

COMPUTER SYSTEMS NEWSLETTER

For HP Field Sales Personnel

REINHARDT, HELMUT
FRANKFURT
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HP Computer Museum
www.hpmuseum.net

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BOISE DIVISION NEWS

Division News

5000 2631A Printers

By: *Thad Webster/Boise*



The 5000th 2631A printer was shipped during December 1978. As you will recall, we began shipments in October 1977. . . slowly at first, but since May of 1978 the 2631 has been producing in volume.

Larry Andrews, Product Manager for the 2630 Family, says that the recent announcement of the 2631G adds considerable capabilities to the 2630 Family and orders so far have shown favorable market acceptance. The future of the 2631 line of printers appears to be a bright one!

HP 2630 Family Intensive Training

By: *Mary McNally/Boise*

Boise Division would like to announce a new series of intensive printer/terminal training classes. The classes are scheduled after DTD training, and will run from Monday through Wednesday. Classes have been scheduled for March 19, April 20, and June 11.

The objective of the course is to provide an in-depth, working knowledge of the HP 2630 family of printers and terminals. The presentations will cover such topics as:

- General characteristics of the HP 2630 family.
- Unique features such as graphics, high density print, and extended interfacing.
- Datacommunications. This will include both a primer and specific issues on HP 2630 family interfacing.
- The extended serial interface in the 2639A.
- Sales Applications and Competition.

Each of the major topics will have an associated lab and product demonstration. Our objective here is that the person who completes this course will be knowledgeable enough on the 2630 family to sell and use them effectively.

Product News

2630 Family Interface Options—Revised

By: *Gary Sherwood/Boise*

The September, 1978 *CS Newsletter* article on the terminal/printer interface options met with such favorable inputs that I have revised it to reflect the latest revisions and system additions. Within the first two weeks after the first article was printed I received many phone calls. The furthest was from Australia. The comment in each case was "I read your article and think I have ordered the wrong options. Would you confirm my fears." We at Boise are still receiving post-installation calls stating that a wrong interface was ordered.

Please add these charts and table to your personal quick reference book and use them. Then we will never have to receive an embarrassed call from you pleading for a quick delivery of an interface kit to replace the incorrect one you ordered. Minimize your customers' problems and maximize their use of their new equipment by ordering correctly initially.

2630 FAMILY I/F OPTION COMPONENTS

OPTION NO.				I/F TYPE	TERMINAL/PRINTER PARTS				Computer/CRT I/F Provided?
2631A	2631G	2635A	2639A		I/F Card (A)	I/F Card Cable Adapter	Cable Provided	2631 Control Panel (B)	
STD	---	---	---	Parallel Differential	02631-60008	02631-60017	---	Parallel	No.
040	---	STD	---	RS232 - Hardwired 103 Modem	02631-60082	02631-60012	02631-60065	Serial	No.
041	---	041	041	RS232 - Hardwired - 103/202 Modem	02631-60159 (< 02631-60083)	02631-60012	02631-60065 (C)	Serial	No.
042	---	042	---	RS232 Current Loop	02631-60021	02631-60019	---	Serial	No.
044	---	---	---	Parallel - 8 Bit TTL	02631-60046	02631-60018	---	Parallel	No.
046	STD	---	---	HP1B	02631-60090 (D) 02631-60145	02631-60011	---	Parallel	No.
051	---	051	051	RS232 - Hardwired - 103/202 Modem	02631-60159 (< 02631-60083)	02631-60064	---	Serial	No.
052	---	---	STD	RS232 Voltage/Current Hrdwd-103/202 Modem	02631-60164	02631-60064	---	Serial	No.
210	---	---	---	HP 1000 Parallel	02631-60008	02631-60017	Yes See I/F	Parallel	Includes 12845B I/F to HP 1000 Systems.
240	---	---	---	Parallel - 264X	02631-60046	02631-60018	Yes See I/F	Parallel	Subsystem includes 13238A CRT I/F Board and 13232J I/F Cable.
250	---	---	---	HP 250 - IEEE-488	02631-60090	02631-60011	---	Parallel	Supplied in System.
300	---	---	---	HP 3000 SERIES II, III Parallel Differential	02631-60008	02631-60017	30209-60004	Parallel	Supplied with cable only. 30209A I/F Board to be ordered from GSD
330	---	---	---	HP 300 - IEEE-488	02631-60090	02631-60011	31389-60002	Parallel	I/F Board supplied in System.
333	---	---	---	HP 3000 SERIES 33 IEE-488	02631-60090	02631-60011	31389-60002	Parallel	I/F Board supplied in System.
---	---	---	102				13232H		
---	---	---	103				02631-60065		

(A) () Denotes older board no longer supplied. (Prior to Serial Prefix 1841, approx Nov 1978.)

(B) Serial 02631-60088
Parallel 02631-60087

(C) Cable not provided with 2639A.

(D) Used with 2631G.



HP 1000

DRIVER	I/F CARD	I/F CABLE	2631A	2635A	2631G
DVA12	*12845B	*12845-60006	Std *210	---	---
DVR05	12966A-001	12966-60008	051	051	---
(A) DVR00	or 12531D-004 or 12880A-001	02640-60058			
(A) DVR00	12531D-001	Hardwired or 103 Modem 12531-60026 *02631-60065 (C)	*040	*Std	---
(A) DVR00	12531D-001	Hardwired or 103/202 Modem 12531-60026 *02631-60065 (C)	*041	*041	---
DVR37	59310B	59310-60002	046	---	---
DVR05	12966A-001	12966-60008	(D) 264X *13238A	*13232J	044 *240
(A) DVR00	or 12531D-004 or 12880A-001	02640-60058			
DVR05	12966A-001	12966-60008	(D) 264X 13250B or 13260B	13232G	040/ 041
(A) DVR00	or 12531D-004 or 12880A-001	02640-60058			
DVR05	12966A-001	12966-60008	2647/8 13296A	Supplied with 13296A	
(A) DVR00	or 12531D-004 or 12880A-001	02640-60058			
					Std

- (*) Includes card and/or cable marked.
- (A) DVR00 does not provide ENQ/ACK handshake. Transmission rates up to 1200 baud may work; however, maximum baud rate is application dependent.
- (B) 264X with serial interface inserts Nulls after Esc's. Prior to Serial Prefix 1841, 263X does not trap Null, therefore printer/terminal control functions are not useable. Subsequent 041 units trap Null. On 2647/8 jumper for zero nulls to work with 263X.
- (C) Cable provided for Modem connection, not needed without modem.
- (D) 2640A/B can only dump display memory, (80 columns Max). No escape sequences can be sent to printer.
- (E) 264X serial interface does not provide ENQ/ACK Handshake. Limited to 600 baud transmission rate. 1200 baud may work.

HP 250				
I/F CARD	I/F CABLE	2631A	2635A	
PERIPHERAL I/F CH. 45120A ASYNC SER I/F	Supplied with System	250	---	
	*02631-60065	*040/*041	*STD/*041	
HP 300				
31262A G.I.C.	*31389-60002 (31389B)	2631A *330		
HP 3000 SERIES 33				
I/F CARD	I/F CABLE	2631A	2635A	
30079A GENERAL I/O 30018/9 A ADCC	*31389-60002 (31389B)	*333	---	
	*02631-60065		*STD	
HP 3000 SERIES II, III				
I/F CARD	I/F CABLE	2631A	2635A	
IOLPRO 30209A	*30209-60004	STD *300	---	
ATC 30032B	Hardwired on 103 Modem *02631-60065	*040	*Std (A)	
ATC 30032B	Hardwired on 103 Modem *02631-60065	*041 (C)	*041 (C)	
ATC 30032B	02640-60043	264X *13238A (B)	*13232J	044 *240

- (A) May lose data when out of paper.
- (B) 2640A/B can only dump display memory (80 columns max.)
No escape sequences can be sent to printer.
- (C) Not supported on 202 Modem.

(*) Includes card and/or cable marked.

Question Corner

By: *Thad Webster/Boise*

Chances are good you have either called us with the following questions or have had these questions asked of you. The following are among the most frequent ones we have received recently.

- Q. This most asked question takes several forms. "What 2630 interface do I need to hook my printer to such and such a system or terminal?", or "My customer ordered a parallel interface by mistake, how do I make it a serial interface?" or "What part would change my 2630 interface from X to Y?"
- A. Let us answer this question by directing you to *Gary Sherwood's* article, in this issue, on 2630 Family interfaces. We are trying to make it easier to understand 2630 interfaces. Let us know how we can do better.
- Q. "Can I hook up a 2631G to anything else with an HP-IB interface besides a 2647 or 2648?"
- A. No, at the present time there are no other devices with released software that can drive the 2631G.
- Q. "Now that tape drives are unbundled from HP 3000, how do I order the tape drive?"
- A. Again, let me refer you to an article in this issue. *Gene Morel*, Tape Product Manager, discusses the order information.
- Q. "What's the weather like in Boise?"
- A. We've had a cold, snowy winter like most of the U.S. Temperatures range from 15 to 35 degrees Fahrenheit. Several inches of snow on the ground in town, which is unusual. We've had some of our usual fog during January; Bogus Basin has a 40"-45" base for skiing. Come up and join us!

Look for this column from time to time to keep you informed.

New Serial Interface Switch Settings

By: *Mary McNally/Boise*

This article is intended to clarify the switch settings on the recently introduced "Null/Delete" trap RS-232 serial interface. A change notice has been written for the 2630 Family Reference Manual, which lists the switch names and settings on the interface board. (Part No. 02631-60159.) There are two switches of particular interest:

1. **Null/Delete trap**
This feature is switch selectable. Those units which shipped from the factory in November-December had this feature DISABLED. As of January 5, this has been reversed, and the Null/Delete trap will be enabled on all units. The switch which controls this feature is S2-4 on the I/O board. In the OPEN position, the trap is ENABLED. If one of your customers is still printing delete characters, have him check this switch.

2. **Full vs. Half Duplex**

There has been some concern in the field over the type of communication selected on the I/O board. We have given some thought to it, and have decided to leave the switch in the Half Duplex mode. (Switch 1-4 open position.) The reason for this may be explained by the following matrix:

Front Panel	I/O Switch	Result
Full	Full	Full Duplex, no local copy
*Full	Half	Full Duplex, no local copy
Half	Full	Full Duplex, local copy
*Half	Half	Half Duplex, local copy

*By setting the I/O switch to half duplex, we cover the two most common cases. The only customers who must change the switch setting are those who require FULL DUPLEX with LOCAL copy. This relates only to those foreign CPU's which do not echo.

Magnetic Tape Ordering Information For New Series III

By: *Gene Morel/Boise*

With the unbundling of the new Series III come new options for the 7970 magnetic tape units. Your Field Training Manual should be updated to reflect the following changes. Please note that all of these options include the new lo-boy cabinet.

	Price
7970B 800 bpi, NRZI, mag tape drive	\$ 6870
-Option 320 Add-on master drive in lo-boy cabinet—includes multi-unit cable.	\$ +1830
-Option 324 First drive on system. Master drive in lo-boy cabinet. Includes interface cable.	\$ +1830
7970E 1600 bpi PE mag tape drive	\$ 8885
-Option 320 Add-on master drive in lo-boy cabinet—includes multi-unit cable.	\$ +1740
-Option 321 Add-on slave drive in lo-boy cabinet—includes multi-unit cable.	\$ - 105
-Option 324 First drive on system. Master drive in lo-boy cabinet. Includes interface cable.	\$ +1740

2608A System Support Recap

By: Steve Richardson/Boise

The 2608A offers the best price/performance of any HP printer today, plus many extra features which your customer may want. It is extremely important to understand what the 2608A can do for your customer. The 2608A does have many beneficial features that may influence your customer's decision, but if they are not supported by his system, he won't be able to use them. This could cause some problems unless you know what he can expect out of his system.

The following chart clearly shows which 2608A features are supported on various HP systems. If you have any questions, please contact your Boise Division Regional Sales Engineer.

System	Print and Space	Download VFU	Programmable Left Margin	Character Size Selection	Double Size Characters	Graphics	Remarks
HP 1000	10/78	10/78	10/78	10/78	10/78	2/79	RTE-IV/RTE-M
HP 3000/33	10/78	10/78	10/78	No	No	No	Downloadable VFU and Programmable left margin are operator functions
HP 3000/II/III	2/79	2/79	2/79	No	No	No	
HP 300	Under development	Under development	Under development	No	No	No	
HP 250	Under development	No	No	No	No	No	

Remember, the price/performance, quiet, reliable operation, cartridge ribbon, enclosed stand, and high quality print are available to all customers. Only the features on the chart are system dependent. These features make the 2608A the best choice no matter what system you choose.

Printing Display Enhancements From the 2648A

By: Larry Andrews/Boise

A problem has surfaced when dumping alphanumeric data, with embedded display enhancements, from the 2648A to the 2631G. (You're most likely to see this when dumping forms using the line draw character set.) Graphs and normal alphanumeric printing are unaffected.

Display enhancements, such as alternate character sets, are invoked programmatically with escape sequences or control characters. These commands, however, are stored in the CRT's display memory in a "shorthand" form. (This format is also used on screen-to-tape dump.) The data-communications and printer drivers, when transmitting data from display memory, convert the "shorthand" information back into escape sequences and control codes before sending it. The Shared Peripheral driver on the 2648A does not have this capability. The net result is that alphanumeric dumps from the screen to the 2631G, or other HP-IB devices, will not work properly if display enhancements or secondary character sets are used.

Fortunately, there is a work-around for this problem. If the data is transmitted directly from the CPU to the 2631G (through the 2648), everything works fine.

Sales Aids

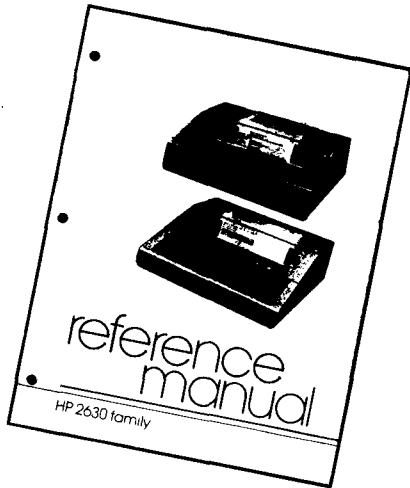
New 2630 Family Reference Manuals

By: Thad Webster/Boise

The 2630 Family of printers now has three reference manuals that every Sales Office should use for selling, configuring, and supporting 2630 printers.

Everything you ever needed to know about these printers is contained in these reference manuals. Amazing, that all the little facts and figures you need for those tricky customer questions is right here in these three manuals. Condensed? Concise? Accurate? That's right! You got it!

Our previous reference manual (02635-90905) has now blossomed into three manuals that cover our growing 2630 Family of printers:



2630 Family Reference Manual (02635-90905)

This is a new version of our previous reference manual. We have added many discussions you have asked for which increases the size of this manual to 68 pages. This manual helps you with examples of escape sequences that control the printer's versatile features, such as expanded and

compressed print. There are large sections dedicated to discussion about the variety of interfaces, serial, parallel, and HP-IB. This manual is used for the 2631A, 2635A, and 2639A printers.

2631G Graphics Printer Reference Manual (02631-90911)

This all new manual describes the configuration and control of the new 2631G graphics printer. Thirty-six pages of switch settings, interface functions, commands, control codes, and graphics control. This manual deals only with the 2631G graphics printer.

2630 Family Extended Serial Interface Reference Manual (02639-90902)

This all new manual describes the many and various interface configurations possible with this new interface board. The extended serial interface is standard in a 2639A and available in a 2631A as Option 052. One of the most valuable parts of this reference manual is the Application Notes section that covers seven common uses of this interface giving switch settings, cable requirements, and limitations inherent in the configuration.

Please call or write us with any revisions, modifications, additions, etc., that you would like to see in these manuals.

2608 Ad in Scientific American

By: Thad Webster/Boise

If your customers have not already told you about it, go out and tell them about the 2608 advertisement in the January 1979 issue of *Scientific American*. Appearing along with the HP 3000 Series 33 and the 2621 printing terminal, the 2608 line printer is described as a versatile, highly reliable 400 lpm printer. You may want to buy an office copy of this issue for your sales aid bag of tricks.

HP measurement and computer advances extend your possibilities.

The HP 3000 Series 33 computer system. Another innovation that, through advanced LSI technology, delivers major business system capability in a desk-sized package.

With the Series 33, Hewlett-Packard adds a low-cost, compatible member to its 3000 computer family: powerful systems that adapt to your operational requirements for the management of manufacturing and other business information.

A Series 33 machine is capable of HP's advanced MicroVAX register file technology in the HP 3000 Series 33. It features a small and robust, 400 MHz microprocessor chip on the Series 33 that delivers benefits of smaller size, greater performance, and lower cost than other printers using advanced technology.

The new HP Series 33 computer system is rugged, reliable, and built for the business processing applications that are the backbone of your business. The HP 3000 Series 33 is a 32-bit system that provides the main computer that can effectively manage the large organizations' equipment and distributed processing.

Businesses can be significantly helped by users to help to 33 machines, and the Series 33 from the same family. The HP 3000 Series 33 is a 32-bit system that provides the main computer that can effectively manage the large organizations' equipment and distributed processing.

A working partnership with HP.

This information management booklet outlines HP's approach to think business. It demonstrates the extensive measures, support and computer solutions, or using the solutions. For more information, call HP's 800-541-3333 or write to HP, 1500 Page Mill Road, Palo Alto, CA 94304.

A new printer and printing terminal: each sets a new performance/price standard.

A highly reliable 400 lpm line printer that is the most high-throughput computer application. The HP 2631G features multiple character sets, graphics capability and outstanding print quality. At the other end of the spectrum, the HP 2621P is an interactive CRT terminal with an integral 120 cps thermal printer. Ideal for the occasional wide-area copy, both cost, results show that you would expect for the performance they provide.

The HP 2608 is a dot matrix line printer that is rugged enough for HP applications. It can be used in office environments. It prints and prints quickly. It has a 100% duty cycle. It is a 400 lpm printer. It has a 400 lpm printer. It has a 400 lpm printer. It has a 400 lpm printer.

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COMPUTER SERVICE NEWS

Division News

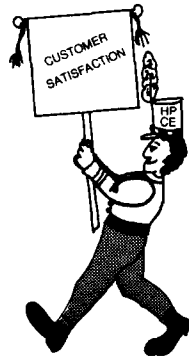
"Support Update" Update

By: Dick Hornor/CSD

In addition to its regular contributors, *Support Update*, the Computer Service Division's semi-monthly publication for Customer Engineers, is now using the *Computer Systems Newsletter* as a source of CE-oriented articles. Because *CS Newsletter* distribution is not extended to Customer Engineers, many articles of importance are missed by the majority of CSD's field personnel. By sourcing the *CS Newsletter* we will be able to select articles of interest to Customer Engineers and reprint these in the pages of *Support Update*.

The Customer Engineer — Part I Or, "The First Step on the Path to Being Number One."

By: Tom Wade/CSD



The Sales Representative has applied his communications skills and product knowledge effectively and shown the heretofore unaware prospect the many benefits of HP equipment. The Systems Engineer has carefully and painstakingly examined the proposed application and given the coveted "SE seal of approval." Credit is OK. Quotations are approved. Delivery time is OK. The prospect is happy — HE BUYS!!

End of story? — Not hardly. In many instances, the new customer has yet to meet the third member of the HP field team. In time of trouble this is the member of the team whom the customer will seek. This member of the team — The HP Customer Engineer — carries the "Customer Satisfaction" banner.

Where did he or she come from? How did this one member of the team qualify for the significant and crucial role he or she will have in the future relationship between HP and the customer? This series of articles about the development of HP Customer Engineers will answer these questions. First of all, where did he or she come from?

The Computer Service Division's goal is to be #1 in service in the computer business. We will accomplish that objective in the HP Way — Quality. In 1978, 60% of the new CE's hired domestically were college graduates — in 1979 the goal is 70%. No one of HP's competitors can match that ratio. In fact, a survey taken in the Bay Area has shown that most competitors monitor HP's CE hiring and set their targets below HP. More than 2/3 of the degreed CE's hired come from schools providing a degree in Electronic Technology (BSET). The remainder are mostly BSEE's.

What is a BSET degree, you ask? OK — The Electronics Technology degree addresses "that part of the technological field which requires the *application* of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities; it lies in the occupational spectrum between the craftsman and the engineer at the end of the spectrum closest to the engineer." This is the definition established by the Engineers Council for Professional Development, the accrediting association of engineering schools.

In order to insure that we hire the type of graduates we need, HP goes a few steps further. Whenever possible, Customer Engineer District Managers and Area Managers work with the faculty of the school in their area, providing counsel on the effectiveness of the teaching curriculum. Faculty members from the schools visit our own training headquarters in Cupertino to talk with HP instructors and management. Even the recommendations for the school donation program are evaluated on the basis of return-to-HP in experienced BSET graduates.

But, even after all this, there are no guarantees for BSET graduates. They must still be selected by HP through the recruiting visit on campus. For each CE hired from the campus, HP field management will have interviewed twelve new graduates on campus, and invited four to an office or factory for further interviews. In all, the new CE will have been interviewed an average of five times before being offered a position with the HP field marketing team. But he or she hasn't made it yet . . .

In the next Issue: "Do I Have to go Back to School Again?"

DISC MEMORY NEWS

Division News

Order Processing Organization

By: Beth Olson/DMD



Over the past few months, Order Processing has added two new faces. *Pat Kimball*, who joined us with the introduction of the 7925, has done an outstanding job and is eager to support you and your customers. **KEEP UP THE GOOD WORK!**



Steve Hieb joined our group in January. Before joining us, Steve worked for the State of Idaho as a land appraiser for four years. Wanting a change, he saw Hewlett-Packard and decided HP was his kind of place! Steve is looking forward to his new challenge as the Order Coordinator for the 7920.

So remember, if you need information on delivery, Order Status, or have any concerns, **PLEASE CONTACT:**

Pat Kimball—7925 Coordinator ext. 2692
Steve Hieb—7920 Coordinator ext. 2488

DMD Lands a Jet Jockey

By: Jim Stinehelfer/DMD



Joining the Product Marketing team at DMD is our most recent hire, *Tom Steipp*. Tom is joining HP after spending eight years in the Air Force. After graduating from the Air Force Academy, Tom flew T38's as an instructor and checkout pilot. Eventually tiring of fast planes, Tom earned an MBA from Purdue and decided to try civilian life. Demonstrating superior decision-making capability, he has selected Hewlett-Packard and DMD to start his new career.

Tom's initial assignment will be to work with *Steve Germain* on the High Performance Disc line. He will be picking up responsibility for the 7906, 7920, and 7925 over the next few months. If any questions on these products come up, please give Tom a call.

Sales Aids

Disc Drive Mini-Series

By: Jon Bolt/DMD

In the coming issues a series of sales aid articles will appear covering the topic "The Impact of Disc Drives on System Sellability." Essentially the articles examine the influence disc drives have on overall system pricing, reliability, and performance. The series will hopefully present new ideas and concepts that can be applied when devoting attention to disc drives in the course of system sales. I hope you'll find the ideas in this series useful and that they provide you with additional depth on HP product knowledge. Any feedback will be appreciated.

GOOD SELLING!

Impact of Disc Drives On System Sellability

By: Jon Bolt/DMD

In the practice of computer system sales, little attention is usually focused on disc drives. The idea that disc drive sales just naturally fall out of system sales seems to prevail. The selection and sale of a disc drive for a particular system appears as such a simple task that discs often receive only casual attention. The only major concern associated with disc drives is to simply determine the customer's mass storage requirements, and meet those needs with the appropriate drive(s).

Disc drives maintain this low profile for three reasons. First, they are obviously not the operational heart of the system. Hence, they do not provide most of the key features and capabilities that are responsible for generating customer appeal. A customer doesn't usually buy a system on the merits of its disc drives. Disc drives perform one simple function—mass storage—that is simple in concept (but complex in implementation) and as a result, they are often treated too casually. Second, disc drives are subject to much less scrutiny by users than other system components. Unlike I/O devices, they need not be attended or operated constantly. They are not constantly under a critical eye. Users do little more than turn 'em on and let 'em spin. Finally, interfacing a disc drive to a given computer is not a trivial task. Developing an interface and writing a driver may require many man-months of effort. Because no industry standard disc interface exists, usually only a limited selection of drives is available for a specific system. Typically, the system vendor also sells the only drives available for his system. The disc sale falls naturally out of the system sale.

Disc drives do, however, have significant impact on the overall system and should not be overlooked. Let's look at how disc drives affect system sellability through primary impact on system pricing and reliability and secondary impact on system performance.

Pricing Impact

A recent study conducted by Venture Development Corporation, a market research firm in Wellesley, Massachusetts, reveals that in 1979, roughly 80% of the total purchase price of the "typical" minicomputer is spent on the system's peripherals (see Figure 1) and this percentage is growing! A large portion of that 80% applies towards purchasing the system's disc drives. In fact, for HP minicomputers, disc drives represent about 40% of the total system purchase price (Figure 2). Disc drives have a major impact on system pricing. As Figure 1 suggests, the percentage of system dollars spent on disc drives will no doubt grow as long as disc drives are the primary device for mass storage. Computers will continue to gain more acceptance and assume expanded duties and responsibilities, while penetrating businesses in all departments. These expanded roles will no doubt call for greater mass storage capacities. In addition, mass storage evolution from data storage to database management in the 1970's will progress to on-line document storage in the 1980's (Figure 3). The result is an unprecedented demand for disc storage space. Of course, the disc industry is in no way technologically stagnant. In fact, technological advances in the disc industry have maintained a 30%/megabyte/year decrease in the price of disc storage (see Figure 4). Optical storage and thin-film heads and media in the 1980's will sustain this 30%/megabyte/year decrease in mass storage prices. Nevertheless, it appears that mass storage requirements on the typical system will continue to outpace price reductions. The customer can expect to spend a growing percentage of his budgetary dollars on disc storage.

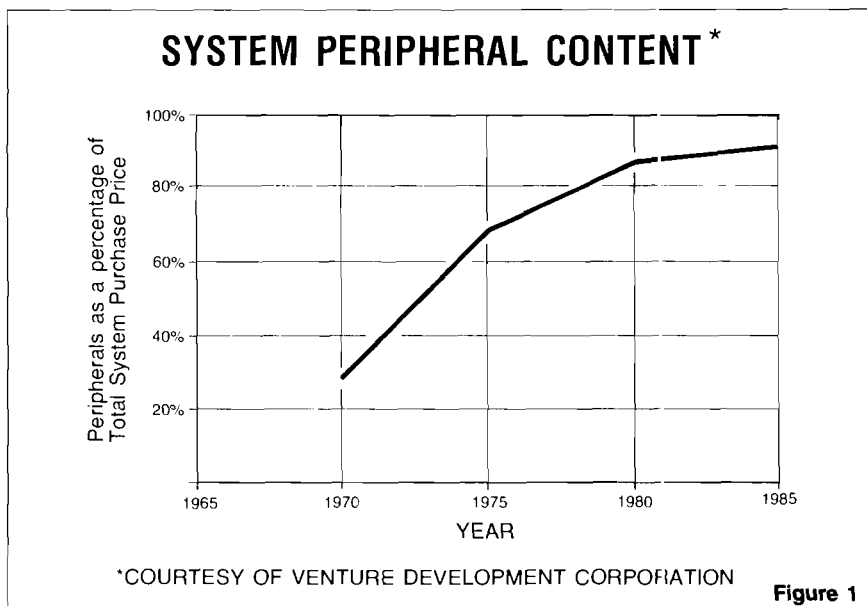


Figure 1

PRICING-SYSTEM LEVERAGE

- HP 1000 MODEL 30 - 38% OF LIST PRICE IS 7906
- HP 3000 III (W/2 ADD-ON 7925'S - 36% OF LIST PRICE IS 7925'S
- HP 9845 WITH ONE 7906 - 40% OF LIST PRICE IS 7906
- HP 250 WITH ONE 7906 - 44% OF LIST PRICE IS 7906
- HP 300 WITH ONE 7906 - 33% OF LIST PRICE IS 7906

Figure 2

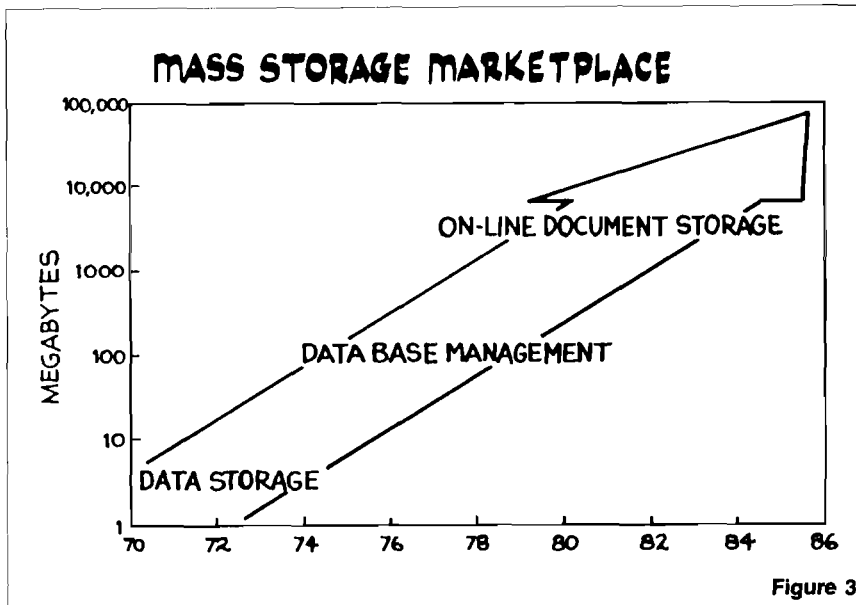


Figure 3

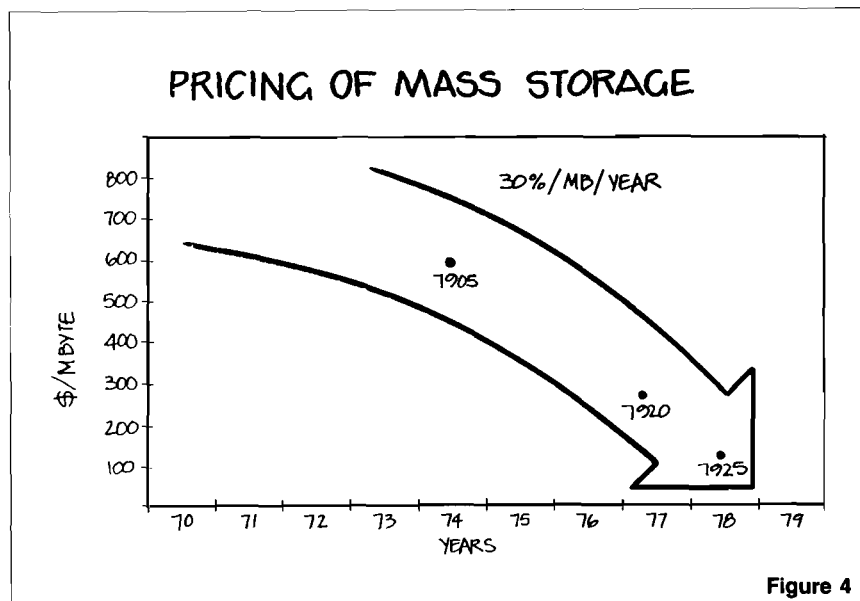


Figure 4

DATA SYSTEMS NEWS

New Applications

HP 2240A Saves Time, Saves Money, Wins Orders

By: Dave Hannebrink/DSD

Recently, an avionics computer manufacturer placed an order for five HP 1000-based electronic test systems that will utilize several unique capabilities of the HP 2240A Measurement and Control Processor. One part of the test involved making analog and digital measurements upon receiving a trigger pulse from the tested assembly. In other words, they wanted to synchronize and correlate their measurements with certain external events. Let's compare the steps needed to implement this application on the 2240A versus those needed by the two-mainframe 2313B (for analog I/O)/6940B (for digital I/O) approach.

Step	2240A Approach	2313B/6940B Approach
1.	Buy one 2240A (for both analog and digital I/O).	Buy one 2313B (analog) and one 6940B (digital).
2.	Connect HP-IB.	Connect separate interfaces, one for 2313B, one for 6940B.
3.	Generate system with HP-IB driver.	Generate separate drivers for 2313B and 6940B.
4.	Begin programming.	Begin programming.

Let's take a closer look at the programming.

5. a. One-line 2240A command (sent to the 2240A via FORTRAN "WRITE" or BASIC "PRINT" statement).

RP,10;WT,3,2,1;AI,1,1,1,8;FI,2,1,2;NX;IC!

Synchro- Scan 8 read 2
nize with analog 16-bit
external chan- digital
event nets fields.

repeat this 10 times

Interrupt
Computer
when through

- b. Let computer perform other work while 2240A performs measurement task.
c. Read all analog and digital data using FORTRAN or BASIC "READ" statements.

Equivalent 2313/6940 program.

- a. Schedule user-written data acquisition program using EVSNS (event sense) program (from the ISA FORTRAN Library).
b. Do EXEC Read (or ISA FORTRAN) to get analog data from 2313B.
c. Do EXEC read (or ISA FORTRAN to get digital data from 6940B.
d. Make sure (through FORTRAN DO-loops) to do "a" through "c" 10 times.
e. Make sure computer stays in direct contact with 2313/6940 during steps "a" through "d".

Now this is somewhat of a simplification (but not much of one). In some cases, the 2313B/6940B solution would have been the better one (especially for a large number of analog/digital I/O channels) and we don't mean to imply otherwise. However, in this case it wasn't.

The 2240A provided everything the user wanted: analog and digital I/O, and external event synchronization.

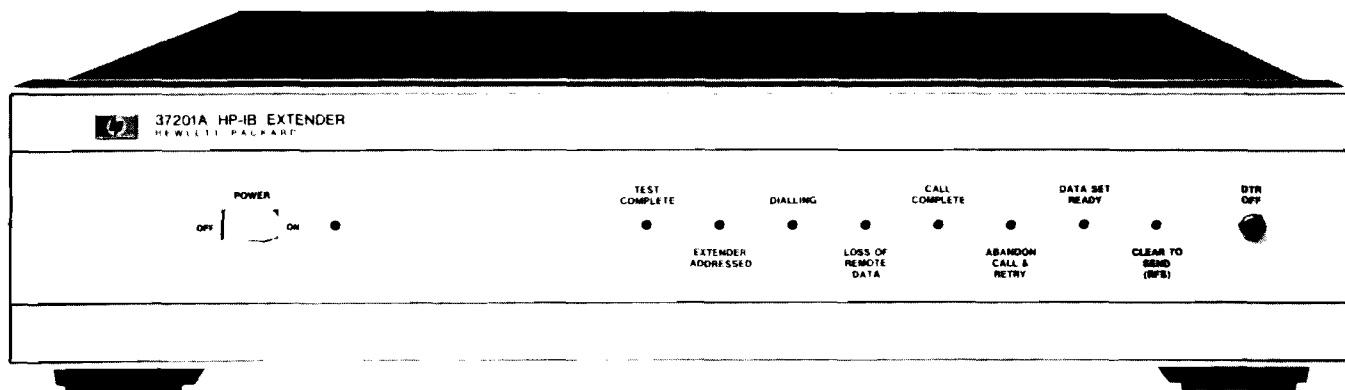
Furthermore, it was easier to use, imposed much less of an overhead burden on the computer, and was less expensive than the 2313B/6940B, not to mention the outside competition. The HP 1000/2240A again provided the competitive edge.

MAKE THE INTELLIGENT CHOICE—SELL THE HP 2240A!



Operate IEEE-488 Bus-connected Instruments over Almost Unlimited Distances

By: Gordon Reid/HP Ltd.



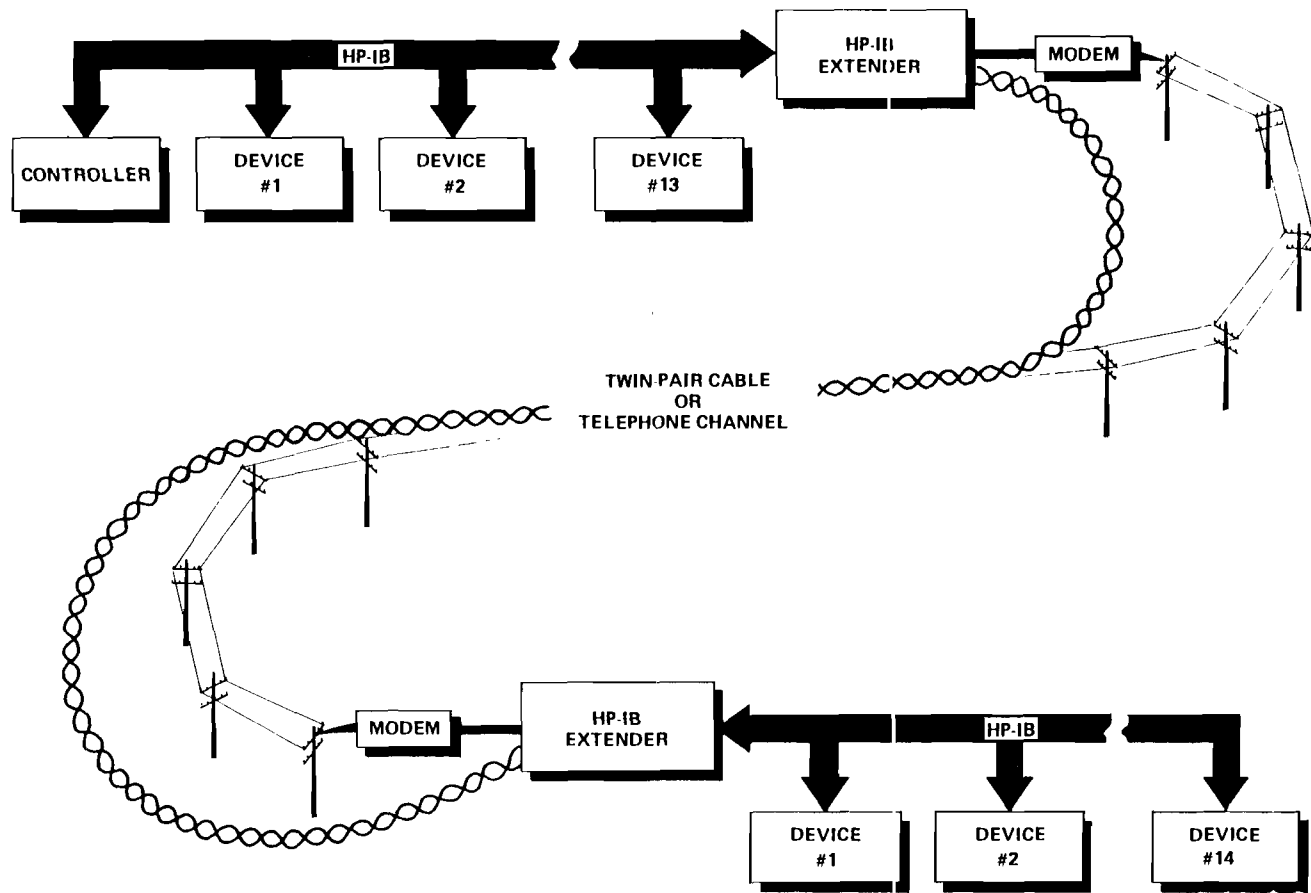
Many users of the HP-IB (IEEE-488) Interface for programmable instruments need to operate over distances greater than the maximum 20 metre cable lengths. Now, Hewlett-Packard has introduced an easy-to-use, transparent HP-IB Bus Extender. It extends operation when connected directly, to 1000 metres, and with modems, is limited only by the telephone network.

Called the HP 37201A, the new Extender is a compact stand-alone unit that is completely transparent to the basic interface bus. It requires no software modification for its implementation. Two or more clusters of equipment at separate sites can now share a common interface bus.

The Extender is hooked to the basic bus just as any other peripheral, and may be linked to a remote extender by low-cost twin-pair cable, or by modem. With this extremely valuable feature, users can slip extenders into existing measurement systems without altering the controller program.

Parallel information extracted from the basic bus is converted into serial coded form. Transmission between the extenders may be either asynchronous or synchronous, the latter at rates to 20 kilobytes per second. A variable length serial buffer assures maximum throughput by assembling data into packets of optimum size. This results in a maximum transfer rate of 750 data bytes per second. The modem interface is compatible with both RS-232C and V24 standards.

The HP 37201A has automatic error detection, using block parity check techniques. Information is retransmitted automatically until an error is cleared. During "quiet" periods each extender sends test data every four seconds to check line validity. Errors may slow the information transfer rate across the extenders, but the probability of an error getting onto the bus is small.



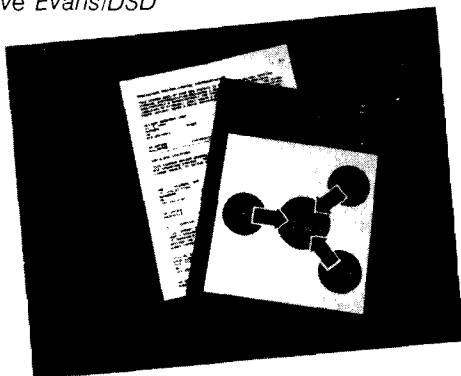
Communication between extenders is always full duplex. Remote dial-up facilities compatible with RS-366 and V25 are provided for those using the switched (public) network. Leased line users may use multi-point solutions to reduce hardware costs.

Factory Base Price of the HP 37201A Extender is \$1600.
 U.S. price of the HP 37201A Extender is \$1840.

Sales Aids

A New OEM Guide

By: Dave Evans/DSD



The "HP 1000 Guide to OEM's and Systems Houses" has undergone a face lift and has put on a little weight. The new look is a glossy yellow and brown cover; the extra weight is due to 30% more entries.

Now you can refer to 186 application descriptions from 162 HP 1000 OEM's and Systems Houses. We have updated previous entries and kept the easy-to-use indices by industries served and applications.

Now the guide will allow you to locate seven OEM's who will supply HP computers with their material handling systems, nine OEM's with program development tools, and nineteen OEM's who primarily serve the aerospace industry.

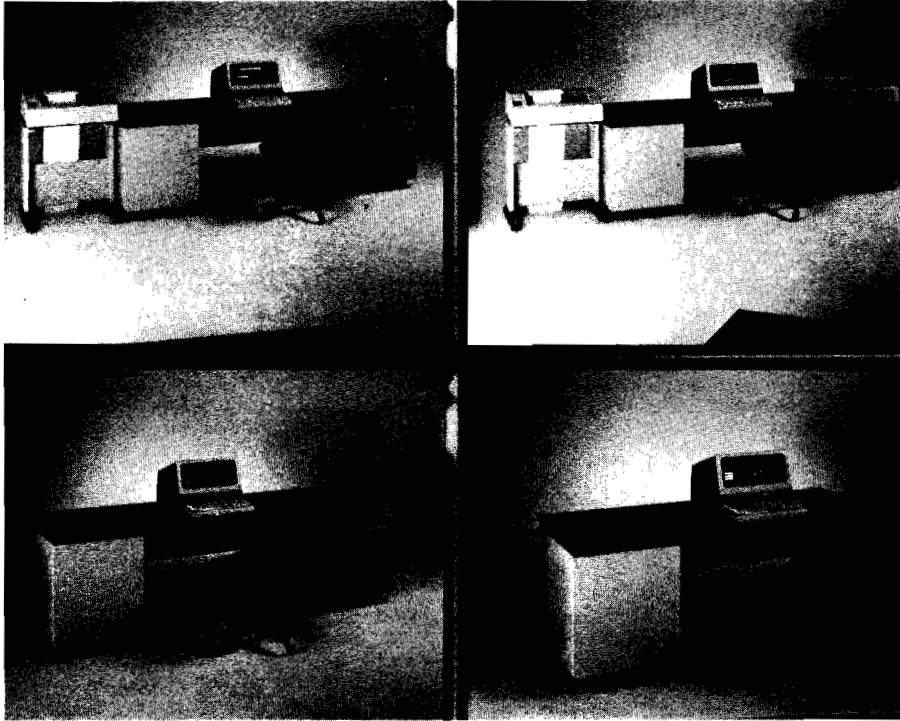
Remember, the field organization is our main source of new entries and changes. Keep us informed by filling out one of the forms in the back of the guide whenever you have news about an OEM customer.

The guide will be distributed to all technical sales reps during the first week of February. If you do not receive your guide by the end of the month and would like a copy, please contact

Mary Anne Huth
 Sales Development
 DSD ext. 3181

HP 1000 System Photo Kit

By: Carlos Avila/DSD



At last there is an easy way for our OEM's to obtain photos of our products for use in their own sales literature. For just \$30 your OEM customer will receive eight 4 x 5 inch color transparencies of our memory and disc-based HP 1000 systems as shown above.

This kit can be ordered via a HEART order to the attention of *Chris Carney* at Division 22/Building 42U/Cupertino. The kit number is BS-17 and the price is \$30.

SUCH A DEAL!

Sales Literature—Order from Corporate Literature Depot

By: Ted Proske/DSD

DATA SYSTEMS DIVISION CURRENT SALES AIDS — 1/1/79**Sales Literature — Order from Corporate Literature Depot**

Literature Stock No.	Pub. Date	Title and Description
NEW AND REVISED HP 1000 COMPUTERS LITERATURE		
5953-0894	8/78	HP 1000 Computers Hardware Data , 92 pp B&W data book that replaces 21MX Computers Hardware Data, except that data communications and instrumentation interfaces have been put into separate data books; provides coverage on new F-Series computers and new memory packages. REVISION OF PREVIOUS DATA BOOK.
5953-0896	3/78	HP 1000 Computers Selection and Configuration Guide, effective May 1, 1978 , 38 pp B&W selection, configuration, and pricing guide that replaces 21MX Computers Selection and Configuration Guide; provides coverage on new F-Series computers and new memory packages, in addition to new HP 1000-compatible peripherals, interfaces, RTE-IV software, and new software support services. REVISION OF PREVIOUS GUIDE.
5953-3094	12/78	HP 1000 Product Compatibility Guide, effective January 1, 1979 , 12 pp B&W, REVISED to reflect latest additions to product line and give better information on terminal configurations.
NEW AND REVISED 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. NEW.
5953-3007	3/78	Announcing new computing power, and new applications power, for the HP 1000 Computer Systems family , 6 pp full color announcement flyer for new HP 1000 Computer Systems with F-Series computer, RTE-IV, Graphics/1000, and multipoint terminal interfacing; intended as low-cost mailer.
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.
5953-3002	3/78	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 six applications, measurement and control capabilities, and DS/1000.
5953-0869	2/78	Distributed Systems/1000 An advanced, "next-generation" network communications package for HP 1000 Computer Systems , 16 pp 2-color brochure.
5953-0897	11/78	HP 1000 Computer Systems Technical Data , 52 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.
5953-0898	5/78	HP 1000 Computer Systems Configuration and Site Preparation Guide , 38 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.
REVISED HP 1000 COMPUTERS AND SYSTEMS LITERATURE		
5953-3005	10/78	The HP 1000 family. Advanced computing power for manufacturing and engineering , 40 pp full color brochure covering the entire HP 1000 Computers and Computer Systems family, including the new F-Series computers, the new HP 1000 Model 25, 40, and 45 Computer Systems, RTE-IV, and other related new products; intended as an attractive, comprehensive overview of the HP 1000 product line. REVISED
5953-3073	9/78	HP 1000 Computers and Systems Peripherals Data , 52 pp B&W data book that covers peripherals usable with HP 1000 Computers and Systems, including measurement and control interfaces, processor, and subsystems, and TV interface. REVISED
5953-3074	10/78	HP 1000 Computers and Systems Distributed Systems and Communications Data , 60 pp B&W data book that covers DS/1000 software-firmware and interfaces, RJE/1000, CRT and printing terminals, multipoint software and interface, and other data communications interfaces. REVISED
5953-3093	12/78	Distributed Systems and Communications Data Supplement , 8 pp, containing new 91731A Async multiplexer software data sheet and revised 12920B Multiplexer data sheet. NEW
5953-0801	7/78	HP 1000 Computers and Systems Mature software data , 44 pp data book covering BCS, RTE-B, RTE-C, and RTE-II and other software that is available, but out of the mainstream of ongoing development efforts, and thus is not recommended for new applications. REVISED
5953-3075	10/78	HP 1000 Computers and Systems Active software data , 68 pp B&W data book that covers RTE-IV, GRAPHICS/1000, IMAGE/1000, and other software, except software pertaining to distributed systems and data communications, that is in the mainstream of ongoing development, and thus is recommended for new applications. REVISED

Literature Stock No.	Pub. Date	Title and Description
SOFTWARE LITERATURE		
5953-3086Z	11/78	92067X RTE-IV Software Sources Product , 1 pp B&W data sheet. NEW
5952-9939	5/76	IMAGE/1000 Data base management software for HP 1000 Computer Systems , 8 pp full color brochure.
5952-9950	9/76	IMAGE/1000 Performance brief , 8 pp, 2-color discussion of IMAGE/1000 performance testing for throughput and response.
5953-0813	7/77	HP 1000 Computer Systems — Building an Inventory Control Data Base Application Note 212-1 , 16 pp, 2 color.
5953-0814	4/77	HP 1000 Computer Systems — Building an Order Processing Data Base Application Note 212-2 , 18 pp, B&W.
5952-1615	3/76	Process Control Software Review , 8 pp reprint of Instrumentation Technology article by Van Diehl.
5953-0883	10/77	HewlettPackard Distributed Systems Networks , 12 pp full-color fold-open brochure covering Hewlett-Packard's Distributed Systems Networks philosophy and its application to interconnection of HP 1000, HP 3000, and HP 2026 Systems.
5952-9949	9/76	Network techniques for Multiple Minicomputers , 4 pp reprint of article by Dave Borton.
COMPUTERS, ACCESSORIES, INTERFACES, AND SUBSYSTEMS LITERATURE		
5952-9929	4/76	HP Journal Articles on: 21MX Processors — Microprogramming — Software , 64 pp of HP Journal article reprints.
5953-3070	10/78	AN281-1 Microprogramming — a way to get higher performance from HP 1000 Computers , 12 pp, full color cover, 2 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 MINICOMPUTER LITERATURE		
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	AN201-1 Automatic Q-A Evaluation of Precision Resistors , 4 pp one color HP-IB Minicomputer application note.
5953-0864	7/77	AN201-4 Performance Evaluation of HP-IB using RTE Operating Systems , 16 pp B&W HP-IB application note.
5953-0863	11/77	AN201-6 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 Specifler , 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 Application Note 224-1 , 22 pp B&W. REVISION OF PREVIOUS AN224-1
5952-8546	4/78	HP 2240A Measurement and Control Processor Signal Conditioning: HP 22914A Breadboard Card Application Note 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 ATACAP 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	35mm Slides	\$ 10.00	DS/1000 (19 slides)
BS-12	4/78	35mm Slides	\$100.00	NPT/1000 (223 slides)
BS-13	4/78	Overheads	\$100.00	Micro Prog. Seminar
BS-14	10/78	35mm Slides	\$ 22.00	Computation (43 slides)
BS-15	10/78	35mm Slides	\$ 11.00	DEM Policy (21 slides)
*BS-16	12/78	Belt Buckles	\$ 5.00	HP 1000

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
- Measurement and Control Peripherals (9603R/9611R) Configuration Guide
- 2240A Measurement and Control Processor Configuration Guide

Powerful New HP 1000 Ad Reprints Available

By: Ted Proske/DSD



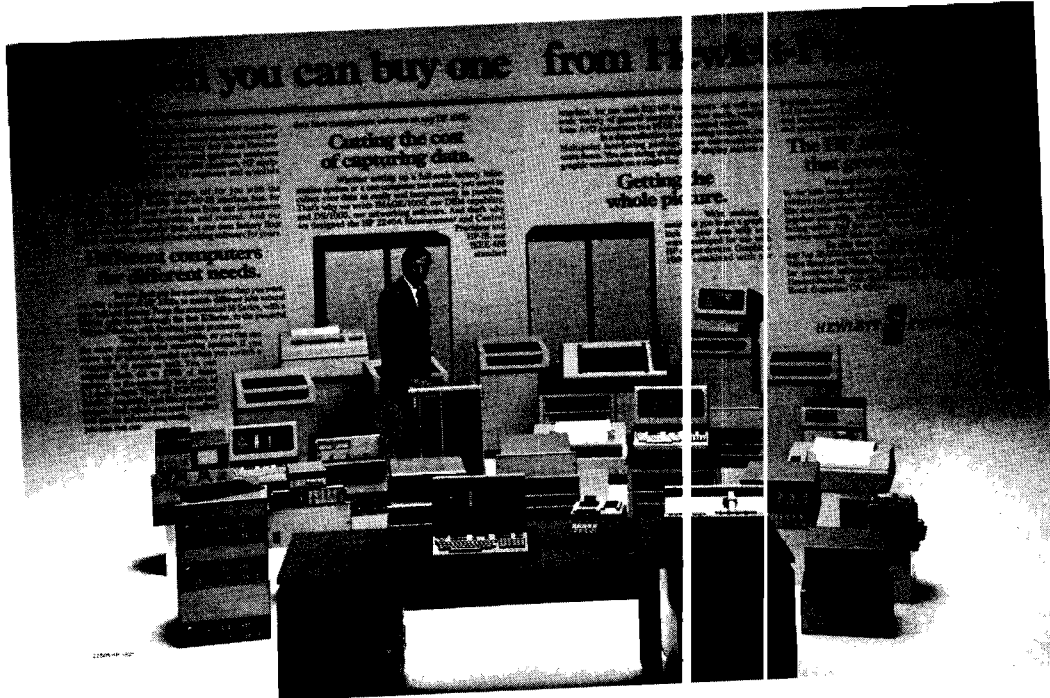
**HP 1000 Computers and Systems
Sales and Service Locations**

United States	MISSOURI	NEBRASKA	NEW YORK	ONTARIO	PERU	PHILIPPINES	RUSSIA	SWITZERLAND	UNITED KINGDOM
ALABAMA Forsyth Tel: (205) 887-0481	BRIDGEVILLE Tel: (616) 878-0000	CHICAGO Tel: (312) 353-0000	ALBANY Tel: (518) 486-3000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000
ALASKA Anchorage Tel: (907) 556-1000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	ALBANY Tel: (518) 486-3000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000
ARIZONA Phoenix Tel: (602) 244-1201	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	ALBANY Tel: (518) 486-3000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000
CALIFORNIA San Francisco Tel: (415) 779-1000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	ALBANY Tel: (518) 486-3000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000
CONNECTICUT Hartford Tel: (603) 281-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	ALBANY Tel: (518) 486-3000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000	CHICAGO Tel: (312) 353-0000
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Sales and service locations in 100 countries.

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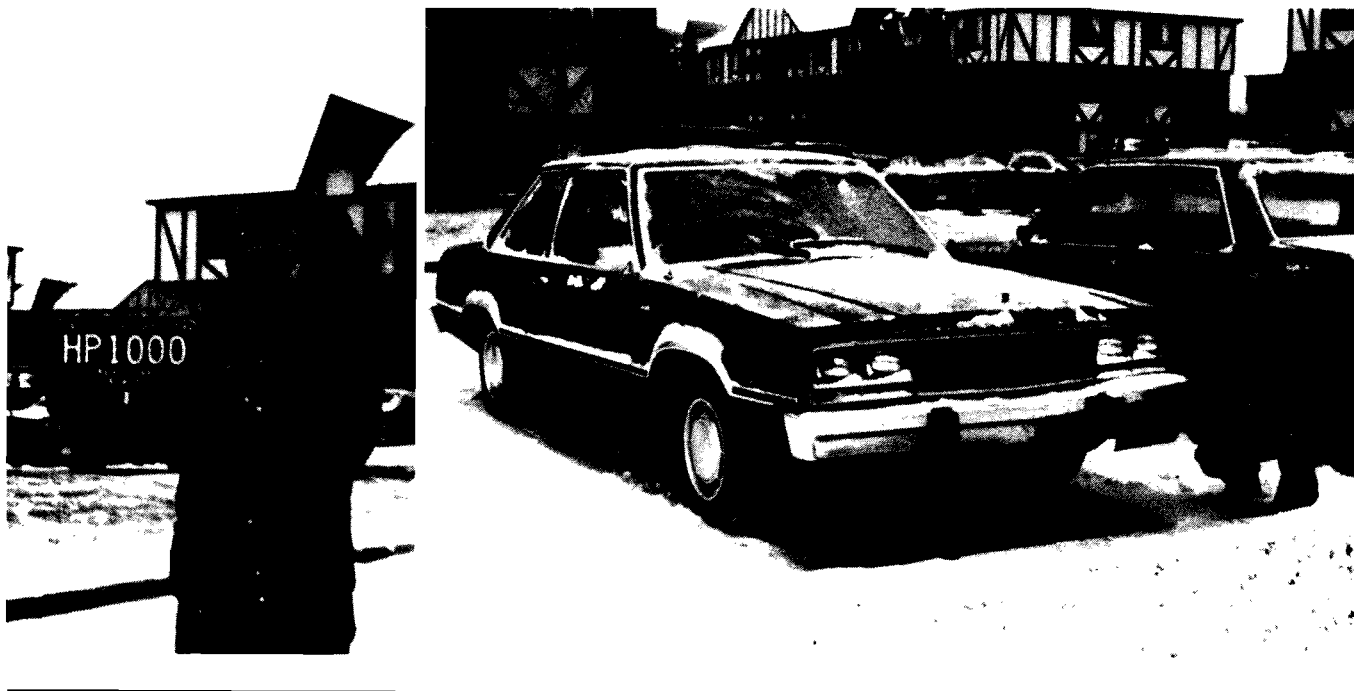
In response to your cards, letters and phone calls, we've reprinted the powerful new HP 1000 Computer Systems ad (see photo) that recently appeared in *Electronics*, *Computer Design*, *Mini-Micro Systems*, and *Industry Week* so you can use it conveniently as a customer handout. You can get copies by ordering "Why buy from a stranger," literature stock number 5953-4214, from the Corporate Literature Depot in the same way as other sales literature. So they won't forget your phone number, we've listed HP world wide sales and service offices on the last page.



Spreading the HP 1000 Gospel While You Drive

By: Carlos Avila/DSD

Not satisfied with bumper stickers? *Steve Barnes*, technical SR in Farmington, Michigan has taken advantage of personalized license plates to do some rather creative advertising while driving around Motown. No one has trouble figuring out what *he* sells!



Product News

Caution: Use of Extended Performance 2240A with BASIC/1000

By: Dave Hannebrink/DSD

Remember that the Extended Performance 2240A cannot be used directly with BASIC/1000M/D programs. The reading of binary results must be done via FORTRAN or Assembler. If users must use BASIC/1000 application programs, a FORTRAN or Assembler subprogram must be called to read the Extended Performance 2240A.

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DATA TERMINALS NEWS

Division News

A New Face in Sales Development

By: Bill Swift/DTD



As our sales continue to climb, we've been building our sales development organization to keep pace with your efforts. Our latest and most attractive addition is *Mary Chin*. *Mary* will be working to support the central area of the Eastern Sales Region. Prior to arriving at DTD, *Mary* spent two years in Sales Development at HP/Corvallis, where she provided factory support for calculator sales in Eastern and ICON. *Mary* is no stranger to the Bay Area; before moving to Corvallis, she worked for Fairchild and Signetics. She brings a depth of engineering background as well as some very valuable HP marketing experience. *Mary* is now safely in place at DTD and will be anxious to help you with your sales development needs.

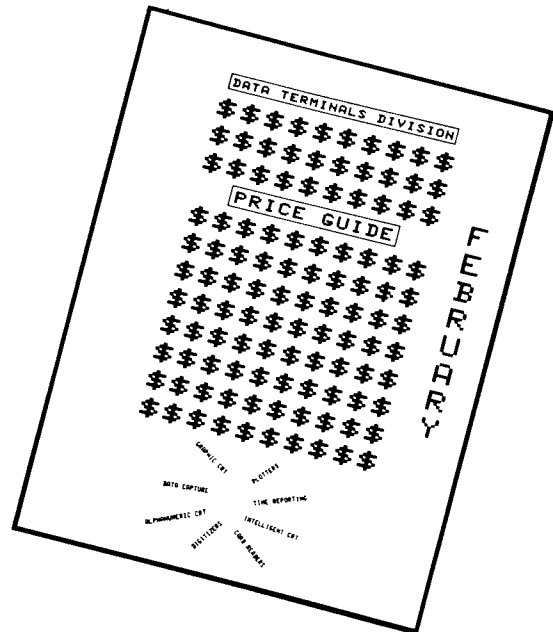
For the Eastern Region, this is our new lineup:

- NORTHERN AREA — *Craig Clark*
- CENTRAL AREA — *Mary Chin*
- SOUTHERN AREA — *Mark Willner*

Sales Aids

It's Green! It's the New DTD Price Guide!

By: Eric Grandjean/DTD



The HP family of compatible terminals and peripherals is growing every day. Reflecting this very exciting phenomenon (I am sure it's been planned that way), the February issue of the famous DTD Price Guide now includes Boise, San Diego, Grenoble and DCD "personal" peripherals which can, in one way or another be attached to some or all DTD terminals. (How is that for generalities!)

Our three basic interfaces are the RS-232C Serial Interfaces (1326XX, 13250B), the 8-bit TTL parallel interface (13238A) and the new Shared Peripherals interface (13296A).

The Shared Peripherals interface is coming on strong. The 2647A has the most powerful driver. The 2648A has a more limited edition, and we now have a corresponding project for the 2645A as well!

Logical or application drivers will be left for the user to develop for "non factory-supported" terminal peripherals.

Also, an important note is that the Price Guide contains DTD part numbers of the most commonly asked about parts (like character ROM's etc).

Your copy of the new Price Guide is in the mail. We hope you will find it helpful in your quest for Big Bucks.

GOOD SELLING!

Need Help?

By: *Tim Haney/DTD*



Call your friendly **DTD** Sales Support Engineer.

Product News

Display Copying with HP 1000 Multipoint Software

By: *Rich Ferguson/DTD*

The HP 1000 with multipoint software puts terminator characters (Esc_) into the data it sends to 2640-series terminals. This facilitates interactive sessions with the computer. However, the terminator character, (Esc_), also stops local printing from display to printer; i.e., copying full screens of data from a terminal to a local printer mysteriously quits in midstream if the data contains the terminator character. And you can't tell why by looking at the terminal display, since the terminator characters are non-displaying. If you have this opportunity looking at you, DTD has the solution. (Actually, there are several solutions, depending upon your situation.)

First, the HP 1000 with multipoint will send these Esc_ terminator characters if:

1. You are using formatted I/O calls, or . . .
2. The Edit mode flag is set.

On a system level, you can avoid Esc_ being sent if you set the binary bit on each write request. This means the program will have to supply its own CR LF, but the Esc_ will not be automatically sent by the system.

If, however, you can't do the preceding, DTD still has another solution. You can clear Esc_ characters from the terminal's memory with the following escape sequence in a softkey defined for local operation:

Esch Esc[EscF Esc[EscW H_ EscX Esch

The only limitations on this method are that the data coming from the HP 1000 can't contain Esc[(Start unprotected field) characters or H_ (Tab) characters.

As always, if you have any questions, get hold of your DTD Sales Development contact.

DTD MEANS BUSINESS!

2649 Manuals

By: *Craig Clark/DTD*

Manuals can become very important to a customer when they expect one thing with an order and receive another (or don't receive anything at all).

To refresh your memory, here is a list of which manuals come with each 2649:

2649A:

No manuals come with this terminal. If the customer needs any, you should make sure they are ordered from CPC using the part numbers listed below.

2649B:

2645A Reference Manual	#02645-90005
2645A User Manual	#02645-90001

2649C:

2648A Reference Manual	#02648-90002
2648A User Manual	#02648-90001
2648A Quick Reference Guide	#02648-90004

Correction to January 8th Article On Strapping the 13296A Board

By: *Mark Willner/DTD*

In our January 8th article on strapping the Shared Peripheral Interface Board (13296A), switch 7 of bank 2 (PLO) was incorrectly shown as closed. The switch **MUST BE OPEN** for proper terminal operation.

Please make this correction to your copy of the *CS Newsletter*.

13297A Board Saves Customer Money in 2649A Configurations Using Maximum Display Memory

By: Mark Willner/DTD

The maximum possible amount of display memory that can be used in 264X series terminals is 12 Kbytes. The minimum is 4 Kbytes. The following table outlines the possible solutions to display memory configurations within that range for 2649A terminals. There are several things to notice in this table. First, the cost effective solutions also use the least number of option slots. Second, although the 13297A Option 002 is really a 16K board, it proves to be more cost effective than the other multiboard 12K alternatives. The benefits are that the customer saves money and gets an extra 4K of memory for free. This 4K can be used by either the multipoint firmware for buffer space or by an alternate I/O driver for private storage.

SELL OEM PRODUCTS!

2649A Possible Display Memory Configurations

Required Memory Size	Products Needed	Number of Option Slots	Total Cost	Cost Per Byte
4K*	13234A	1	\$ 300.00	7.32¢
8K	13234A 13234A	2	600.00	7.32¢
8K*	93982A (STD Special)	1	425.00	5.19¢
8K	13297A	1	500.00	6.10¢
12K	13234A 13234A 13234A	3	900.00	7.32¢
12K	13234A 93982A (STD Special)	2	725.00	5.90¢
12K*	13297A-002	1	600.00	4.88¢† 3.66¢‡

* = Most effective solution

† = Based on 12K

‡ = Based on 16K

GENERAL SYSTEMS NEWS

Product News

HP 3000 Communicator to Ship With System

By: Rich Edwards/GSD

With future shipments of HP 3000 Series 33 and III systems, a copy of the latest HP 3000 Communicator (HP part number 5951-6113) will be included. This will enable your customers to become familiar with the Communicator when they first unpack the system manuals.

Thanks to *Linda Auen* and other sales representatives in the Farmington Hills (MSR-E) Office for communicating their idea to HP 3000 Product Marketing. Do you have some ideas we should know about? Please send them to me at GSD, Santa Clara, and maybe you'll read about them in a future *CS Newsletter* article.

Oh yes, if anyone wants a regular subscription to the HP 3000 Communicator, they can order it for \$48.00 per year in the U.S. from:

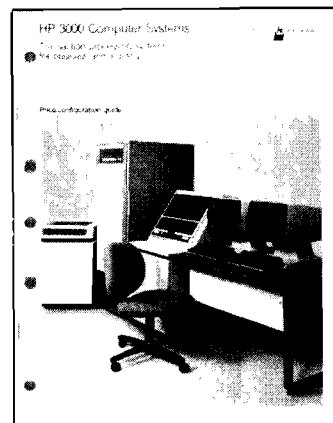
Hewlett-Packard Company
 Computer Systems COMMUNICATOR
 P.O. Box 61809
 Sunnyvale, CA 94088
 U.S.A.

International customers order by part number through the local HP Sales Office. A complete order form appears in each issue.

Note that all customers paying for either Comprehensive Software Support or Software Subscription Service on an HP 3000 regularly receive the HP 3000 Communicator as part of that service. Because GSD will ship only the Installation Tape (IT)-related Communicators (4 of the 6 issues per year), there exists the possibility that some customers won't receive the non-IT issue under their subscription when it starts. This issue can be ordered singly with the order blank in the back of each Communicator issue.

Gremlins at Work in the New HP 3000 Price/Configuration Guide!

By: Gwen Miller/GSD



Try as we might for a "perfect" Price and Configuration Guide, so far that goal remains elusive. A number of you have pointed out inaccuracies that should be corrected.

Page	Correction
2-2	VIEW Software Subscription Service is \$25
3-5	7970E Option 426 HP-IB cable length is 6 meters
4-2	Current for 7970E in U.S. is 3.3 amps
4-4	Description for 32435A should include 30215A mag tape controller
4-7	Option 300 for 2613A, 2617A, and 2618A is \$650
4-9	Description of 30119A should include, "Must order Option 002." Add 30119A Option 002, "Adds keyboard for off-line use." Price is \$2000, BMMC is \$0.
5-1	22830A VIEW on-site course is \$1,150
5-3	Site Prep manual for new Series III is 30000-90145 Site Planning Workbook for new Series III is 30000-90146 #32209-90004 "Introducing VIEW" will not be available until mid-April, 1979. #32209-90003 and 90002 "Operator's Guide" and "Programmer's Pocket Guide" will not be available until mid-February 1979.

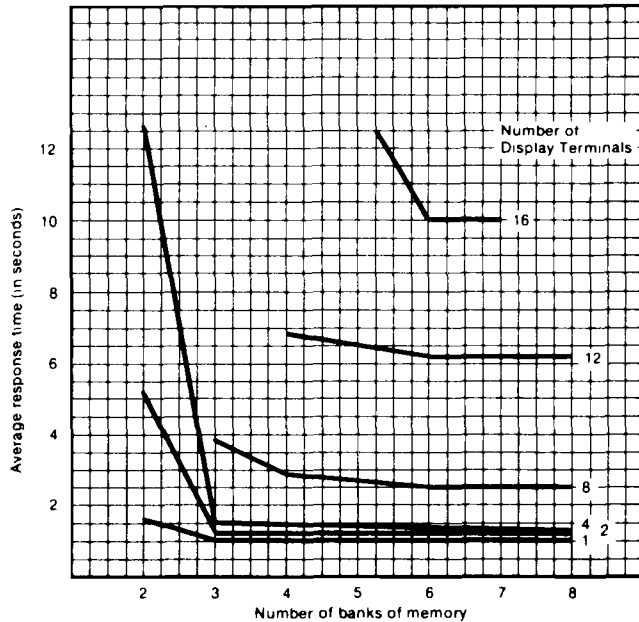
Please make these corrections in your copies of the P/C Guide—and be sure to let us know if you find any more errors!

Increasing HP 300 Performance

By: Bob Bowden/GSD

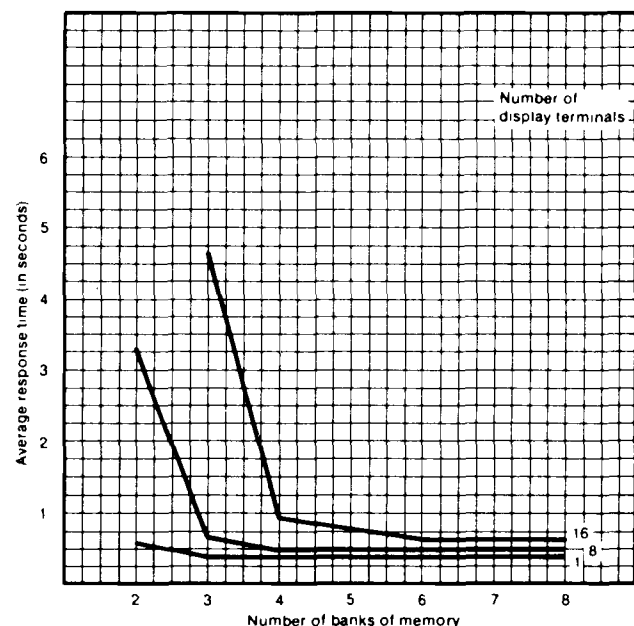
Added memory can have a significant impact on HP 300 performance. The "HP 300 Computer System" brochure (5953-3705) contains several examples that show the effect of added memory. For instance, a typical example of interactive transaction processing, that uses shared files and other time and resource consuming system services, shows the following results:

Response Time: Example 1



You can see from these results that adding one optional bank of memory (128 Kbytes: \$4000) for a total of three banks, significantly improves the average response time at terminals. This is true even for the two-terminal configuration. A simple forms-oriented transaction example shows similar results for a larger number of terminals:

Response Time: Example 2



Increasing memory size also shows a significant improvement in performance for processing-intensive operations. For instance, the time to TEST a program (compile, prepare and link) is improved by adding memory as shown in the following table:

Program Length	Business Basic/300			
	Memory (Total Number of Banks)			
	2	3	4	6
200 lines	4:35	2:13	1:57	1:46
1500 lines	9:40	5:34	4:49	4:37

Test Time (minutes: seconds)

Recommendation: For improved performance, especially with multiterminal configurations, an additional bank of memory should be ordered with HP 300's.



12 Mbyte HP 300 Demo Systems . . . Solid as a Rock!

By: John Whitesell/GSD

DMD's new 12 Mbyte sealed disc drive has proven to be extremely reliable. It is now available in production quantities, and we encourage you to include it in your HP 300 field demo system.

If we haven't shipped your HP 300 demo unit yet and you didn't order the 12 Mbyte version, you can just change your existing order from product 31033A to 31032A. (Check with O.P. as to whether this change will delay your shipment.)

If you already have your HP 300 installed and want to convert it to the 12 Mbyte (7910) drive, all you need to do is order the 31241A upgrade kit. You can then use both the 7910 and the 7906, or just the 7910.

With the 12 Mbyte sealed disc drive in your HP 300, the compact, office-oriented nature of the HP 300 is more apparent. What other 12 Mbyte system with the processing power of the HP 300 does not need a separate air-conditioned room? Can plug into a standard office power outlet? Is this quiet? Is portable? Has the reliability and serviceability advances of the HP 300?

Let your customers move into the future faster . . . with the HP 300 . . . the system designed to simplify the development, control and operation of on-line business data-processing applications.

HP 300: Effective Price Decrease In Bigger Disc HP 300 Configurations

By: Vijay Kapoor/GSD

Check out the new HP 300 Price/Configuration Guide (dated 1/79). It contains a very significant change. It can mean considerable cost savings to your HP 300 system customers.

A Second Master and Second GIC No Longer Necessary

First, a second GIC (General I/O Channel) is no longer required when you add discs to either model (Model A — 7910 based and Model B — 7906 based). This saves \$1,800 U.S. for additional-disc configurations!

Second, you now need only one Master for any combinations of 7906, 7920 and 7925 disc drives on the HP 300 (the 7910 of course works on a separate controller). That saves \$4,800 when adding discs to an HP 300 Model B (7906 based)!

The following table, reprinted from page 2 of the new Price/Configuration Guide, shows the various disc configurations.

HP 300 Model A		HP 300 Model B	
Capacity	Added Discs	Capacity	Added Discs
12Mb	standard	20Mb	standard
32	7906M (Master)	40	7906S (Slave)
52	7906M, 7906S	60	two 7906S
112	7920M, 7920S	120	two 7920S
252	7925M, 7925S	260	two 7925S

For example, a 40 Mbyte HP 300 Configuration (2-7906 disc drives) is now \$6,600 U.S. less than before!!

HP 300 Training Courses To Be Given in Cupertino

By: Walter Utz/GSD

Two HP 300 User Training courses will be given in the Neely Systems Engineering Center at Cupertino during March and April, 1979. The courses are:

31362A HP 300 System Management and Operation

This course covers the standard procedures for operating the HP 300 system including installation, backup, updates, diagnostics, and job management. Features of the HP 300 File Management System, Business BASIC/300, and RPG II/300 are also explained. Daily lab sessions are scheduled to provide extensive hands-on system experience.

Prerequisites: Programming experience in a high level language, preferably BASIC or RPG, will be assumed.

Duration: 1 week Fee: \$500
Starting Date: April 30, 1979

31363A HP 300 Systems Programming

This course provides a comprehensive examination of the HP 300 system capabilities with particular emphasis on the programming tools available for developing multiterminal applications and the use of the Integrated Display System. Topics include a detailed study of the HP 300 File Management System, programmatic access to operating system service, system architecture, multiprogramming, multitasking, and IMAGE/300. This course also includes the topics covered in the HP 300 System Management and Operation course.

Prerequisites: Students should be competent BASIC programmers with experience in string, file, and formatted I/O operations. Familiarity with block-structured languages such as SPL/3000, ALGOL, or PL/1 is highly desirable.

Duration: 2 weeks Fee: \$1,000
Starting Date: March 12, 1979

The starting dates indicate the first time that each of these courses will be taught at the Neely Systems Engineering Center at Cupertino. Subsequent course offerings will be listed in the Center Training Schedule. Registration for these courses will be handled through normal channels in HP Sales Offices.

9600 Baud Terminals on the Series 33

By: Chosen Cheng/GSD

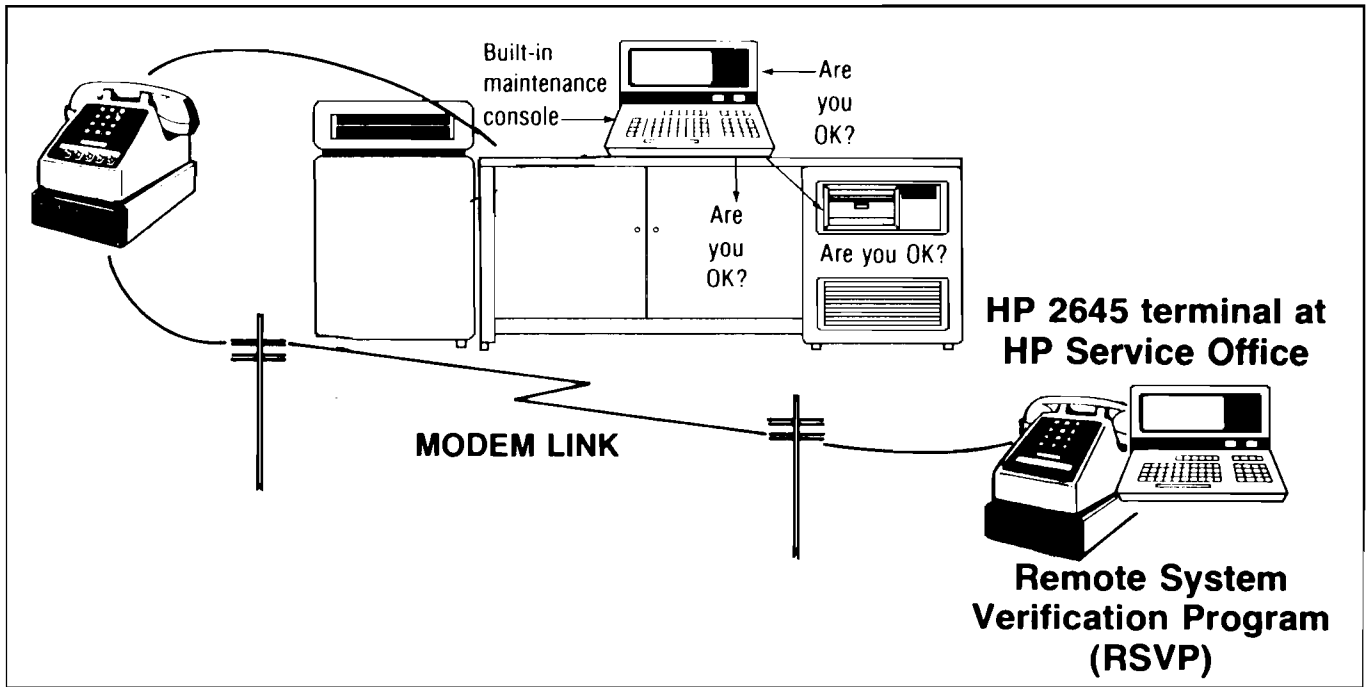
Operation of asynchronous terminals at 9600 baud on the Series 33 is now quotable. However, this does not mean that the Series 33 is able to support a full 32 terminals operating at 9600 baud. There are practical upper limits to the number of terminals that can operate at 9600 baud. These limits depend on the aggregate data rate experienced on the ADCC which depends on the number of terminals, speed of operation, character content of screens and/or frequency of entering lines of data. Although the latest HP 3000 Price/Configuration Guide does not specify any limitations on 9600 baud operation, we currently do NOT recommend specifying 9600 baud operation for more than eight (8) terminals. GSD is working on defining an easy-to-use formula for how many 9600 baud terminals can be supported.

It is important to set your customer's expectations properly. Note that in the HP 3000 Performance Brochure all Series 33 tests were run at 2400 baud. These 2400 baud results are still applicable, but there are currently no published performance tests documenting 9600 baud operation. For assistance with specific sales situations, contact your GSD HP 3000 Sales Development representative.

Sales Aids

RSVP Added to HP 3000 Support Services Brochure

By: Rich Edwards/GSD



Your customers can now get the latest information on support services for the HP 3000 Computer Systems — the Series 33 and the New Series III — in a new edition of the HP 3000 Support Services Brochure.

We've added a paragraph explaining RSVP on the Series 33. (Forgotton what it is? Remote Systems Verification Program. See the January 8 issue of the *CS Newsletter* article for a complete description.) The brochure has also been revised to include new descriptions of several training courses. The new course on VIEW/3000 is also documented.

Look for the brochure under a NEW part number, 5953-0569. The brochure is an excellent way to show your customers that with the HP 3000, Hewlett-Packard provides a range of services to assure their success. To quote from the brochure, "Hewlett-Packard places the same emphasis on long-term, responsive customer support as it does on the superior design and manufacture of computer products."

GSD, CSD AND THE SEO SAY: SELL SUPPORT!!

HP 3000 Called HP's "Mercedes-Benz" Machine

By: Rich Edwards/GSD

Small Systems World (formerly *System/3 World*) has a very wide distribution among IBM System/3 users and other small business computer owners. I hope you enjoy reading their analysis of the recent HP 3000 and HP 3000 Series 33 introductions in October.

The article refers to the earlier HP 3000 systems as "its Mercedes-Benz machine" and then ends with the following conclusion:

"Hewlett-Packard has evolved a product over the past few years which can be attractive to two types of

buyer. The first is the businessman who is looking for maximum cost/performance and extreme range of computing capability and flexibility. The second is the person who drives an extra 200 miles to see a Frank Lloyd Wright building, who gets a headache when a second-section violinist is playing flat, who has sent his television set to Goodwill, and who walks up the stairs if Muzak is playing in the elevator. There simply aren't that many things any more which can please both the pragmatist and the perfectionist, but the HP computer appears to be one of them."

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Hardware ^{review}

H-P ADDS TWO BUSINESS COMPUTERS

Last October, Hewlett-Packard announced two major additions to its line of small business computers. These machines, the HP300 and the 3000 Series 33, provide a medium-range series of equipment to complement the larger 3000 Series III and the smaller HP250.

This article is an examination of the company and some of the computing equipment it has developed.

engineers extraordinaire

Hewlett-Packard was founded in 1938 in a Palo Alto, California garage by two graduate engineers from Stanford, Bill Hewlett and Dave Packard. Both are still active in the corporation, Hewlett as chairman of the executive committee, and Packard as chairman of the board. The first product was an audio oscillator designated the Model 200 A "because the numbers sounded big." The first volume order was from Walt Disney Studios which purchased the oscillator for use in the "Fantasia" sound system. Hewlett-Packard was incorporated in 1947 and by 1950 had 200 employees, 70 products and \$2 million in sales.

During the 1950s Hewlett-Packard acquired F.L. Mosely Co., Pasadena, a manufacturer of graphic recorders; Sanborn Co., Waltham, Mass., electrocardiography and other medical recording equipment; and F&M Scientific Corp., Avondale, Pa., producer of gas chromatographs. These acquisitions helped Hewlett and Packard diver-

sify their operations into medical recording equipment and analytical chemistry labs as a supplement to their already top-of-the-line position in electronic measurement equipment.

In 1972, with the introduction of the HP-35 scientific hand-held calculator, Hewlett-Packard became a household word. The HP-35 was a child of Hewlett-Packard's intense research and sophistication in the field of digital electronics and produced an overnight revolution in consumer electronics. The development of the HP-35 is also indicative of the wide range of latitude HP allows its engineering and product development people.

Hewlett-Packard had developed several digital computers internally during the mid-1960s to control digital instrumentation. Its first computer offered for sale was a con-



sumer version of this machine. Other business-oriented desk-top computers were developed and offered by Hewlett-Packard, but its first full-scale business computer, the 3000 Series CX, was not introduced

until the early 1970s. (The 1000, 2000, and the 2100 MX were Basic machines, and were used primarily for networking and controlling.) The company was not completely satisfied with the first release of the 3000 and pulled it from the marketplace for some extensive revisions to the operating system. When the CX was re-released in 1974, HP was satisfied. There are now about 2,000 installations of the 3000 series.

At the end of fiscal 1977, Hewlett-Packard reported \$1.36 billion in total sales. Data processing products accounted for more than \$571 million of total sales, or about 42%. In 1977, *Datamation* reported Hewlett-Packard to be the ninth largest computer company, immediately behind Memorex Corp.

innovation and value

Those of us who read the business press are aware of the growing concern with the overall lack of innovation and inherent value in current American products. It is no secret that the American economy can no longer compete with, and must be protected against, the Japanese in consumer electronics and steel production. The auto industry has also been slowly losing ground to both the Europeans and the Japanese.

Many reasons have been advanced for the slippage in American industry: increasing labor costs, proliferating government regulation, prohibitive costs of capital, sluggish money markets. Sensitive observers see a deeper malaise in American business—planned obsolescence, fallout from the intellectually deadening Organization Man climate of the '50s, and the rise of mass marketing techniques which by definition means marketing to the lowest common

continued on page 40

Hardware Review *from page 36*

denominator. Innovation has come to mean simply repackaging. Companies founded on great innovative ideas have put the thing in a new plastic shell, engineered it for a three- or five-year life span and spent their R&D funds for 10 minutes of Superbowl air time.

When Hewlett-Packard decided to come into the computer marketplace, its approach was in character. The hardware design was an interesting challenge for HP engineers, but certainly was nothing new to the multilayered, cross-disciplined Hewlett-Packard engineering group. The 3000 was designed from the ground up to be an advanced commercial machine. Stack architecture was chosen simply because it is the best practical method of implementing multiple user time-sharing. Because the machine was intended for commercial use, the operating system was made to appear ex-

remely simple to the unsophisticated user but provided advanced capabilities for the technically complex application.

From the very beginning, commercial software was implemented including the important commercial languages (Basic, Cobol and RPG II) as well as Fortran and an Algol-equivalent system programming language. As an outgrowth of building its first commercial machine, Hewlett-Packard innovated silicon-on-sapphire circuit technology (an extremely fast and dense medium which is still far from its potential), wrote the first distributed-system operating software which actually worked, and implemented arguably the first true data base management software on a minicomputer (IMAGE 3000).

to market, to market . . .

The business marketplace was not ready for Hewlett-Packard. The company pressed

into service (to sell its Mercedes-Benz machine) a group of people who had been acting primarily as order takers. Unlike the aerospace engineers, chemical and hospital lab technicians, and other buyers of HP electronics who were qualified to evaluate their intended purchases, the business computer marketplace consisted almost entirely of people who had no idea of what they were buying and were forced to rely on impressions, hunches, and how the stock was moving up on the Big Board.

Hewlett-Packard salesmen found that they could not communicate with business management on a factual level and that the technical people were, for the most part, cut off from any real decision-making power. As a result, the company quickly identified its prime prospect to be the sophisticated second-time user who had some tools to evaluate computer hardware. This technique began to yield dividends, and com-

HEWLETT-PACKARD INTERACTIVE BUSINESS COMPUTER SYSTEMS

	Price Range	Main Memory	Disc Memory Range (Megabytes)	Operating System	Data Communications	Languages	Data Base Management	Number of Terminals
HP 250	\$25,000 to \$50,000	160k bytes 256k bytes (32k or 64k bytes user memory)	2.4 40	Memory-based	—	Business Basic (Interpreter)	IMAGE/250	1 to 4 Single-terminal Program Development
HP 300	\$40,000 to \$80,000	256k bytes 1 megabyte	12 260	Virtual memory Amigo 300	—	Business Basic RPG-II (Compiler)	IMAGE/300	1 to 16 Single-terminal Program Development
HP 3000 Series 33	\$75,000 to \$200,000	256k bytes 1 megabyte	20 960	General purpose MPE-III	—	Basic RPG-II Cobol Fortran SPL (Compiler)	IMAGE/3000	1 to 32
HP 3000 Series III	\$125,000 to \$250,000	256k bytes 2 megabytes	50 960	General purpose MPE-III	3780 HASP HP DSN	Basic RPG-II Cobol Fortran SPL APL (Compiler)	IMAGE/3000	1 to 64

panies who had become disappointed with the cost/performance of the warmed-over second generation machines or had found that the touted machine they bought was more properly a toy, began discovering some advantages of the 3000.

Since the introduction of the 3000, Hewlett-Packard has also developed a fairly diverse group of OEMs who provide HP computers on a turnkey hardware-software basis to the end user. A more important market development for Hewlett-Packard has been a steady influx of salesmen from other major computer firms. These transplants have brought with them the experience in handling the more naive first-time business user and have begun opening up markets that the more technically-oriented HP salesman was unable to penetrate.

the current line

The chart shows a representative set of specs for each of the important HP machines. What the chart does not readily show is the lateral-expansion capabilities of the various machines. The 300, which Hewlett-Packard intends to compete with the IBM System/34 can expand to 1mb of main memory (eight times as much memory capacity as the /34 and carries twice as much disk storage as its targeted competitor. The 3000 Series III can be a 2mb machine and, although HP lists its top disk capacity as 960 mb, billion-byte-plus 3000 configurations are possible and do exist. This can be



~~HP 300~~ HP 3000 Series 33

an extremely important capability for users who have been faced with the disruption of moving through a model a year or who have had to acquire a second machine to handle overload capacity.

Another important point: with the introduction of the 2608A printer, Hewlett-Packard now manufactures all its own

peripherals. HP disk drives are current state-of-the-art in density, retrieval time and transfer rates. Hewlett-Packard also manufactures a variety of terminals including a graphics terminal capable of drawing pie-charts (an amusing way to spend a rainy afternoon).

Software fans will be pleased to know that at least one Pascal compiler can be obtained for the 3000 (not sold or supported by HP). A diverse set of programs is also



HP 2608A Line Printer

available from the Hewlett-Packard Users Group for only the cost of membership. These offerings range from a design aid for multiple stage L-C filters, a complete PERT charting system, a text-processing formatter, and just about everything in between.

conclusion and caveat

Hewlett-Packard has evolved a product over the past few years which can be attractive to two types of buyer. The first is the businessman who is looking for maximum cost/performance and extreme range of computing capability and flexibility. The second is the person who drives an extra 200 miles to see a Frank Lloyd Wright building, who gets a headache when a second-section violinist is playing flat, who has sent his television set to Goodwill, and who walks up the stairs if Muzak is playing in the elevator. There simply aren't that many things any more which can please both the pragmatist and the perfectionist, but the HP computer appears to be one of them.

Hewlett-Packard has insisted from the beginning that its goal in the marketplace is to make a technological contribution rather than compete for market revenue. Whether or not the company can really ignore mar-

ket revenue is problematical. The danger is that it will be used as a stalking-horse by the handful of large, predatory firms in our business who have chosen to let others do the innovating. It is not easy to forget the classic General Electric machines, the Singer System 10 and others that represented good ideas and new concepts. On the positive side, the success of Digital Equipment, and the initial success of Hewlett-Packard and others, may well be proving that the minicomputer marketplace carries enough demand to support and develop the more courageous, innovative companies that the American economy so desperately needs.

—Jeff Cox

Circle Number 80 on Reader Card

RPG II/300: A Selling Plus

By: Dave Iuppa/GSD

Did you know that RPG II (Report Program Generator, Version II) is the most widely used small business language in the world? Well, it's true! RPG II is used in nearly every conceivable business application. So having RPG II/300 on the HP 300 is a real selling plus!

There are basically three groups who will be attracted to RPG II/300:

- Those who choose RPG as their primary language because it is easy to learn and simple to use.
- Those who use RPG to complement their primary language or turn-key system for report generation.
- Those who already have an investment in RPG programs and skills, including many IBM users and software houses.

This third group of potential RPG II/300 users represents a significant sales opportunity. They are, for the most part,

anxious to leave their System/3 or System/32 computers and face long lead times from IBM.

RPG II/300, while it has some unique features, is very close to IBM RPG II. This means that with few exceptions the conversion effort is relatively easy. The conversion process is being studied now and complete documentation of programs and data conversion will be available soon.

RPG II/300 can make a great "stepping stone" for these customers who want to use the full capabilities of the HP 300 with Business BASIC/300 but do not want to lose their RPG software investment.

RPG II/300 and Business BASIC/300 make a great combination. With a little forethought, they can access common data files. Programs of each language can be intermixed in an application. And since BASIC can call RPG programs, BASIC can be used to support menu selection of RPG programs.

General News

HP GSUG's New Membership Schedule

By: Lynn Gardner/GSD

Here's the new Membership Price Schedule for the HP General Systems Users' Group. Please note: the Library is now also available to individuals (it is no longer restricted to Installation Members only).

HP General Systems Users' Group

**Membership Price Schedule
January 1, 1979
(One Year Basis)**

General Member

New: \$20

- Includes:** 1. Journal
2. Newsletter

Renewal: \$20

- Includes:** 1. Journal
2. Newsletter

Installation Member

New: \$200

- Includes:** 1. Journal
2. Newsletter
3. Master Labrary
4. One Library Update
5. Voting Privileges

Renewal: \$120

- Includes:** 1. Journal
2. Newsletter
3. Library Update Subscription
4. Voting Privileges

Note: Both General and Installation Members may receive additional subscriptions of the Journal and Newsletter at the same address for \$15/subscription. (Each subscription includes Journal and Newsletter.)

Any individual or organization may purchase the following:

- | | |
|---|--------------|
| 1. Master Library and one update | \$200 |
| 2. Library Update Subscription | \$120 |

Additional inquiries regarding the Library should be sent to:

Rella M. Hines
 Executive Director
 HP General Systems Users' Group
 Suite 414
 Empire Towers
 7300 Ritchie Highway
 Glen Burnie, MD 21061
 (301) 768-4187

HP 300 CE's — Ready to Support Your Sales Effort

By: Doug Hoffman and Curt Gowan/GSD

Since the HP 300 is new and a product from a new organization, we thought that you'd like to know some who's and how's about HP 300 on-line CE support.

Who?

There are now more than 40 CE's in the field trained on the HP 300. These CE's are supported by System Specialists in the field who are in turn supported by the On-line Specialist Support Group at GSD-Cupertino.

The seven current HP 300 System Specialists are listed below. You can contact the System Specialist in your area for information or support, including current and planned CE coverage for your area.

Area	Name	Location
ESR	<i>Ray Medina</i>	King of Prussia
NSR	<i>Dennis Donley</i>	Santa Clara
MSR	<i>Jim Loizzo</i>	Rolling Meadows
SSR	<i>Mel Bailey</i>	Dallas
UK	<i>Dave Price</i>	Manchester
Germany	<i>Gottfried Specht</i>	Frankfurt
France	<i>Phillipe Catherine</i>	Orsay
France	<i>*Joseph Clavier</i>	Grenoble
France	<i>*Charles DeFoucault</i>	Grenoble

*HP 300 European CE Class Instructors.

How?

The HP 300 Service Engineering group is part of the HP 300 Program organization within GSD and is located at the Cupertino, California site (building 43L).

For regular business, the Service Engineering number is (408) 249-7020 x3203. This is the number which should be used for non time-critical situations.

We also have a factory hotline for Specialist use only. It is monitored around the clock by an answering service, in addition to connecting directly into HP 300 On-line Specialist Support. At all times, there are two Service Engineers on call who can be reached via pocket pager.

In summary, Service Engineering, your CE, and your Specialist stand ready to help make your customer's first HP 300 successful — the key to landing follow-on orders for this excellent product.

MFG/3000 Management Seminars

By: Dick Knudtsen/GSD

Round One Complete

During the last quarter of 1978, representatives from GSD sales development and product management worked with the sales force in a number of North American locations to successfully deliver the initial series of management seminars on MFG/3000.

It's been clear from the feedback that these "lead generation" management seminars have helped the sales force in identifying and qualifying more new prospects for manufacturing applications than any other single technique. They've also been instrumental in establishing HP's position as an important vendor of distributed transaction processing systems with manufacturing companies.

The number of customers and prospect managers attending ranged from 20 to 60 per seminar. And through the conscientious efforts of salesmen and SE's in putting together the seminars, we've been able to generally attract high level decision makers — VP's of operations, Plant Managers, Manufacturing Managers, Controllers, and MIS Managers.

To date, the MFG/3000 Management Seminars have been conducted in the following cities:

September 19 & 20	Toronto (3)	<i>Knudtsen</i>
September 21 & 22	Montreal (3)	<i>Knudtsen</i>
September 21	Chicago (1)	<i>Van Kuran</i>
October 3 & 4	Detroit (2)	<i>Sohm</i>
October 11	L.A. (1)	<i>Sohm</i>
October 17	Houston (1)	<i>Van Kuran</i>
October 17	Paramus (1)	<i>Knudtsen</i>
October 19	King of Prussia (1)	<i>Knudtsen</i>
October 19	Dallas (1)	<i>Van Kuran</i>
October 24	Lexington (1)	<i>Knudtsen</i>
October 26	Greensboro (1)	<i>Knudtsen</i>
November 3	Fullerton (1)	<i>Kelley</i>
November 2	Paramus (1)	<i>Wolfson</i>
November 14	St. Louis (1)	<i>Van Kuran</i>
November 15	St. Paul (1)	<i>Van Kuran</i>
November 16	Indianapolis (2)	<i>Van Kuran</i>
November 17	Cincinnati (2)	<i>Van Kuran</i>
November 21	Denver (1)	<i>Kelley</i>
November 28	Santa Clara (1)	<i>Knudtsen</i>
November 29	Berkeley (1)	<i>Knudtsen</i>
November 30	Sacramento (1)	<i>Claycomb</i>
November 30	Toledo (2)	<i>Sohm</i>
November 30	Reno (1)	<i>Claycomb</i>
December 1	Cleveland (2)	<i>Sohm</i>

Round Two

We're encouraging the sales force to continue to conduct the seminar on a quarterly basis in the larger manufacturing market areas. We'd like to help in that effort and are therefore ready to assist in the delivery of the seminar — sometimes it seems to help generate higher interest if a factory representative is involved.

We'd like to achieve our second successful series of seminars during the first quarter of 1979. *Jean Toth Kelley* will be contacting all District managers to establish schedules. If you want to schedule one, and she has not yet contacted you, please call *Jean* on Ext. 3364 or *Dick Knudtsen* on Ext. 3458.

Seminar Kit Available

To facilitate the second round and future seminars, we're providing a professionally done seminar kit containing slides (35 mm and overhead), instructor's notes, key questions and answers, MFG/3000 seminar checklist, invitations, and promotional materials). This seminar kit can be ordered from GSD, #5955-1722.

Good luck in selling MFG/3000. Let us know how we can best help you.

New Applications

Distributed Processing Fortune 500 Style

By: *Barry Klaas/GSD*

Application: Engineering Drawing Control
Industry: Manufacturing of Consumer Products

Overview:

It only took a few references to the hundreds of thousands of drawings that the HP 3000 now kept track of to make one realize the importance of this system to this giant Fortune 500 company. The company was organized to have information system departments within functional corporate support areas and this was the engineering information system manager speaking, "The key to our success was to make everyone realize that the HP 3000 was a part of the total company wide solution, not taking away from the IBM 370 but adding an improvement that would in fact bring it more business."

The manager went on with his professional analysis while the enthusiasm of success sparked a wry smile. "We had to sell this system on a solid economic basis. We heard concerns of being non-IBM, requirements for auditability and controls, as well as replication of support. We made presentations, answered the concerns, and sold the distributed processing concept on the basis of hard economics. We are happy with our decision and with HP."

The Application:

An engineering drawing is the most precise description of a part. Design and maintenance engineers identify and verify parts information by having a reference drawing. The drawings themselves are numbered and knowing the right number is the usual problem. Using IMAGE and VIEW-like routines, the keyword descriptors related to the part are entered; e.g. product produced, machine used or machine function, plant site, location within plant site, and part description. The IMAGE database is searched based on these descriptors and all qualified drawings are selected and listed on the CRT. If further visual identification is

required, an actual drawing is displayed on an HP 2648 graphics terminal.

Benefits:

This process of identifying and looking at a drawing used to take up to 1½ weeks and if the engineer guessed wrong on the drawing number, then it took even longer. Today it takes only a few seconds to a few minutes to complete the cycle. In addition, once the part is identified, a dimensioned and annotated drawing can be examined on the CRT. Beyond this, the engineer may invoke design aid routines to test a proposed design change and display a graphic image of the design change; e.g. pulley or conveyor roller placements.

For more information about this application, contact *Barry Klaas* at GSD Sales Development.

Public School System Implements a Distributed System Network

By: *John Chisholm/GSD*



Application: Information Network
Customer Type: Public Schools

A large county school system is implementing a network of seven HP 3000's to maintain budget payroll and attendance records for all employees; and attendance, grading and demographic information for all students in the county. The network consists of three dedicated HP 3000's at County Headquarters and four "nodal" HP 3000's in various regional districts, each supporting on-line terminals in all schools and facilities in that district. (See exhibit.) Consistent with the 80/20 Rule, detailed information is stored in databases either at county headquarters or at one of the regional HP 3000's, or both, depending upon who uses the information and how frequently it needs to be accessed.

During the day, payroll, time, and attendance records for each school employee are input into regional HP 3000's from interactive display stations in about 170 school facilities throughout the county. By Fall of 1979, student attendance information will be included as well. During the evenings, DS/3000 program-to-program communication is activated between the HP 3000's at the headquarters and the four regional HP 3000's. Master programs on the HP 3000's in headquarters activate slave programs on the regional HP 3000's. These slave programs transmit to headquarters the information entered during the day that is required to update the headquarters' databases.

Only that student information which is required for state and federal reporting is transmitted to headquarters. More detailed information, such as students' home addresses, academic and health records, etc., is stored at the regional node where it is more accessible to inquiry from the local schools. On the other hand, detailed budget and payroll information is stored at headquarters, since that is where the greatest need for financial information lies. Only summary financial information for the district is stored at the regional nodes.

Data transfers by DS/3000 from the regional HP 3000's to headquarters take place on a daily and semi-monthly basis. Each regional system daily transmits 100 records of 256 bytes each and 50 records of 275 bytes each, to headquarters. Twice a month, 3000 records of 24 bytes each and 12,000 records of 220 bytes (more than 2.5 million bytes altogether) are transmitted from each regional system. Transmission time is held down in two ways. First, DS/3000 provides data compression for any sequence of three or more identical characters. In particular, long sequences of blanks are compressed. Secondly, compressed data are tightly packed into buffers before transmission, to minimize overhead time.

All systems in the network are HP 3000 Series II's with 512 Kbytes of memory. Two of the three systems at headquarters are hard-wired together; the four regional systems

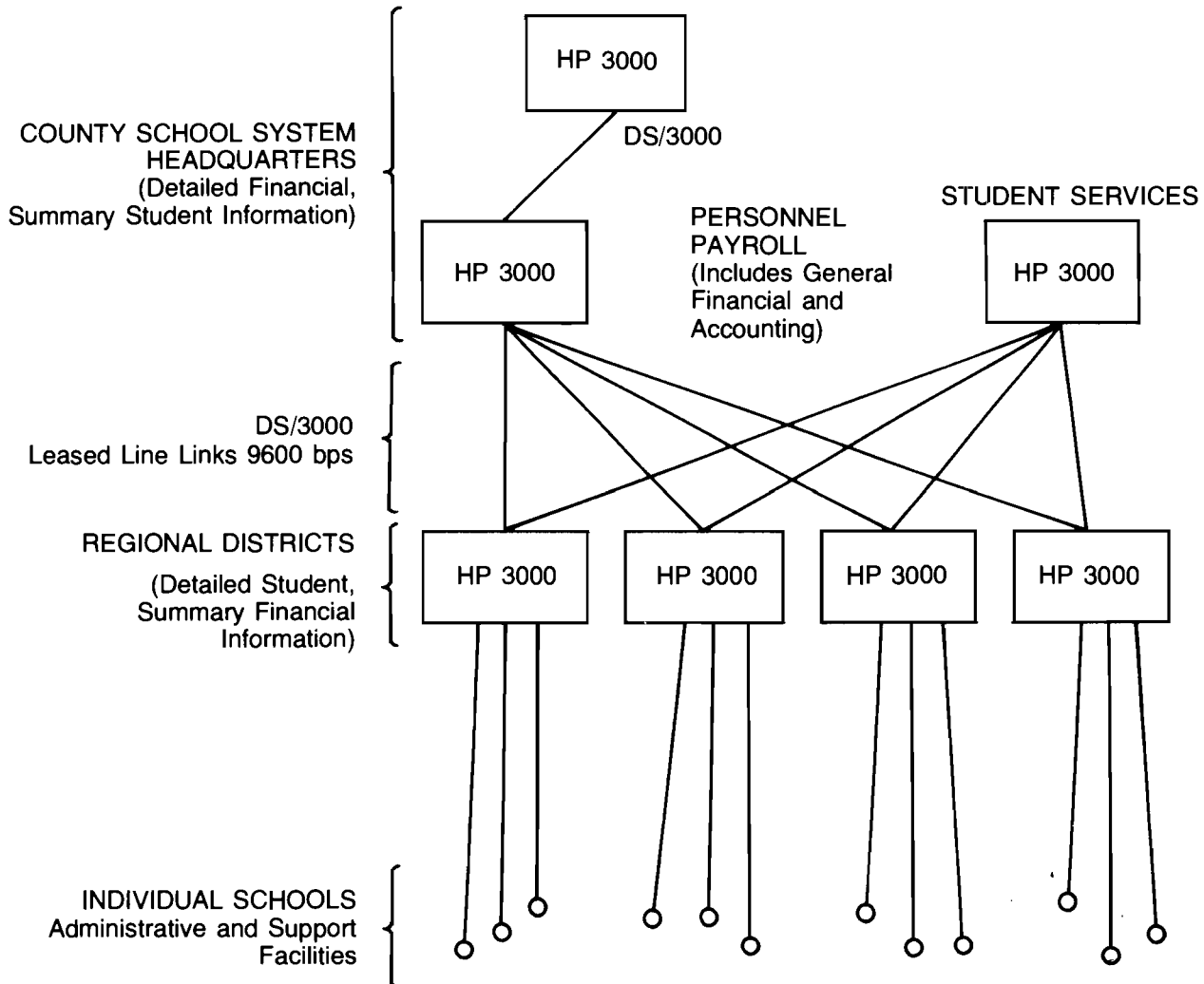
communicate with headquarters by leased lines at speeds of 9600 bits per second. There are more than 250 interactive display stations in the network, each consisting of an HP 2645 terminal and an HP 2631 printer.

The school system has approximately 140,000 students and 20,000 employees. The county covers an area of some 400 square miles. In addition to and apart from the HP 3000 network, the school system has two HP 2000's and one HP 3000 Series I used for computer-aided instruction.

By adhering to the 80/20 Rule for distributing data, the school system has significantly reduced both the frequency and volume of their data transmissions between systems.

Contact *John Chisholm* or *Regina Fanelli* at GSD for more information on this application.

PROGRAM DEVELOPMENT AND FUTURE APPLICATIONS



More than 250 Interactive Display Stations
(HP 2645 Terminals and HP 2631 Printers)

HP Gets Order for Business Data Systems

By: Rich Edwards/GSD

That rather mundane headline in the January 10 issue of the *Wall Street Journal* introduced an article which discussed a significant order for HP: "Hewlett-Packard Company said it received a contract to supply about \$25 million of business computer systems to Automatic Data Processing, Inc., Clifton, N.J., a computing-services company." The order is for transaction processing applications using HP 3000 computer systems.

Congratulations to Jerry Tartaglia, Sales Representative, Paramus, N.J. (ESR) and his outstanding field and factory team. Jerry and his team pursued ADP for fourteen months before landing one of the biggest commercial minicomputer sales orders we know of. The following HP press release gives more details:

PALO ALTO, Calif., January 9 - Hewlett-Packard Company has received a multimillion dollar contract to supply business computer systems to Automatic Data Processing, Inc. (ADP), Clifton, N.J., the world's largest independent computing services company.

HP anticipates that it will deliver approximately \$25 million worth of HP 3000 Series business computer systems to ADP. Deliveries will begin in the first half of 1979.

The HP computers will be used by ADP to provide business clients with an on-line system to do their billing, inventory control and accounts receivables. ADP clients will be able to process data on-line using HP 3000 computers located either in ADP regional computer centers or at the clients' sites.

The HP 3000 Series, more than 2,000 of which have been installed worldwide, is a multi-terminal, interactive computer system with networking and full database management capability. The HP 3000 Series is at the top of HP's family of business computers, which range in price from \$25,000 to \$250,000.

ADP provides essential computing services to more than 60,000 firms in the U.S., Canada, Europe and South America. Hewlett-Packard, headquartered here, is a leading manufacturer of computers for business and scientific use with fiscal 1978 sales of \$1.73 billion.

HP GRENOBLE NEWS

Data Systems News

The French Technical Sales Force Comes To Grenoble

By: Georges Retornaz/HPG



In spite of the night life, everyone stayed awake during the sessions!

On December 11th, 12th and 13th, 1978, the complete French Technical Sales Force spent two-and-a-half days in our Grenoble facility.

The two main objectives we reached during those three days were:

1. Technical updating for every field engineer. Thanks to the help of our technical marketing specialists *Jean-Pierre Baudouin* and *Marc-Henry Bricquet*, we emphasized mainly RTE-IV, DS/1000, GRAPHICS/1000 and DATACAP/1000. During special workshops, the attendees shared their real life experiences, and asked specific questions. Good detailed demos, with the FE's participation, made more concrete the different covered topics.
2. The second objective for the FE's was to better know the different factory people with whom they are working daily. Also, an in-depth factory visit (in two groups), with special attention on our product tracking system (SPIDER), gave them the best confidence to bring their customers to our factory.

The general atmosphere was really good: Night sessions really finished early in the morning, and French cooking should convince some other European sales forces to plan a similar trip to Grenoble! The consensus of opinion at the end of the session was that the time had been well spent and the objectives fulfilled.

The Sales Development Group at Grenoble with the help of Technical Marketing will plan similar seminars for the other European Sales Forces as required.

The Grenoble DSD marketing team is ready to host them!



Product News

A Minor Detail

By: Peter Stuart/HPG

During the calm and controlled panic that every division experiences in the weeks before a new product introduction, we let a few errors slip into the Quick Reference Guide which was included in your Data Capture Binders. We are reprinting the guide, but it may be worth your while to take a few minutes to correct the one you have right now.

Note under Indicator and Display Keyboard Control:

- ' is a lower case symbol and @ is upper case
-] is a lower case symbol and \ is upper case
- { is a lower case symbol and [is upper case
- } is a lower case symbol and] is upper case

Note under Terminal Configuration switches 1-3, 4:

- NO Parity is 0 X
- EVEN Parity is 1 0
- ODD Parity is 1 1

Note in Terminal Status Information (3075, 3076) the status bytes 4 and 5 are reversed and bit 6 of status byte 3 is set to a 1 if the printer is busy.

CS GROUP NEWS

CSG News

Computer Advances Update

By: Carol Scheifele/CSG



Our two latest business systems — the HP 300 and the HP 3000/Series 33 make their debut in the most recent issue of *Computer Advances* (Jan/Feb '79). As both products are heavy users of our SOS chips, the final page is an in-depth interview with *Marco Negrete*, Group R & D Manager, in which he updates readers on the status of SOS at HP.

Issue Appearances:
Computerworld — January 8, 1979
Datamation — January 1979

Further copies are available for direct mail or seminar purposes. Send the attached coupon to *Carol Scheifele* — Bldg. 40, 11000 Wolfe Road, Cupertino CA, 95014.

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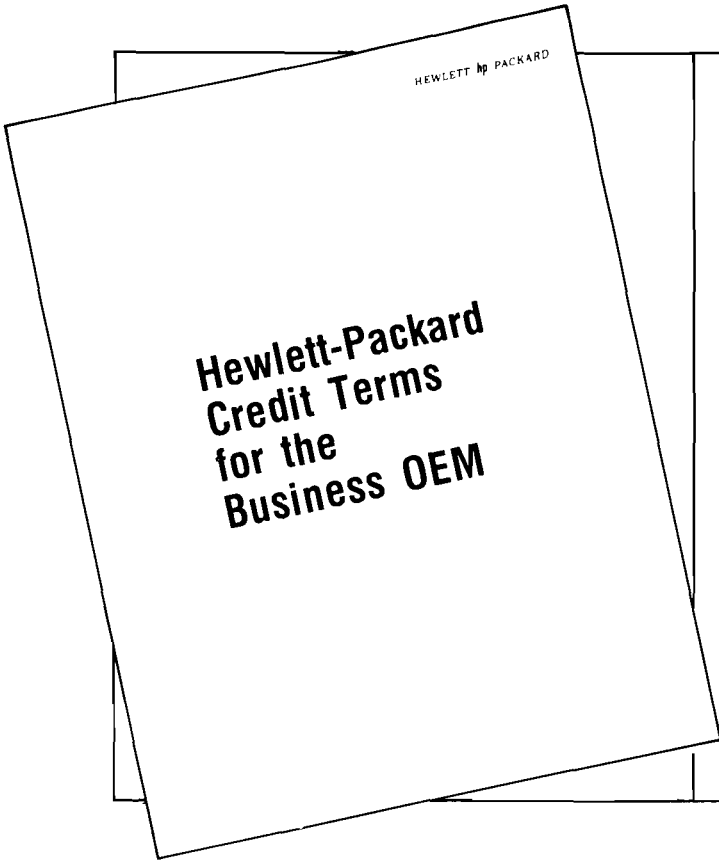
Previous issues are also available.
 Indicate below any others you can use.

Name _____

Office _____

New Credit Plan for Business OEM's

By: Stu Yellen/CSG



A choice of credit alternatives

In your relationship with Hewlett-Packard you as a Business OEM will want to consider the credit alternatives available to maximize your sales opportunities while minimizing the risk for both parties. This is a rational way of doing business.

This document discusses your credit alternatives with HP. The alternatives described will allow you to order your customers' business computer systems from HP with minimal investment.

The bases of credit are confidence and financial capacity. The factors HP considers in determining credit are:

- Age of company
- Profitability record and projections
- Balance sheet analysis
- Past and projected cash flow
- Bank arrangements
- Financial resources available from other sources
- Payment history
- Background of principals

Information needed to establish a line of credit

In order for HP to make a credit determination you may be asked to provide certain information. This information is helpful to both parties since it usually is a lack of information that causes delays in approval. Items that you may be asked to supply include:

- Financial statements
- Cash flow analyses
- Commercial bank references
- Commercial trade references
- Business plan
- Tax returns
- Resumes of principals

All of this information naturally will be treated confidentially. Only those making the credit evaluation will have access to it.

After receiving the requested information, HP's credit staff will do a thorough financial analysis of your operations prior to execution of a signed OEM contract. If your company qualifies, a line of credit will be assigned to cover the maximum allowance exposure. You will be advised of the amount for this line of credit and whether you qualify for net 30-day terms of HP's Business OEM Credit Plan, which is described below.

Generally, net 30-day payment terms will be granted if you are an established OEM with significant tangible net worth, profitable operations and a good payment history. These terms mean that your payment to HP is due within 30 days of the date that HP issues an invoice.

3. Letter of Credit - This is a guarantee by a bank to make payment to HP. All the financial arrangements are made by you, the OEM and your bank and HP is not a party to these arrangements. The amount of credit involved should be fairly significant (\$75,000 plus), as this is a complex and somewhat expensive arrangement.

Letters of credit can be issued to cover a specific transaction (Enclosure 9) and the bank pays HP when all terms and conditions have been met as stipulated.

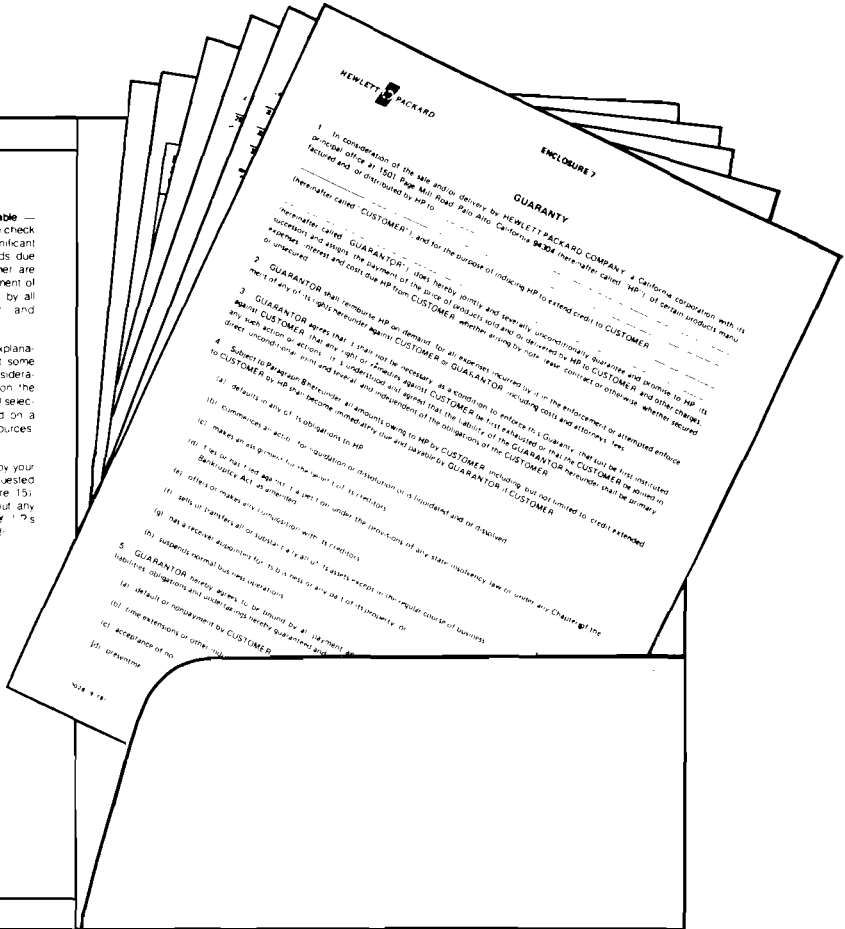
Standby letters of credit (Enclosure 10) cover multiple transactions up to a mutually agreed upon dollar amount and time period. Normally, payments are made by you, HP's customer, and the bank only becomes involved in the payment process if you do not make payment.

4. Escrow Account - Funds for the amount of the purchase can be placed in an escrow account by you, HP's customer. A written agreement spells out the exact conditions under which the funds will be released to HP. Interest can be paid by the bank to you while the funds are in escrow. This arrangement can be used if your company presently has excess cash but does not yet qualify for net 30-day credit. The excess cash could represent part of the initial investment not yet utilized in a new business, or it could be advanced funds from an end-user.

5. Assignment of Accounts Receivable - This is a formal version of the two-party check arrangement and applies to more significant amounts of credit. Rights to the funds due from the end-user to you, HP's customer, are legally transferred to HP. An Assignment of Receivable (Enclosure 14) is signed by all three parties (HP, HP customer, and end-user).

While we have tried to give a simple explanation of each type of credit arrangement, some are very complicated and require considerable coordination and cooperation on the part of all parties involved. The actual selection of a particular method is based on a combination of your interests and resources and HP's credit evaluation.

The credit evaluation can be started by your providing us with the information requested on HP's credit application (Enclosure 15). Should you desire more details about any information covered in this brochure, HP's Sales Representative can arrange for credit staff to contact you.



The big news is HP's new "Business OEM Credit Plan."

Those of you who sell to business OEM's or refer them to your end user customers, know that very few of them qualify for HP's standard net 30 terms. This business today (primarily HP 3000) is done using third-party guarantees, two-party checks, letters of credit, etc., for each order.

The introduction of the HP 250, HP 300, and HP 3000 Series 33 and the third party specialist selling effort will multiply these credit intensive transactions.

Securing guarantees costs time and money, and many times causes delays in entering orders.

The objectives of the "Business OEM Credit Plan" are:

1. To find an easier way for the field team to do business with good OEM's who do not qualify for our standard net 30 terms.
2. To increase the efficiency of our credit people in dealing with sales of commercial systems through OEM's.

Briefly, here is how the program works:

Credit is extended to the OEM if the OEM:

1. Pays a deposit of 10% at the time of order.
2. Provides HP with a "Purchase Money Security Agreement" signed by the OEM's customer and assigned by the OEM to HP, giving HP a security interest in the equipment until the OEM receives payment.
3. Qualifies for the plan — much lower net worth requirements than for net 30.
4. OEM pays HP within 30 days or 5 days after the OEM receives payment from the customer, whichever comes first.

Benefits to HP:

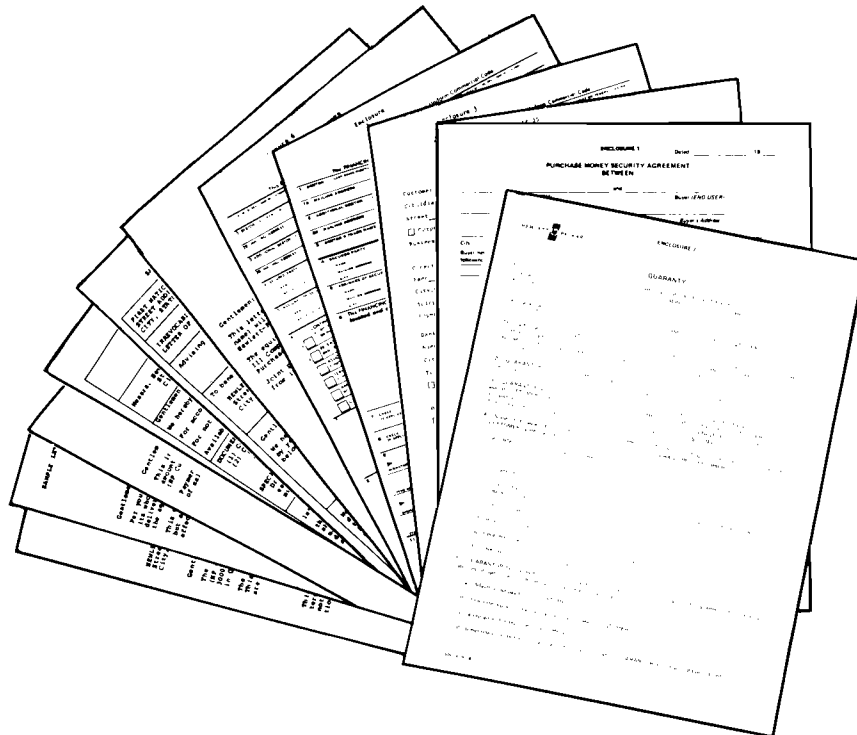
1. No need to seek third-party guarantees, two-party checks, letters of credit, etc., when dealing with OEM's who do not qualify for standard net 30. We establish the credit-worthiness of the OEM, not each of the OEM's customers.
2. No need to evaluate the credit of the end user, we deal only with the OEM. The OEM makes the credit evaluation of the end user.
3. Reduces or eliminates the booking of orders with credit holds.

We have made the necessary documents and the procedure as simple as possible so that the program is easy to understand and use. All it really means is that end users do not have full rights to equipment until they have paid for it.

When the OEM wants to purchase more equipment or larger systems than their assigned line of credit allows, the previously mentioned alternatives of third-party guarantees, two-party checks, letters of credit, etc., are available. Since these alternatives are more time-consuming and costly to administer, they should be used only for HP 3000 systems and large configurations of HP 300's.

To make everyone's job easier, all of the details on the "Business OEM Credit Plan," as well as on the third-party guarantees, two-party checks, letters of credit, etc., are in a new brochure entitled, "Hewlett-Packard Credit Terms for the Business OEM." The brochure is easy to understand, and it includes sample copies of all of the documents involved. It will make it much easier for you to discuss credit with your OEM customers and for them to discuss credit with their end user customers.


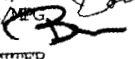
Your office should have shelf quantities of the brochure now and your credit people have quantities of the actual forms.



Joint CSG/MPG Sales Program
By: Doug Chance/CSG and Ben Holmes/MPG

HEWLETT  PACKARD

MEDICAL PRODUCTS GROUP - 175 Wyman Street, Waltham, Massachusetts 02154 - TWX 710 324 0367 - Telephone (617) 890-6300

FROM: Doug Chance/CSG 
Ben Holmes/MPG 

TO: CSG NEWSLETTER
MEDICOM

DATE: 5 February 1979

SUBJECT:

During the last fiscal year, the Medical Products Group and the Computer Systems Group have been jointly working on a program designed to sell HP computational systems to hospitals for general purpose data processing applications. Last year this program consisted of four sales representatives (one in each region of the United States) working for MPG, but whose sole responsibility was selling CSG products to the hospital community. This direct selling effort met with limited success, primarily due to the small number of hospitals that are able to do their own application programming. We did, however, achieve some success in closing a number of OEM agreements with third parties whose prime market was data processing for the hospital. These contracts were the direct result of a joint effort between the CSG sales force and the Waltham Medical Data Management Systems sales development organization.

We will continue the program in 1979 with some important changes. MPG will start out with the same number of sales representatives (4), although that figure is expected to grow during the year. Peter Deavenport in Los Angeles and Ray Shanahan in New York will be remaining on the team; joining them will be Jack Clarke, former Computer Systems District Manager in Atlanta, and Chuck Roberson in the Midwest Region. This direct selling effort will be backed up both by the CSG S.E.O. and by MPG's growing number of S.E.'s: Connie Kelly in the Midwest Sales Region, Jay Gortcinsky in Neely, plus Jim Navin and Vern Johnson, the MDMS Sales Development Team at the Waltham Division.

In addition to this direct selling effort, MPG will expand its non-personal selling efforts to include CSG product ads talking about medical applications run in medical magazines. MPG will also publish a set of brochures speaking to the subject of medical applications and run a series of articles in its new periodical, Advances for Medicine.

Since it is MPG's long-range strategy to develop proprietary software for the hospital market, they have established product line (35), designated Medical Data Management Systems. All Computer Systems Group products sold to hospitals in territories covered by the MDMS sales force will be coded to that product line through the use of an MPG systems model number. Outside of those specific territories, CSG retains the total responsibility for all medical institutions. Orders that involve third parties or HP business OEM's will be handled in the conventional manner in accordance

-2-

with Computer Systems Group policies, with a commission split going to the MDMS salesperson only if the ultimate customer is in his predetermined territory.

It is important to reiterate that the Medical Products Group has not taken over the responsibility for the entire hospital marketplace. Today the responsibility consists only of four territories, and those of you from the Computer Systems Group sales force know if your territory is involved. The vast majority of the CSG sales force, and all those outside the United States, maintain the responsibility for the medical market. It is to be treated as a quality horizontal market, but one that has special interests to HP. In fact, due to MPG's pre-eminence in the clinical computer systems area you will find a customer who in general is knowledgeable about Hewlett-Packard and holds us in high regard.

The four MPG sales representatives, at the request of your Area Manager, will make joint calls with you outside their territory if you feel the potential sale warrants this effort. In addition, the Waltham Division Sales Development Team responsible for MDMS, will assist you with both end use and third party orders. They have been especially helpful in closing a number of third party contracts where their knowledge of hospital application has been very useful. This help is offered with no strings; there will be no quota credit or commission splits. We are just genuinely interested in maximizing the number of HP computers at use in medical institutions. We encourage you to continue to call on the hospital marketplace, to use MPG's resources to help you qualify and close orders, and in general, to make the medical market a complete HP market.

DC/BH/e

New General Manager at CSD

By: Doug Chance/CSG



Bob Puette was named as the new General Manager of the Computer Service Division on January 30th. Bob will be replacing Tom Lauhon, who will manage several projects of strategic importance to CSG, reporting to Paul Ely.

Bob has been with HP for 13 years, having started as a Systems Analyst in HP Corporate in 1966, becoming manager of Corporate Marketing Services in 1968. Bob joined the Santa Clara Division in 1970, where he held various product and marketing management positions before becoming a Product Line Manager in 1974. In 1976 he was named to his previous position as Marketing Manager at Data Systems Division.

At CSD, Bob will be responsible for field Customer Engineering, repair and distribution of exchange boards and the marketing of computer maintenance services.

Bob's personal interests include flying his own airplane and big game hunting in the Rocky Mountains.

In answer to questions from irate customers, Bob may be tempted to answer, "Have gun, will travel."

FOR INTERNAL USE ONLY

I terminali Hewlett-Packard. Una famiglia di tipi in gamba,

furbi,

Il terminale alfanumerico 2645A ha un controllo a microprocessore che semplifica l'editing, l'impostazione e la realizzazione dei formattori. In più ci sono i tasti dettabili dall'utente e l'unità di trasmissione a 9600 baud.

brillanti,

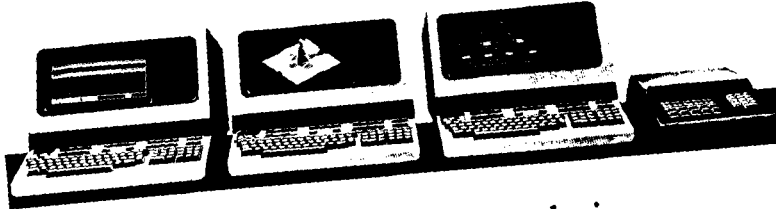
L'HP 2648A visualizza su caratteri alfanumerici che grafici completi. Auto-plotting, schermo a retrovivo, zoom e visione panoramica ad hardware, ombreggiatura di superficie, "tracce elettroniche" sono le sue caratteristiche più significative.

docili,

L'architettura modulare dell'HP 2649A consente all'OEM di realizzare su misura una stazione di controllo o di visualizzazione di grafici. Puoi cominciare con lo schermo, il microprocessore 8080, e l'I/O e aggiungere poi schede e tastiere, e programmare l'MPL.

alla mano,

Il terminale di Ingresso di Dati Numerici HP 3071A ha la vocazione per stare nei posti più diversi, puoi così collegare l'elaboratore con il tuo magazzino, la macchina di spedizione, o la linea di produzione (tramite l'RS232C o il CCITT V. 24). L'HP 3070A è compatibile IEEE 488.



semplici,

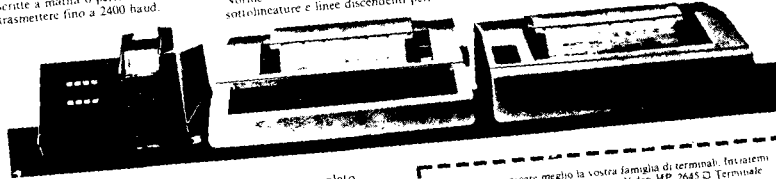
Il Lettore Ottico HP 7260A è uno strumento di collegamento estremamente versatile per il tuo elaboratore, in grado di leggere schede scritte a matita o perforate, e di trasmettere fino a 2400 baud.

"duri",

La nuova Stampante HP 2631A e il Terminale Stampante HP 2635A, entrambi controllati da microprocessore, producono copie molto precise e leggibili con estrema facilità. La matrice a punti 749, conforme alle Norme l'ASCII, permette di realizzare sottolineature e linee discendenti perfette.

e veloci.

Sia la Stampante che il Terminale di Stampa hanno una velocità di 180 cps in entrambe le direzioni. L'MPL sceglie la direzione di stampa più opportuna mentre una "slitta" ad alta velocità accelera la stampa dei dati incolonnati.



Il servizio assistenza HP supporta in modo completo l'intera famiglia di terminali della Hewlett-Packard: gli utenti hanno inoltre a disposizione sia corsi di addestramento che una esauriente documentazione. Se desideri maggiori informazioni su questi o altri membri della nostra sempre più numerosa famiglia, contatta l'ufficio Hewlett-Packard più vicino o spedisci il coupon qui a fianco.

HEWLETT  PACKARD

Italia: Via A. Vespucci 2, 20124 Milano, Tel. 6251
Altri uffici: Roma, Padova, Torino, Bologna, Napoli

Si desidera conoscere meglio la vostra famiglia di terminali, inviateci maggiori informazioni su Terminale Video HP 2645 Terminale Grafico HP 2648A Terminale Unità di Controllo HP 2649A Terminale Dati HP 3071A Lettore Ottico HP 7260A Stampante HP 2631A Terminale Stampante HP 2635A Altri terminali Desidero ricevere maggiori informazioni sui contratti OEM

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SISTEMI C. AUTOMAZIONE INFORMATICA 70 ELETTRONICA OGGI

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