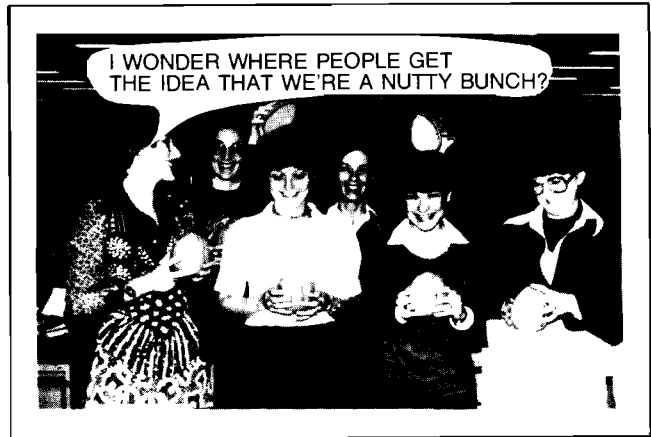
During December, we also received a lot of visitors, mainly for the Distributed Systems Demos/Courses and the big DSD Show. Those events will be covered and illustrated in the next *CS Newsletter*. You can see below that our Marketing publication team is making slides using the 2648A associated with a hard-copier.

Our secretaries and Order Processing team keep smiling.



*Mike Tupper*

*Jeanine Giraud*



From left to right:  
*Catherine Celli*  
*Marie-Odile Laurencin*  
*Catherine Clay*  
*Kathy Romani*  
*Annie Barbe*  
*Gabrielle Mingat*



# CS GROUP NEWS

## CSE News

### Osaka Office Hosts Applications Seminar

By: Yuji Mineyama/YHP

An in-house seminar titled as "New Applications of Mini-Computer Systems" was held at OSAKA Sales Office from November 29 to December 1, 1977.

Around 2000 invitation cards were mailed and 120 customers attended the 1-day through 3-day seminar. *Manome-san* and *Tezuka-san* (Mktg Mgr) spoke about HP-IB and Data Base Management Systems throughout A.M. after *Kohtani-san* (Director) gave a speech about total YHP business outline.

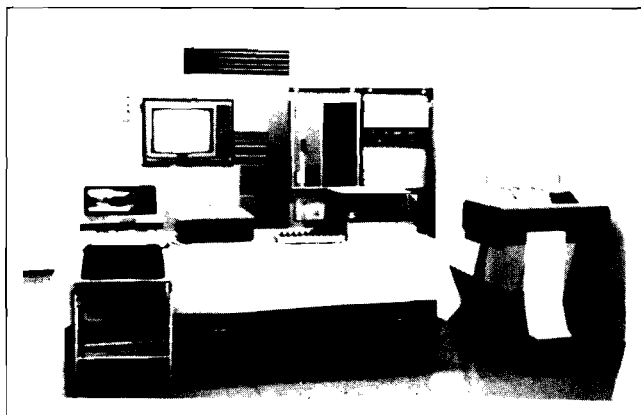


*Kohtani-san* (Director) had a presentation about YHP overall business.



*Manome-san* gave a presentation about HP-IB concept.

HP 1000 demo was held in the afternoon. Two HP-IB stations were shown, one of which was 3455A/3495A DVM/SCANNER data logging station; the other consisted of 4271B LCR meter, 9872A graphic plotter and 3070A application terminal. Also 20 inch color TV monitor displayed memory map of RTE-M and RTE-III. Data base demo was also shown.



Demonstrated System. Also 3090A, 4271B and 9872A were displayed. (Not shown here.)

Attendees were divided into two groups: DM and 4 salesmen contacted and qualified all customers in one group while the other group saw demo.

The seminar was done successfully and many new potential customers were found. Thanks to all men and women who participated; and Good Selling OSAKA SALES TEAM!

### IHI Visits Hachioji Factory

By: Yuji Mineyama/YHP

Eighteen key members of IHI (Ishikawajima Heavy Industry) visited YHP Hachioji factory on December 2, 1977.

*Kohtani-san* (Director), *Tezuka-san* (Mktg Mgr) gave a speech about YHP business outline for an hour and *Mineyama-san* gave a lecture about HP 1000, DS/1000, HP-IB and 2240A MACS along with a Factory tour. 7 YHP guys attended to entertain them and many factory managers co-operated for factory tour. IHI, one of the huge heavy industry suppliers in Japan, has payed attention to YHP as a computer supplier and is growing as one of the best major accounts.

Thanks to all those who co-operated on the visit and good selling, *Seki-san*!

## YHP 3000 Pre-Sales Seminar

By: Masayasu Bando/YHPT

On December 12, *Matsuji Tezuka*, YHP Marketing Manager, launched YHP's first Pre-Sales Seminar with an introduction to the overall business environment of YHP. Attendees at the seminar were mainly EDP and engineering personnel from such diverse areas as meteorological observatories and stereo manufacturers.

The areas covered during the 3-day presentation ranged from the YHP business environment, with emphasis on HP's relationship to YHP, through distributed processing, Data Base Management Systems, and "hands-on" terminal training.

We had a particularly impressive presentation of DS/3000 and the "Project Prelude to the Eighties" by *Larry Hartge* of GSD. *Larry* rearranged his tour schedule to assist us at this seminar. His presence was a great asset to our program.

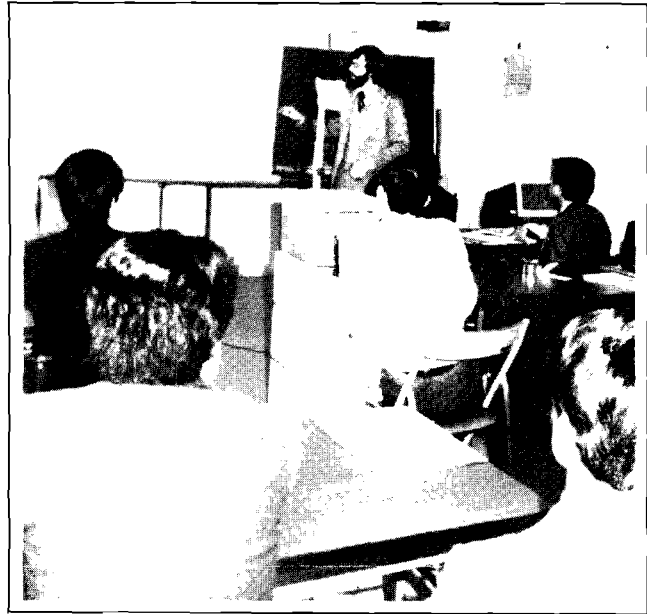
Our afternoon session, with the attendees using the terminals, was quite exciting. The experience with the HP 3000 computer generated lively discussion as well as some penetrating questions, which our FE's were delighted to answer.

These conversations helped us to find our potential customers' specific needs, as well as give us a basis for our review meetings that we held each evening to determine how effective our presentations were.

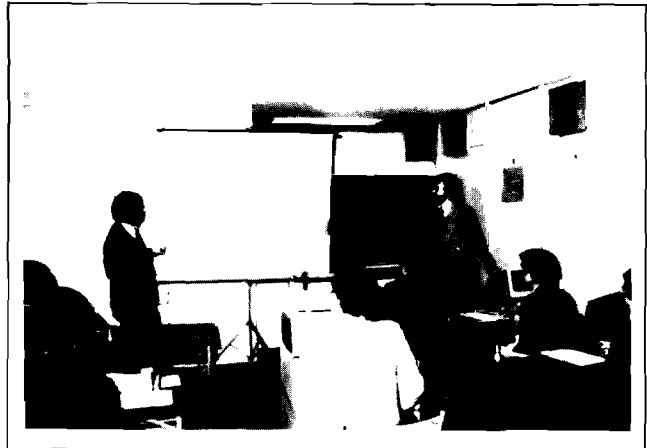
While the Pre-Sales Seminar was only a first step in our HP 3000 marketing program, from the favorable reactions we received, we will be doing much more in the future.



People listening carefully to the IMAGE data base management system.



*Larry Hartge* gave a presentation on DS/3000.



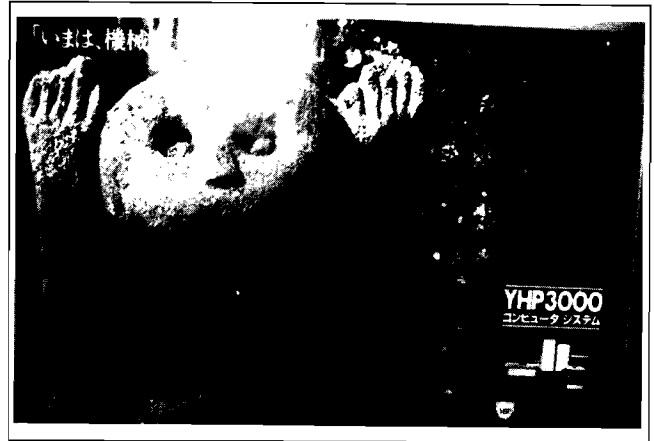
Explanation of the PRELUDE. *Dohmen-san*, left, functioned as an interpreter.



*Takahashi-san* (SE), standing, shows how easy and useful editor is.



Two attendees who are interested in QUERY.



YHP 3000 advertisement run in NIKKEI BUSINESS, Japanese counterpart of BUSINESS WEEK.



**New Quote Forms**

By: Sherry Harvey/CSG

By now you may already be using the new QUOTATION forms. The new forms differ from the old form in the following ways:

1. There are TWO forms instead of one—the FRONT page (form #9320-3661) which contains terms and conditions on the reverse side, and a CONTINUATION page (form #9320-3662) which does NOT contain terms and conditions. The continuation form should never be used by itself, since the transaction would not then be covered by HP's terms of sale.
2. The forms are set sideways to increase room for descriptive area.
3. There is a column for net prices and an additional column for BMMC's and/or net monthly software fees.
4. The "due date" has been removed (since it's the same as "Quote Date" plus "Quote Firm For"), and space for the System Type code has been added.
5. Terms and Conditions (on the reverse side of the front page) have been modified as follows:
  - A. Warranty (Sec. 10)—a disclaimer on "Merchantability or fitness for a particular purpose" has been added.
  - B. Prices (Sec. 3b)—a statement that a quote made pursuant to a Purchase Agreement is not firm past the expiration of the Purchase Agreement.
  - C. Acceptance (1a-b)—customer acceptance terms have been deleted and replaced by terms of acceptance of customer's order by HP.

6. Terms and conditions have generally been made more consistent with Corporate quote forms.

You should now begin using these new forms. They are orderable from Corporate Forms.

The diagram illustrates two versions of the Hewlett-Packard Quotation form. The top form is the main quotation (form #9320-3661), and the bottom form is the continuation page (form #9320-3662). Both forms are oriented sideways. Callouts highlight specific changes:

- NOTE THE EXTRA ROOM FOR MULTIPLE PAGE QUOTES:** Points to the top margin area of the main form.
- "CONTINUATION PAGE":** Points to the top right corner of the main form.
- WIDER DESCRIPTION COLUMN:** Points to the expanded description area in the main form's table.
- COLUMN FOR MONTHLY CHARGES OR NET MONTHLY CHARGES IF DISCOUNTED:** Points to the 'NET MONTHLY CHARGE' column in the pricing table.
- COLUMN FOR UNIT PRICES LESS DISCOUNTS:** Points to the 'NET PRICE TOTAL' column in the pricing table.

Both forms include the HP logo, the word 'QUOTATION', and a table with columns for ITEM NO., QUANTITY, DESCRIPTION, APPROX. DELIVERY WEEK, UNIT PRICE, NET PRICE TOTAL, and NET MONTHLY CHARGE. The main form also includes a 'YOUR REFERENCE' field and a 'QUOTE FIRM FOR' field. The bottom form includes a 'BY' field with sub-fields for NAME and TITLE.

## Il Computer System Group della Hewlett-Packard

Gli elaboratori HP, le unità centrali e le periferiche sono prodotti da 6 divisioni distaccate negli USA e in Europa. Come grande compagnia, la Hewlett-Packard produce direttamente la maggior parte dei propri sistemi, periferici. Questi non sono semplicemente acquistati da terzi e connessi al computer, ma sono progettati e prodotti in proprio, onde assicurare il massimo delle prestazioni quando questi siano allacciati al nostro sistema di elaborazione. Il Computer System Group è articolato nelle seguenti divisioni:

**General System Division** ha sede in California a S. Clara e produce le serie di elaborazione HP 2026, 2000, 3000 e le applicazioni gestionali, industriali, nella pubblica amministrazione e nell'istruzione. L'HP 2026 è un sistema di acquisizione dati e di comunicazione per azionamento potentissimo in grado di gestire il più potente sistema di acquisizione dati (DEAL) L'HP 3000

è un sistema multiterminali programmabile da utente con capacità di collegamento in Rete, le Job Entry (JJE) è adatto per applicazioni di acquisizione ed elaborazione di dati. L'HP 3000 è un sistema di elaborazione tutto che gestisce contemporaneamente l'acquisizione dati, la gestione delle transazioni, lo sviluppo e l'esecuzione di programmi. L'elaborazione è tutta inserita in una rete di comunicazione dati.

**Data System Division** ha sede in California a Cupertino. Produce i sistemi di misura e controllo gestiti da elaboratori, oltre il loro HP 1000 e un proprio sistema particolarmente adatto al calcolo al controllo della strumentazione ed alle applicazioni tecnico produttive.

**Data Terminals Division** ha sede in California a Cupertino. Produce la

famiglia DE di terminali intelligenti e interattivi HP 2640.

**Disc Memory Division e Boise Division** ambedue hanno sede a Boise nell'Idaho. Producono le unità a disco, le stampanti a matrice, le unità a nastro magnetico e terminali scriventi.

**Grenoble Division** ha sede in Francia a Grenoble. Produce terminali per acquisizione dati, adatti per applicazioni di raccolta dati in tempo reale su impianti di produzione e per altre applicazioni similari.

**Automatic Measurement Division** ha sede a Sunnyvale in California e produce sistemi per misure in prove automatiche.

**Computer Services Division** ha sede a Cupertino, California, fornisce il servizio di assistenza e manutenzione per gli elaboratori HP.



La Hewlett-Packard è leader nel campo dei computer per il controllo di processo, per l'industria, per la pubblica amministrazione, per l'istruzione, per la ricerca scientifica, per le applicazioni gestionali, per le applicazioni industriali, per le applicazioni mediche, per le applicazioni di acquisizione dati, per le applicazioni di comunicazione, per le applicazioni di calcolo, per le applicazioni di controllo della strumentazione, per le applicazioni tecnico produttive.

# COMPUTER SYSTEMS NEWSLETTER

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