COMPUTER SYSTEMS NEWSLETTER
For HP Field Sales Personnel

HEWLETT hp PACKARD

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DSD Announces the HP 1000 Computer System, F-Series Processor, Faster 16K RAM's, RTE IV

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DSD Announces New High-Performance HP 1000 Computer System, New F-Series Processor, Faster 16K RAM's, New RTE-IV Operating System .... Page 5

In This Issue...

BOISE DIVISION NEWS

Product News

2631 Throughput Rating

By: Gary Atkins/Boise

Prior to early 1976, there were no specific duty cycle ratings for our line printer product line. At that time specifications and help in selecting the proper printer or printers for the customer's application were made available. A "Hewlett-Packard Guide to Printers" was published and distributed in the field stating the duty cycle, pages printed between failures, and throughput rating for the 2607A, 2613A, 2617A, and 2618A line printers.

When the 2631A serial printer was introduced, duty cycle, pages printed between failures, and throughput were again specified in the traditional manner. However, two significant facts were overlooked. First, the 2631A would be competing in a different marketplace, one in which our competitors were advertising 100% duty cycle. This, in terms of how we defined duty cycle, is impossible to achieve. Defining duty cycle as the ratio of print/paper motion time to power-on time, 100% duty cycle would imply no time to load forms, no wait time on users, and no wait time associated with the hardware in the system. Second, the 2631A is a serial character printer and not a line printer; therefore, they cannot be compared in an identical manner.

On the 2630 Family, we have established that there is a nearly linear relationship between duty cycle and mean time between failures. This linear relationship implies that, on the average, the same number of characters will be printed between failures regardless of the duty cycle. However, the elapsed time between failures will be reduced at higher duty cycles. The linear relationship can only be achieved in that the product is not overly sensitive to internal heat buildup caused by continuous use as is the case on the 2631A.

The obvious question to ask, then, is why was the duty cycle for the 2631A initially specified at 20%? 20% was used because we perceived the "average" 2631A user to be one who would have the machine powered on for eight hours per day and print one million characters per day with all other users being normally distributed around the mean. The fastest one million characters can be printed is approximately 1.6 hours. Defining duty cycle as the ratio of print and paper motion time to power-on time, the 2631A, therefore, has a 20% duty cycle and would print approximately 300 million characters between failures. These numbers were then used to calculate the standard Basic Monthly Maintenance Charge (BMMC). However, the potential exists for a particular customer to destroy the "average" user concept. For example, if the duty cycle percentage changes to 70% based on a 24-hour power-on time, the 2631A will not heat up and smoke, nor will the printer cough and die. The printer will continue to print 300 million characters between failures; however, the chronological time from failure to failure will be significantly reduced.

In summary, the following points should be remembered:

1. The 2631A has a linear relationship between duty cycle and mean time between failures.
2. The standard 2631A BMMC was established to cover the printing of one million characters per eight hour day, or 20% duty cycle on the average.

Proceed with Caution!

By: Steve Richardson/Boise

When the 2631A is connected to an HP 1000 or HP 3000 Series II via a half-duplex modem at 1200 baud or faster either directly or via a 2645A CRT, there is a good chance you will lose data!

These systems do not support ENQ/ACK protocol on half-duplex modems (due to the extensive line turn-around time which would be required). So you should recommend full-duplex modems or run your half-duplex modems at 300 baud.

Problems Using the 2630 Family with DVR00

By: Larry Andrews/Boise

DVR00 is often used as a terminal driver in systems because of its small size relative to DVR05. Its primary limitation, relative to the 2630, is that it doesn't use ENQ/ACK protocol. (Ref. "The 2630 Family at 1200 Baud," Vol. 3, No. 5, Jan. 9, 1978, *Computer Systems Newsletter*.) It does use fill characters to allow for line feeds, etc., at 1200 baud when using sub-channel 9. Unfortunately, these fill characters are deletes (octal 177), which the 2630 family prints. The best way to use DVR00 at the present time is to use sub-channel 0 (no fill characters) and run 600 baud (1200 baud may work, depending on the application).

Remember, the best solution, by far, is to use DV05 and the 12966 interface card.

2630 Family Firmware Bug

By: Larry Andrews/Boise

A creepy-crawly critter has emerged in the 2630 family firmware. When the unit is set for 12-inch form feed (printer logic board), and 8 lines per inch, VFC commands will cause semi-disastrous results. (It stops line feeding until reset.) This problem is most likely to occur on the 2631A options 210 and 300, since both the HP 1000 and the HP 3000 normally output VFC commands only (no carriage return/line feed).

We're working on the problem, but for now, don't set form feed to 12 inches if 8 lines per inch and VFC commands are to be used. Also remember that VFC commands are all that is normally used on HP 1000 and HP 3000 line printer drivers.

New Mag Tape Subsystem Product Numbers

By: Mike Harrigan/Boise

As promised, here is another brief article to remind you that magnetic tape subsystems for HP 1000 computer systems are changing product identification numbers as of May 1, 1978. Below is a table showing old numbers and new numbers. Please use the new numbers when ordering mag tape subsystems.

Old Number	New Number
12970A Std	7970B #236
12970A #010	7970B #230
12972A Std	7970E #236
12972A #005	7970E #230
12972A #010	7970E #231

Please see the Corporate Price List for further details. The 12971A's (7-track subsystems) have not changed product numbers since they will be obsoleted in approximately ten months. Also, 12973A's (read only subsystems) will not change since these are mainly OEM subsystems.

Please remember that option 051 (Corporate color scheme) is now included as part of the subsystem, so it is not necessary to order this option separately. The new numbers do not allow any other add-on options. For example, 7970B #236, #003, would *not* be allowed. If your customer requires a subsystem other than the standard subsystems which are offered, it is necessary to order the individual components.

If you have any further questions or comments on this new subsystem scheme, please contact *Mike Harrigan* at Boise Division.

Color Options for 7970 Mag Tapes

By: Mike Harrigan/Boise

All mag tape subsystems are now available in the new Corporate colors of pearl gray and cocoa black. To assure that your magnetic tape subsystem matches your HP 3000 Series II, (shipped after March 1, 1978), be certain to order either option 310, 311, or 314 (see table below) with your 7970B/E.

Old Color	New Color
7970B #300	7970B #310
7970B #304	7970B #314
7970E #300	7970E #310
7970E #301	7970E #311
7970E #304	7970E #314

Please note that only the color is changed. The 30x options will be retained for six months to allow add-ons to existing systems. After that, it will be necessary to order a special (call the factory).

The newly renumbered subsystems for HP 1000 computer systems now include Corporate colors also. Please see the preceding article on these new subsystems for details.

DATA SYSTEMS NEWS

New Product News

New High-Performance HP 1000 Computer System, New F-Series Processor, Faster 16K RAM's, New RTE-IV Operating System

By: Van Diehl/DSD

Most of you must have by now participated in the DSD New Product Party. I hope you share our excitement with the vast array of new products that we are introducing. It is the largest set ever introduced by DSD, very well demonstrating the vitality of the HP 1000 Product Line. And, don't forget that HP 1000's are now systems, and board computers, giving you a choice of integration level and also a choice of performance with the three processors M, E and F.

The new products being introduced extend the HP 1000 computer performance in speed and ability of handling large programs and data, thus providing superb tools for computation applications, in problems such as linear programming, simulation, computer-aided design, etc.

The top of the line is the HP 1000 Model 45. It offers greatly improved operating speed, making use of a unique hardware scientific instruction set that performs technical calculations with unmatched speed, a new hardware processor for faster floating-point operations, and new 350-nanosecond memory. Aimed at engineering and scientific applications, the HP 1000 Model 45 is based on the RTE-IV operating system which makes it unique in its class with the ability in FORTRAN to handle memory data arrays as large as 2 megabytes.

Other features of the DSD New Product Party included the new HP Systems 25 and 40, Multipoint, Graphics/1000, new enhancements for the 2240 and a new set of software support products.

The table below summarizes the new HP 1000 family:

	HP 1000 Family		
	M-Series	E-Series	F-Series
Systems		Model 20 Model 30 Model 40	Model 25 Model 45
Computers	2105A 2108M 2112M	2109E 2113F	2111F 2117F
Board Computers	2108MK	2109EK	
Relative Speed	1X	2X	6X

Will My Customer Require a Hardware Upgrade for RTE-IV Operation?

By: Van Diehl/DSD

RTE-IV is compatible with the HP 2108A/B and 2112A/B Computers, serial prefix 1810A and later, 2109A/B and 2113A/B serial prefix 1812A and later, and all 2117F computers. Accessories shipped with computers that meet this serial prefix requirement are also compatible. Two service products are available to provide a fixed price upgrade. The 92852E and 92852M service products include all material to do the required update.

The two products 92852E and 92852M have been set up for hardware upgrades required for RTE-IV. They will be added to the CPL June 1st.

Almost all hardware in the field today requires these upgrades; the required serial prefix for proper RTE-IV operation is 1810(3/6) for M-Series computers and 1812(3/20) for E-Series computers.

The list price for these kits are $5860 for the 92852M and $5715 for the 92852E. The two kits include a return authorization form. Using these forms the customer will ship his old boards *directly* to DSD. DSD will advise the sales office of the receipt of the old boards. The field will then generate a credit authorization for the boards. Upon receipt of the credit authorization, Order Processing will credit the customer with $3715 for the M-Series and $3860 for the E-Series, for a net price of $2000. The returned boards will be reworked and resold to CSD.

The total upgrade cost for the customer will then be $3000, for both the hardware and software during the time that we have the special $1000 RTE-IV software price.

Thus, for the super price of $3000, the customer will get an almost brand new computer and the super RTE-IV. (Who in the competition can beat such a smooth upgrade path? We can really say that we care for the customer's cost of ownership!)

Upgrading of boards to the latest date code is not automatically included under BMMC. Only critical design errors affecting the ORIGINAL PRODUCT SPECIFICATIONS are corrected, and these are usually handled by service notes extending warranty to both contract and time and materials customers. RTE-IV is a new product and we will not automatically cover updates of machines to work with it.

These packages are the recommended approach for all RTE-IV upgrade customers.

If the customer does not want to purchase the upgrade product, we cannot stop him from buying exchange boards and parts to do the upgrade himself. Some of the parts can be obtained via the board exchange program. others not. Thus, in these cases the customer will have to pay full list price for the upgrade.

Our customers will find the upgrade package an attractive, straightforward, and economical approach. This price, combined with the spcial $1000 RTE-IV upgrade price, is certainly a winning combination.

RTE-IV—The Mega-Array Handler

By: Van Diehl/DSD

A new member of the RTE family is born—RTE-IV. RTE-IV makes HP 1000 Computer Systems unique in their class in their ability in FORTRAN to handle programs that include data arrays as large as 2 megabytes.

HP 1000 Systems will now be specially suited where large arrays of data are manipulated. RTE-IV supports user program code up to 54 Kbytes (this does not include the partition base page which is mostly available to user programs also) in each of 64 memory partitions. RTE-IV also supports mother partitions with capability of handling megabyte data arrays.

RTE-IV also includes reconfiguration of user partitions and I/O at boot-up time and an extensive set of fail-soft capabilities keep the system running in case of failure of power, device, or memory parity.

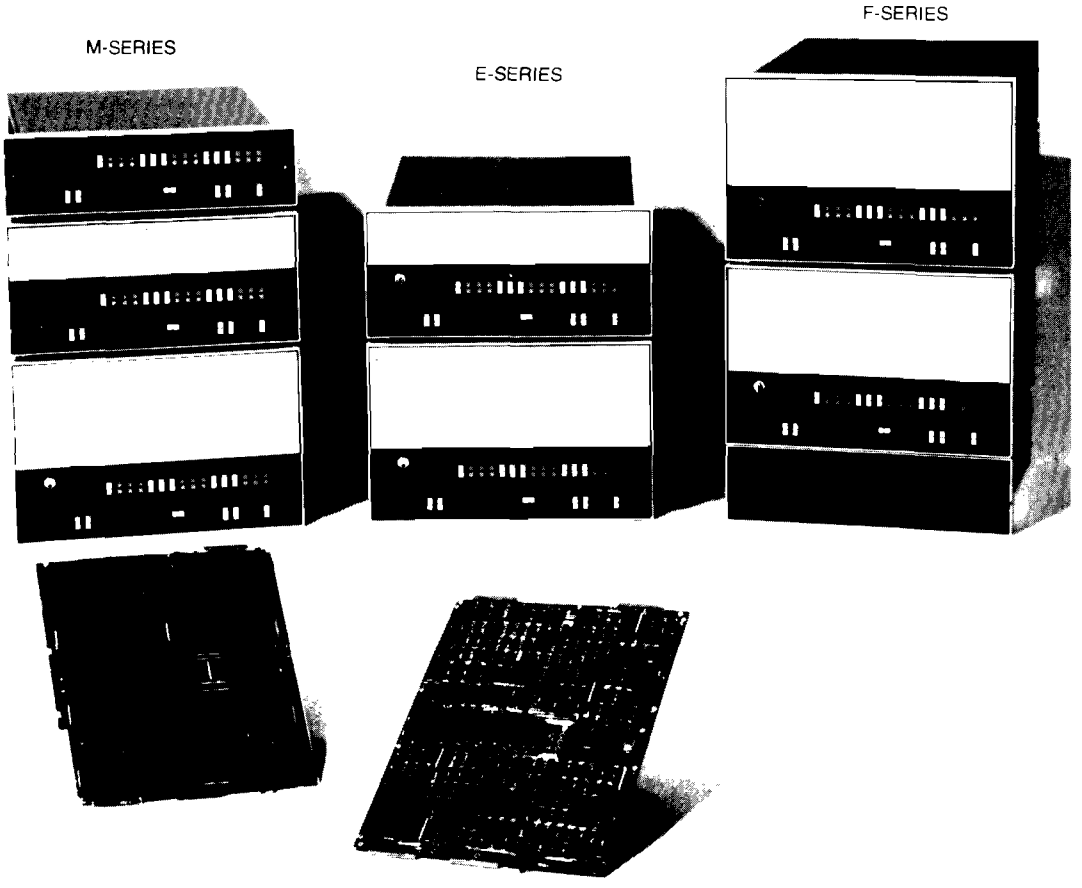
RTE-IV Field Training Manual Errata

Please note that RTE-IV supports RJE/1000, the 2313 and 6940. Also note that the upgrade price of Option #001 is −$4000 (minus $4000). It will be raised, later on, to −$2000 (minus $2000) as stated on page 20.

Introducing The HP 1000 Computer Family

By: Bill Elmore/DSD

The introduction of new computer products from Data Systems Division brings with it a new way of describing the HP Technical Computer Family. The term "HP 1000," formerly used to denote HP computer systems, has been expanded to be associated with the entire product line. Thus, the 21MX M-Series and 21MX E-Series become the HP 1000 M-Series and HP 1000 E-Series, respectively. The HP 1000 computer product line now consists of M-Series, E-Series, and F-Series computers. All three are offered in a variety of rack-mountable chassis sizes and are available in conjunction with a variety of disc products. HP 1000 M-Series and E-Series are available as board computers for high-volume applications here it is useful to integrate the central processing unit into a product to achieve space and power economies. HP 1000 E-Series and F-Series computers also form the basis for complete HP 1000 Computer Systems, which combine computer, mass storage, CRT terminal, operating software, and cabinetry into fully integrated, packaged systems. The matrix below summarizes the HP 1000 computer family.



	M-Series	E-Series	F-Series
Systems	—	MODEL 20 MODEL 30 MODEL 40	MODEL 25 MODEL 45
Discomputers	2108M/7906 2112M/7906	2109E/7906 2116E/7906	2111 F/7906 2117F/7906
Computers	2105A 2108M 2112M	2109E 2113E	2111F 2117F
Board Computers	2108MK	2109EK	—

The HP 1000 Computer Family.

Announcing The HP 1000 F-Series Computer

By: Bill Elmore/DSD

The HP 1000 F-Series computer, the latest addition to the HP 1000 product line, is a high performance machine aimed at those OEM and end-user customers who require a high level of computation capability from their computers. Designed for both performance and accuracy in applications that involve floating point arithmetic, trigonometric, logarithmic, and other scientific calculations, the F-Series will be very attractive to customers looking for a cost effective solution to computer aided design, graphics, simulations, modeling, and scientific problem solving applications.

Powerful HP 1000 Instruction Set

The HP 1000 F-Series utilizes the same powerful control processor as the E-Series computer, with an enhanced instruction set that is an extension of the HP 1000 base set common to M-Series and E-Series computers. Execution times for single precision floating point instructions have been improved by a factor of 2.5 to six, while remaining completely compatible with software executed on M-Series or E-Series computers.

New Floating Point Processor

All this is possible because of a new Floating Point Processor that is dedicated to performing floating point arithmetic. Implemented in hardware and connected directly to the computer's control processor through the Microprogrammable Processor Port (MPP), the floating point processor executes floating point instructions much faster than was previously possible. The new processor executes both single precision (32-bit) and extended precision (48-bit) floating point instructions at hardware speed to give the F-Series greater number crunching ability. Accurate to at least eleven decimal places, these 48-bit floating point instructions typically execute 3 to 6 times faster than equivalent firmware and software routines on the E-Series computer.

New Scientific Instructions

In addition to the floating point processor, the F-Series offers as standard nine new instructions that perform trigonometric and logarithmic operations. Called the Scientific Instruction Set (SIS), the new instructions utilize the computational resources of the floating point processor to give the F-Series the ability to execute these instructions with incredible speed and accuracy. SIS instructions execute up to 24 times faster (and several orders of magnitude more accurately) than the software routines they replace.

Accelerated FORTRAN Performance

Offered as a standard in the F-Series computer are firmware routines designed to improve FORTRAN performance. The FORTRAN accelerator routines of the Fast FORTRAN Processor consist of 15 instructions that perform frequently used FORTRAN operations, such as parameter passing, array address calculations, floating point conversion, packing and normalization functions. This results in an increase in performance by a factor of two to twenty over that of equivalent software routines, and a 50-70% performance improvement for a typical FORTRAN applications program.

A Powerful New Microprogramming Resource

As with all members of the HP 1000 family, the F-Series computer is fully user microprogrammable, thus allowing the user to create his own tailored, high performance microprogrammed subroutines. An internal floating point accumulator is available under microprogram control for the storage of intermediate results and overlapping CPU and floating point processor operations to achieve extremely high performance for computation applications.

High Performance Fault Control Memory

High Performance 350 nanosecond memory is the standard memory system offered with the F-Series. Based on state-of-the-art 4K and 16K RAM technology, memory is available in modules of 32K and 128 Kbytes. For fault secure operation, 420 nsec high performance fault control memory is also available. Fault control provides for correction of all single bit errors and detection of all double bit errors.

High Speed Input/Output

The variety of high speed I/O capabilities available on the E-Series computer are also available on the F-Series computer. The Dual Channel Port Controller (DCPC) offers transfer rates of up to 2.2 million bytes per second on a cycle stealing basis. Microprogrammed Block I/O provides an intelligent I/O channel with transfer rates of up to 3 million bytes per second.

Two Models to Choose From

The F-Series computer is available in two models, the 2111F and the 2117F.

The 2111F includes CPU, Floating Point Processor, 64 Kbytes of high performance memory, F-Series instruction set, SIS, FORTRAN accelerator routines, power supply, 9 I/O slots, and room for 640 Kbytes of memory, all in a single 12¼" rack mountable unit. The 2117F is similar to the 2111F, except that the floating point processor is housed in a separate 5¼" unit. The 2117F includes 128 Kbytes of high performance memory, Dynamic Mapping System, 14 I/O slots and room for 1280 Kbytes of memory. The 2111F is priced at $12,250; the 2117F $16,000.

Powerful Real Time Operating Systems

Memory- and disc-based operating systems that are compatible with the entire HP 1000 family are available. In particular, the new RTE-IV real-time operating system is a perfect complement for the F-Series computer. With RTE-IV's ability to process large arrays of data, it will be ideal for use in many computation intensive applications.

Automatic Boot Up

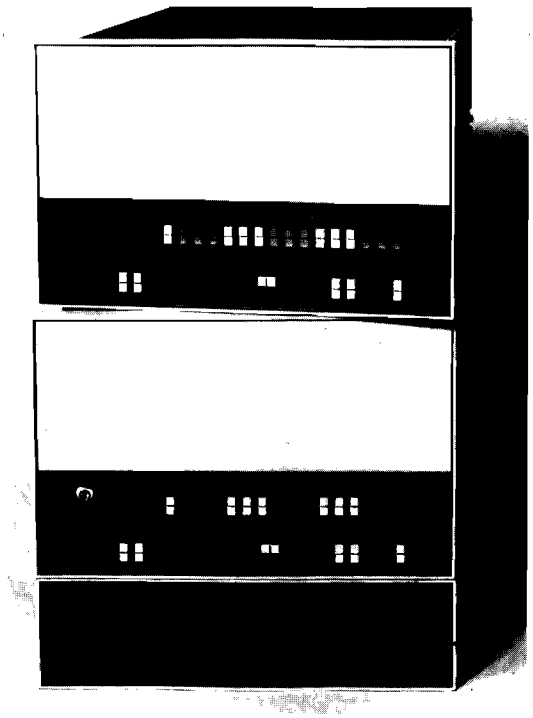
The Remote Program Load (RPL) feature of the F-Series allows the operating system to be booted up without operator assistance. Just turn it on and up it comes! RPL also allows the computer to boot up on a signal from a remote site, or to re-boot itself on execution of certain instructions.

Tough, Reliable Design

Designed, built, tested, and specified to operate under harsh environmental conditions, the F-Series continues the line of sturdy construction and reliable memory systems, for which the HP 1000 product line is known. These tough specifications mean that the F-Series will be able to perform its tasks longer, better, and more reliably than many other small computers.

2111F

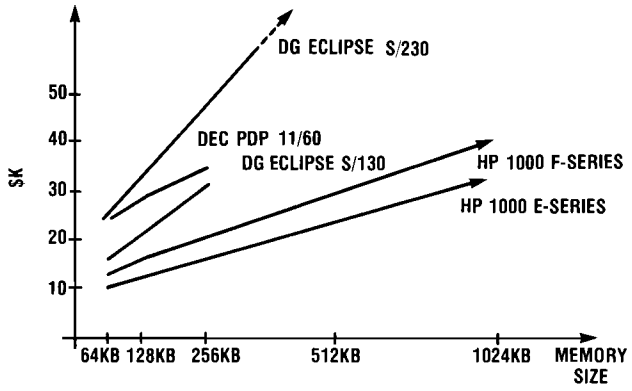
2117F



The Price/Performance Leader!

The HP 1000 F-Series computer brings HP into the high-performance marketplace with a strong edge in price/performance. The F-Series has roughly the computing power of the PDP 11/60 or Eclipse S/230 at less than 2/3 the price. The trigonometric and logarithmic functions of the Scientific Instruction Set are faster than any of the popular minicomputers, including the PDP 11/70, which sells for more than *three times* the F-Series' price. The chart below compares CPU and memory price for the HP 1000 E-Series and F-Series and several other popular minicomputers. Look for more competitive information in future issues of the *CS Newsletter*.

PRICING COMPARISON:
PROCESSOR WITH MEMORY



Announcing High Performance Fault Control Memory

By: Bill Elmore/DSD

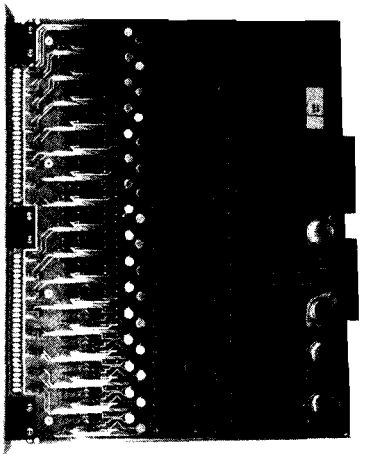
Fault control for high-performance memory is here! It's available on all HP 1000 E-Series and F-Series computers and it offers significant MTBF improvement for those applications requiring fault secure operation.

As you all know, fault control provides error detection and correction of all single-bit memory failures, and detection of all double-bit and most multiple-bit failures. This is accomplished by means of five extra parity bits (called check bits) and the use of a "hamming code" by the memory controller to generate and compare these check bits whenever memory is accessed. When any error is detected, the five check bits "point" to the incorrect bit, which is then complemented to restore the correct value.

High-performance fault control memory has a cycle time of 490 nanoseconds, compared to 700 nanoseconds for standard-performance fault control memory. The most economical way to order high-performance fault control memory is via the 12789A-D memory packages which include memory controller, memory boards, DMS, and check-bit array boards. Memory controller (2102H), and check-bit array boards (12779H and 12780A) are also available as separate products.

New Low Level Analog Input Card and DAC for HP 2240A

By: Peter Palm/DSD



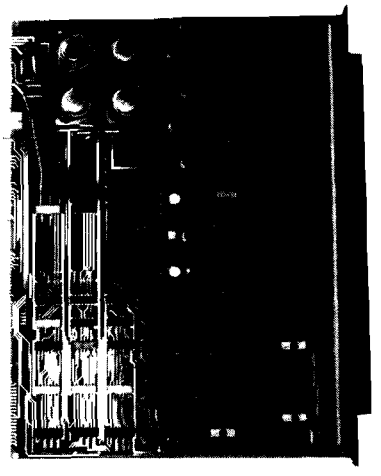
2240A Low Level Card

- Thermocouples and Strain Gauges

Now you can connect thermocouples, strain gauges, and other low level analog inputs to the HP 2240A using the new HP 22915A 16 channel low-level Analog Input Signal Conditioning Card. The HP 22915A has five jumper-selectable ranges (±20 mV, ±50 mV, ±50 mV, ±500 mV, and ±10 Volts) on each of 16 input channels. The 22915A mounts in the 22920A Signal Conditioning Tray.

The amplifier-per-channel approach used allows the 2240A to scan all channels at a 20 KHz rate with full accuracy and 12-bit resolution.

- Current Loop Control



2240A Current DAC Card

In addition to the HP 22915A, the HP 22901B, a 12-bit Digital-to-Analog Converter card with both ±10 Volt and 4 to 20 milliampere current outputs, has been added to the product line. Now you can program voltage with 2.5 millivolts of resolution and control industrial equipment using the ISA standard 4 to 20 milliampere control signals.

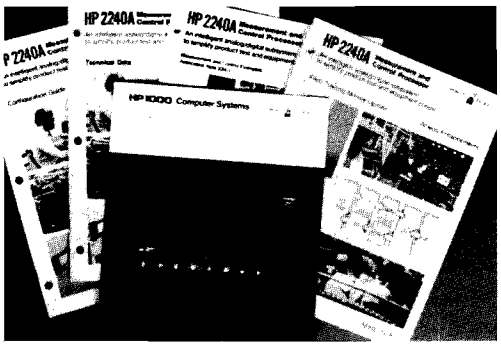
Both the HP 22915A and the HP 22901B are on the June 1, 1978, price list. The HP 22915A is $1250, and the HP 22901B is $1200. Delivery for both cards will be eight weeks ARO.

- New Literature

Five new sales pieces are available to complement the new 2240A cards. Sales literature to support you on 2240A Measurement and Control sales include:

NEW!	Management Brochure	HP 1000 Computer Systems for factory data acquisition and control (4 color)	5953-3002
	Direct Mail Flyer	2240A Measurement and Control Processor (4 color)	5952-8541
NEW!	Data Sheets	2240A Technical Data	5952-8542
NEW!	Application Notes	2240A AN224-1 Measurement and control examples 2240A AN224-2 Signal Conditioning: HP 22914A Breadboard Card	5952-8544 5952-8546
NEW!	Prices	2240A Configuration Guide	5952-8543
NEW!	Field Training Manuals	2240A Field Training Manual 12/77 2240A Enhancements Field Training Manual 4/78	Contact DSD Product Management for your copy

New HP 2240A Sales Tools

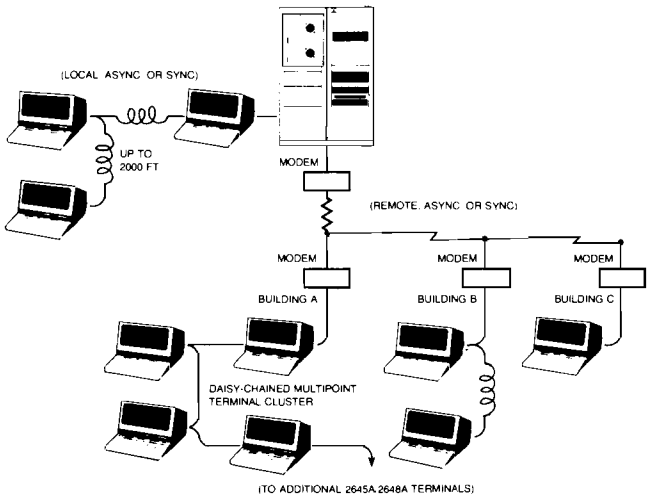


HP 1000 New Multipoint Capability

By: Bill Stevens/DSD

The HP 1000 Multipoint Terminal Subsystem capability introduced to you during the past month provides a new, efficient and high performance interface for 2645A display stations and 2648A Graphics Terminals for program development, program execution and data entry applications. It is a unique competitive advantage!

Multipoint CRT terminals communicate to the HP 1000 through a microprocessor-based interface card that significantly off-loads HP 1000 processors, thereby making them more available for the application execution or program development tasks of HP 1000 terminal users. Multipoint terminal operation offers computer users a number of opportunities for cost savings since communications resources can be shared by a number of terminals as illustrated below.



Shared communications resources include a leased or dial-up telephone line, modems, the hardwired cable interconnecting multipoint terminals, the multipoint interface itself and the input/output slot of the HP 1000 computer.

Multipoint terminal hardware and software operate in HP 1000 M-Series, E-Series and the newly-introduced F-Series processors and systems in conjunction with the new disc-based RTE-IV (Real Time Executive) and the memory-based RTE-M-III operating systems. Program development and program execution is supported on RTE-IV. Application program execution is supported on RTE-M-III based systems. Multipoint 2645A and 2648A terminals operate in block mode, supporting the transfer of as many as 1000 characters at a time at speeds of up to 9600 baud. Nominally, up to 32 terminals can share a single multipoint line and, with appropriately fewer terminals per line, up to 8 multipoint lines can be supported on an HP 1000. The line protocol is 2645A Multipoint BISYNC which is similar to IBM BISYNC.

For general purpose applications each multipoint terminal user can be developing programs or executing different application programs and can obtain RTE system attention. Alternatively, the multipoint terminals on a line can be set up to execute programs within a specific environment created by a user's multipoint master application program. For example, in a data entry/retrieval application, this master program might display a menu of programs from which each terminal user could choose one—perhaps utilizing the 2645A user-definable "soft" keys. Such a user would thereby be insulated from the RTE operating system itself. Multipoint software implements an intelligent terminal servicing algorithm which is transparent to the user or programmer and which assures each terminal user equal access to system resources and prevents monopolization of the line by a single terminal.

A powerful, control-oriented, HP manufactured microprocessor widely used throughout the corporation is utilized on the multipoint interface to manage the 2645A multipoint bisync protocol, the on-board 1024 byte buffer and the hardwired multipoint line or modem control signals. Within the polled and selected terminal environment managed by multipoint software, the microprocessor-based interface converts user reads, writes and control requests into BISYNC's character oriented messages which provides for the transfer of user text blocks to and from specific terminals. The interface card provides for error detection by the powerful CRS-16 cyclic redundancy method and implements error correction by retransmission. The interface also manipulates EIA RS232C/CCITT V.24 control lines. Furthermore, the microprocessor-based interface packs and unpacks characters for high speed, block-mode DMA transfer to and from the HP 1000 processor. In summary, the multipoint interface off-loads the routine communications processing from the HP 1000. This is reflected in the fact that the worst case HP 1000 E-Series processor overhead for up to 32 terminals connected on a single multipoint line and operating under RTE-IV is 10% for asynchronous 9600 baud communication and 6% for synchronous 9600 baud communication.

Clusters of multipoint terminals can be located remote from the HP 1000 and linked via synchronous or asynchronous, half-duplex or full-duplex RS232/CCITT V.24 modems at speeds up to 9600 baud. Within a given cluster, the terminals can be as far as 2000 feet apart and the total length can be as long as 16,000 feet. Therefore, multipoint on the HP 1000 offers the flexibility to locate CRT terminals where the information is needed and generated rather than only at distances on the order of 50 feet from the computer or modem as is prevalent today.

DSD Software Support Ensures Customer Satisfaction

By: Paul McGillicuddy/DSD

DSD's new software support policy is setting high standards for minicomputer vendors. Its features include:

- SIMPLICITY
  The CATEGORIES OF SOFTWARE (Active, Mature, Obsolete) and LEVELS OF SUPPORT [Software Notification Service (SNS), Software Subscription Service (SSS) and Comprehensive Software Support (CSS)] are easy concepts to understand and explain to a customer. The NPT slides make an excellent mid-management customer presentation.

- FLEXIBILITY
  The HP 1000 system customer gets CSS for the first 90 days—ensuring a successful association with HP. The customer can then *tailor* his support services in modules of 6, 9 or 12 months to meet his needs!

- EASE OF PROPOSING/ORDERING
  SSS and CSS product support is merely the product number with the "S" or "T" suffix. the only new product numbers associated with support are 92830A for SNS and 22976B for SE consulting.

- AUTOMATIC
  SNS and SSS services are all handled through the mails on a predictable schedule.

  Updates to your FTM include adding the support prices of RTE III to the table on Page 22. The prices are the same as RTE II.

  The discounted CSS applies to any system under the control of the designated System Manager. These systems may be in the same location or in several locations.

Graphics/1000 Graphics Plotting Software

By: Mike Scott/DSD

GRAPHICS/1000 commences a new family of graphics software for HP 1000 systems and computers. The modularity of this software makes possible the support of a wide variety of HP graphics devices, currently including the 2648A raster-scan Graphics Terminal, the 7245A thermal Plotter/Printer, and the 9872A four-color graphics plotter.

The 92840A Graphics Plotting Software is the first member of the GRAPHICS/1000 family. The 92840A is a plotting-oriented package that offers the software tools required for user-written application programs. This package offers a powerful set of modularly-usable plotting subroutines to the FORTRAN, BASIC, or HP Assembly Language programmer. It can be used in HP 1000 systems and computers operating under memory-based RTE-M or disc-based RTE-IV operating systems.

GRAPHICS/1000 is device independent so that the flexibility and power of the plotting subroutines can be applied to any or all of a variety of graphics devices. Programmer's plotting requests simply identify the graphics output device by its RTE logical unit number and device subroutine identification number.

The range of applications for the GRAPHICS/1000 software is virtually unlimited. GRAPHICS/1000 can be a very useful addition to any HP 1000, whether the application is instrumentation, computation, or operations management. A few example applications for GRAPHICS/1000 are data plotting, computer-aided design, and process control.

The 92840A Graphics Plotting Software is included with the 2648A Graphics Terminal in the high-performance HP 1000 Model 45 System or it can be ordered separately for other HP 1000 systems and computers. When ordered separately, the U.S. list price is $500.

New HP 1000 Computer System Models

By: Mike Scott/DSD

Three new models have been added to the HP 1000 computer systems family. These new systems are designated Models 25, 40, and 45 and are similar to the existing Models 20 and 30 which are aimed at computation, instrumentation, and operations management applications both for OEM system houses and manufacturers with computer application experience.

Model 25 features the F-Series processor, high performance memory and RTE-M operating system for high performance memory-based system applications. Model 40 features the E-series processor and RTE-IV operating system for general purpose disc-based system applications. Model 45 is the top-of-the-line HP 1000 System with the F-Series processor, high performance memory, RTE-IV disc-based operating system, and graphics capability.

HP 1000 computer Models 20, 25, 30, 40, and 45 offer users a range of computing power for small, medium, and large applications. They are designated as a compatible family of systems that can be upgraded as the user applications grow. All HP 1000 computer systems can be programmed in FORTRAN, BASIC, and HP Assembly Language. There is also a wide range of applications software available on HP 1000 systems such as DS/1000 distributed systems, IMAGE/1000 data base management system, GRAPHICS/1000 Graphics Plotting Software, Microprogramming, Multipoint Terminal Interface, and HP-IB.

A summary of all five models in the HP 1000 computer system family is shown below:

	MODEL 20		MODEL 25		MODEL 40		MODEL 45		MODEL 30		
	2174A	2174B	2175A	2175B	2176A	2176B	2177A	2177B	2170A	2171A	2172A
Base System											
Processor	E-Series		F-Series		E-Series		F-Series		E-Series		
Op Systems	RTE M		RTE M		RTE IV		RTE IV		RTE II		
Terminal	2645		2645		2645		2648		2645		
Memory	64Kb		64Kb Hi Perf (350nS)		128Kb Std		128Kb Hi Perf (350nS)		64Kb Std		
System Disc	None		None		7906		7906		7900	7906	7906
Cabinet	Upright	Desk	Upright	Desk	Upright	Desk	Upright	Desk	Upright	Upright	Desk
Base System Price	$22,000	$22,000	$27,500	$27,500	$40,000	$40,000	$46,500	$46,500	$31,500	$36,500	$36,500

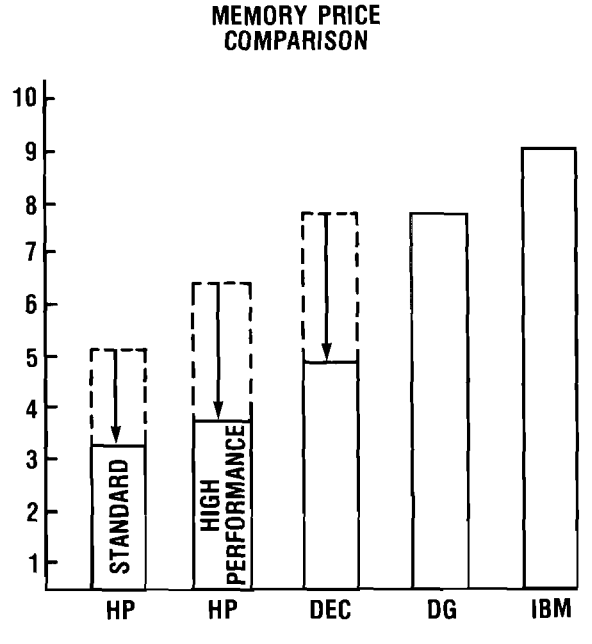
Product News

HP 1000 Memory Prices Slashed 30%

By: Bill Elmore/DSD

It's that time again.

Effective May 1, 1978, the price for HP 1000 computer memory will be reduced 30% for memory packages of 128 Kbytes and larger. The price of the 12747A 128 Kbyte standard performance memory module is now $4000, or only 3.1¢ per byte! Even with DEC's recent memory price cuts, shown in the figure below, HP continues to maintain its leadership position in minicomputer semiconductor memories. Large amounts of memory are now more economical than ever, and with the introduction of the powerful memory management capabilities of the new RTE-IV operating system, large memories are even more usable to your customer.



2313B, 91000A, and 6940B Supported On RTE-IV

By: Peter Palm/DSD

By the time RTE-IV is shipped to customers (after July 1, 1978) the existing RTE drivers for the 2313B (DVR62), 91000A (DVR62) and 6940B (DVA72) will be updated, tested, and available for compatibility with RTE-IV systems. The only limitation will be no support for CLASS I/O calls to the 2313B driver. As far as we can tell no one has used this feature in the past. This also precludes REMOTE I/O EXEC calls to the 2313B under a DS/1000 environment, but you still can (and normally should) use program-to-program, remote file access, and other DS/1000 features with the 2313B on DS/1000 satellites.

NOTE: This new support capability is incorrectly stated in the recent Field Training Manuals for RTE-IV, the 2240, and the HP 1000 Model 40/45 which state that the 6940B and 9611R (2313B and 6940B) will not be supported.

9500 System Obsolescence Notice

By: Dawson Mabey/DSD

As a follow-up to our obsolescence plans for 9500 systems described in the December 1, 1977 issue of the *CS Newsletter*, the following letter has been sent out to all CSG Sales Managers worldwide.

We are already meeting with some customers to try and work out longer term requirements they have for these systems. If you have customers with similar needs, please send their detailed requirements to DSD Sales Development (Attn: *Greg Gillen*) by June 15, 1978.

Customers with new system needs should be directed to the newer HP-ATS Automatic Test Systems.

You can expect to see a similar announcement for the Microwave test systems (8542C/8580C) in the near future. These systems are being replaced by more cost effective solutions from Santa Rosa Division.

HEWLETT hp PACKARD

DATA SYSTEMS • 11000 Wolfe Road, Cupertino, California 95014, Telephone 408/257-7000

To: Dawson Mabey

Date: April 14, 1978

Subject: 9500 Obsolescence

Dear Computer Systems Group Sales Manager:

This letter is intended to further clarify our plans for obsolescence of the HP 9500 Series Automatic Test Systems as described in the December 1, 1977, CSG Newsletter.

The 9500 series systems (9500A/D, 92XX) have been effectively obsolete since the introduction of the HP 9580A system in January, 1977. Since that time, we have continued to accept orders for 9500 systems from certain customers who required follow-on systems and spares in support of their existing programs.

Over the last year, a number of the instruments used in these systems have become obsolete, making it increasingly more difficult to satisfy these on-going requirements for identical systems. With the obsolescence of the HP 2100A/S Computer in April, and with a limited supply set aside for 9500 use, it is most important that our customers understand these systems will continue to be available for a limited period only.

It is our intent to stop accepting orders for 9500 systems and all associated products (9400B and cards, 9401C and cards, 9402A, 9403A, etc.) effective November 1, 1978. HP will, of course, continue to provide replacements parts for the normal five year support period (starting November 1, 1978). At this same time, we also recognize that in certain cases some of our customers will have requirements beyond this date. While we cannot guarantee the availability of systems and spares for a longer period, we would like to discuss each customer's needs in detail and on a "best effort" basis work out individual agreements that are satisfactory to both parties.

As the first step in this effort, we would like you to do the following:

(1) Send the attached letter under your signature to the appropriate customers who have requirements for follow-on 9500 systems.

(2) Discuss with each customer their requirements for both systems and spare instruments and cards.

(3) Send their detailed requirements in writing to DSD (Attention: Greg Gillen) by June 15, 1978.

-continued-

(2)

With visibility into all requirements, we then will meet with each customer and attempt to work out a mutually satisfactory agreement.

While these customers are not particularly happy the 9500 is being obsoleted, they do appreciate advance notice and our desire to work out the best solution to their needs. We appreciate your help.

HEWLETT hp PACKARD

DATA SYSTEMS • 11000 Wolfe Road, Cupertino, California 95014, Telephone 408-257-7000, TWX 910-338-0221

Dear (Customer):

This letter is to advise you of Hewlett-Packard's plans to obsolete the HP 9500 Series Automatic Test System, effective November 1, 1978. Many of the standard instruments used in these systems are becoming obsolete and it has become increasingly difficult to satisfy your requirements for follow-on systems and spares.

You should note that all associated products designed specifically for use in 9500 systems will also be obsoleted on November 1. These products are often used as spare instruments in support of 9500 systems, and include:

HP 9400B Modular Switch (and HP 25000 cards)
HP 9401C Digital Test Unit (and HP 25002A)
HP 9403A Control Panel
HP 9402A Interface Panel

HP will, of course, continue to support these products with replacement parts for at least five years.

While we feel that we must obsolete the 9500 system, we also realize that you may have requirements beyond November 1, 1978, for both systems and spares in support of your on-going programs. We cannot guarantee the general availability of these systems over a longer period, but would like to discuss your specific requirements in hopes of working out a mutually agreeable means of satisfying them.

To this end, please advise (your local HP sales representative) of your specific needs for both complete systems and spares by June 15, 1978. Given this information, we will attempt to jointly work out a plan to satisfy your requirements.

For your new system needs, we encourage you to also consider the recently announced HP-ATS Automatic Test Systems. HP-ATS offers the latest instrumentation and software, and provides greater performance than the HP 9500 Systems at a lower price. We would be happy to provide more information.

We look forward to hearing from you and hope you continue to use Hewlett-Packard products to satisfy your testing requirements.

Sincerely,

12560A Digital Plotter Interface Obsolescence

By: Mike Scott/DSD

The 12560A card interfaces the CalComp Model 565 or 563 Digital Incremental Plotters to HP 1000 computers and systems. Model 563 (30" drum) was obsoleted by CalComp last year and Model 565 (11" drum) is scheduled to be obsoleted in June. The new models are not compatible with the 12560A.

The DSD plan is to remove the 12560A from the Corporate Price List August 1, 1978 and obsolete it following that. The CalComp plotter driver DVR10 and graphics library for the 563/565 CalComp plotter will be removed from the 92062 RTE Drivers Package after the last 12560A has been shipped. Let me know if you see any problem with this plan.

92409A Plotter Software Obsolescence

By: Mike Scott/DSD

The 92409A software supports the 7210A/12935A plotter from San Diego Division. The 7210A/12935A is scheduled for obsolescence at the end of October, 1978. The new, device-independent 92840A Graphics Plotting Software (6/78 CPL) and the four-color, HP-IB 9872A Graphics Plotter is a far superior combination that you can offer to your customers.

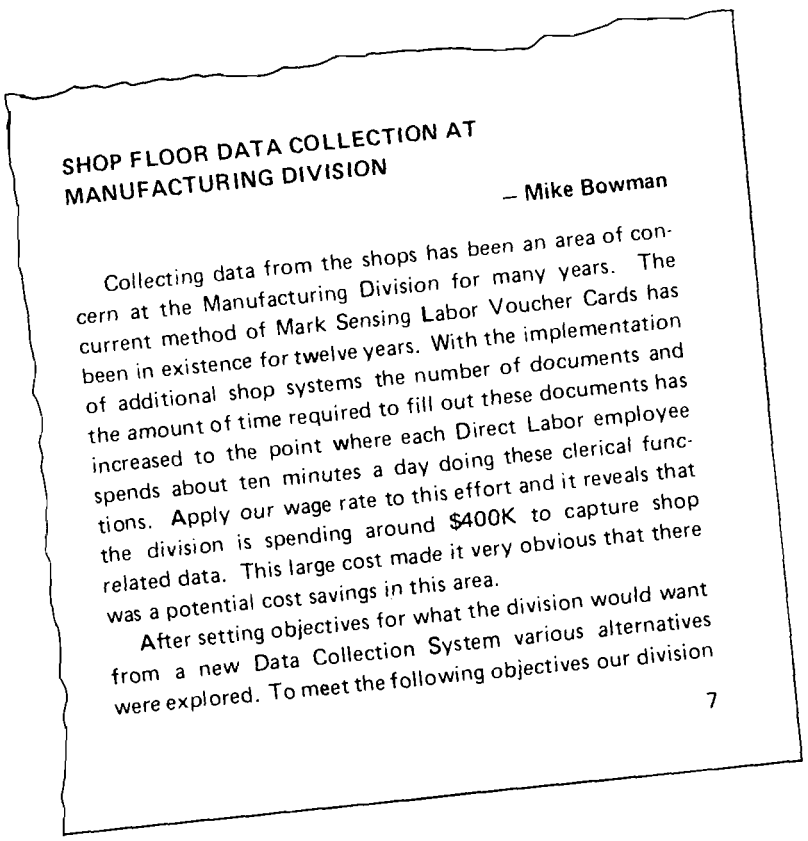
The DSD plan is to remove the 92409A software from the Corporate Price List August 1, 1978 and obsolete it following that. The graphic plotter driver DVR10 for the 7210A/12935A will be removed from the 92062 RTE Drivers Package after the last 92409A has been shipped. Let me know if you see any problem in this plan.

New Applications

Shop Floor Data Collection at Manufacturing Division

By: Mike Bowman/MFG

The following article is reprinted with the permission of the Editor, from the HP *Information Systems Newsletter*, Vol. 11, No. 2, pp. 7-8.



SHOP FLOOR DATA COLLECTION AT MANUFACTURING DIVISION

– Mike Bowman

Collecting data from the shops has been an area of concern at the Manufacturing Division for many years. The current method of Mark Sensing Labor Voucher Cards has been in existence for twelve years. With the implementation of additional shop systems the number of documents and the amount of time required to fill out these documents has increased to the point where each Direct Labor employee spends about ten minutes a day doing these clerical functions. Apply our wage rate to this effort and it reveals that the division is spending around $400K to capture shop related data. This large cost made it very obvious that there was a potential cost savings in this area.

After setting objectives for what the division would want from a new Data Collection System various alternatives were explored. To meet the following objectives our division

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management chose to use HP equipment, which would consist of the yet to be announced HP 3070B Badge/Card Reader/Terminal from Grenoble and HP 1000 computers from Data Systems.

Objectives

- Reduce shop personnel time for clerical functions.
- Must provide more accurate information.
- Require minimum input by shop personnel.
- Must be able to function in shop environment.
- Maximum terminal queue time of 3 minutes with average of 20 seconds.
- Must be daily system.
- New employees should be able to use system the day they start.
- Reduce paper handling and distribution.
- Ability to add new shop floor system with ease.
- Use standard software to minimize programming time.
- Entry time per labor voucher of 15 seconds.
- Backup system for when system is down.
- Must have on-line editing capability.

At the time this decision was made there was no software to drive these terminals. Through collaboration with Data Systems and discussions with Grenoble a software package has been developed by Data Systems and will be announced with the HP 3070B terminals in April. So our objective of not writing our own specific software was met by "DATACAP/1000"

The accompanying flowchart (Figure 3) shows a composit of our long range plans for distributed processing.

The HP 1000 systems will be located in our three manufacturing sites and will provide our interface to the shops. All shop floor data will be transmitted to the on site HP 1000. The HP 1000 systems will communicate to each other via the DS 1000 software.

Initially the HP 1000 in Building 8U will batch all input from these systems and transmit the data at night via RJE to the IBM 370 at Corporate BAEDP. If we go to HP 3000 systems to replace the IBM 370 the HP 1000 systems can communicate to the HP 3000 via another DS 1000 link.

This configuration offers many advantages over present systems of shop data collection and over current FMS plans. A few of the advantages are:

- Minimum input for the shop personnel.
- Custom designed inputs by work station/terminal.
- Data collection off-loaded from main computer.
- Increased response time.
- Editing on-line terminal.
  - 3 HP21MXE CPU's 192K memory
  - 3 HP 7905 Disc Drives
  - 3 HP 2645 Terminals
  - 17 HP 3070B/HP 2075 Terminals

We will be using standard software which will consist of:

- Image 1000
- DATACAP/1000
- DS 1000
- RTE IV

Our development and start-up costs are estimated to be $106K. Total annual operating cost is estimated to be $174K. We believe the operating cost is a very conservative number as we allowed five minutes a day per employee for terminal input but we feel this time could drop to as low as two to three minutes. Apply these costs to our current costs for data collection and you come up with a very healthy 99% internal rate of return.

Our implementation will be in phases:

Phase I
Install terminals in Metal Fab Building as initial test location for labor only.

Phase II
After successful testing, install terminals at remainder of Palo Alto Site (Plastics, Tool Shops).

Phase III
Implement system at the Harbor Site for cables and transformer shops.

Phase IV
Implement system in the Printed Circuits Shop.

Phase V
After implemention of all shops for labor only, then add capability for machine logs, scrap reporting, etc.

Our target date for completion of Phase IV is July 1978 and for implementation of the entire system is September 1978. This is a very ambitious schedule but one we feel can be met due to the standard hardware and software that will be used.

Our Shop management is very excited about the capabilities of the system and cognizant of the problems it will obliterate. Chung Leong, the project leader, has had numerous inquiries from divisions concerning interest in this project. Please contact Chung at building 8U, Palo Alto, extension 588 for more detailed information and project progress.

MANUFACTURING DIVISION – DISTRIBUTED PROCESSING

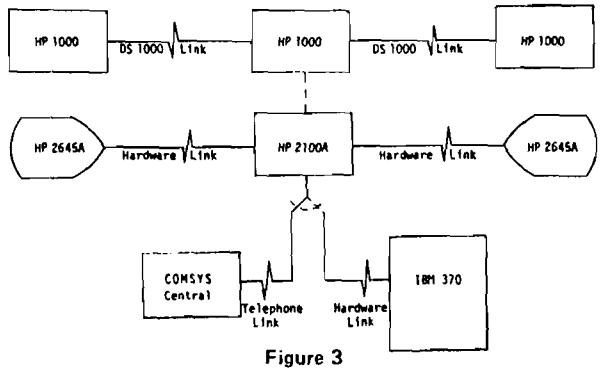

Figure 3

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Sales Aids

2240A Added to Peripheral Products Discount Schedule

By: Peter Palm/DSD

For those customers who buy multiple 2240A's and accessories on a single HP 1000, HP Calculator, or their own HP-IB controller, the 2240A is now available on the new Computer Products Purchase Agreement, Exhibit A-4, *HP Peripheral Products Subject to Discount*. Effective 1 April 1978 your HP 2240A earns one (1) functional unit much like 2631 printers, or 7900 discs. All 2240A plug-in cards and accessories are included in Exhibit A-4. Thus, both your OEM (15%-38%) and End-User (0%-23%) customers can earn better discounts on multiple 2240A orders.

NOTE: The 2240A and accessories did not make the cutoff date to be printed on the Revision R4-78 printed schedule, but they are approved and available. Just type in the 2240 product numbers on the A-4 Exhibit. Any questions, contact *Joe Rodgers*, CSG Cupertino.

New Warranty and Installation Policy for the HP 2240A

By: Peter Palm/DSD

The following table attempts to clarify the new Computer Products Warranty and Installation policy as it applies to the 2240A. The changes result from the new Computer Products Purchase Agreement, effective April 1, 1978. The HP 2240A falls under the category of "HP Accessories, Interfaces, Peripherals, Software, and Terminals".

2240A Warranty & Installation Services

With HP 1000 Ordered?	Installation included	Warranty period	Start of warranty	Service during warranty
With HP 1000 computer system	Yes! NEW!	90 days	Install date	On-site
With a 2240A maintenance contract (computer or calculator)	Yes! NEW!	90 days	Install date	On-site
Stand alone, or with calculator but no maintenance contracts	Yes for $500 extra	30 days NEW!	Ship date	Return to HP (at HP's option we may repair on-site) NEW!

Microprogramming Seminar Package

By: Dennis Haar/DSD

What is a super way of meeting new OEM prospects or finding out what is on the minds of your present OEMs?

Invite them to a technical seminar at the sales office!

OEMs are always anxious to learn about unfamiliar products and gain a better insight into where the industry is heading in the future. These seminars could range from discussing one topic for a few hours to covering several concepts over an entire day. One concept which has been receiving a lot of attention lately in both technical seminars and the various computer journals is user-microprogramming.

OEM Market Development has put together a microprogramming slide kit available to the field for technical seminars. The kit includes 54 color overheads with a full explanation of each slide. The flexibility of the kit makes it perfect for anything from a half-day technical seminar to just a short one hour overview.

The seminar was *not* set up to teach the OEM how to write microcode. That is the purpose of the five day microprogramming customer class. Instead, the seminar concentrates on the capabilities of user-microprogramming and how to use these capabilities. For example, it shows the OEM how to analyze application programs to find what sections of the code should be microcoded for the best results.

The background of the presenter depends on the technical level of the seminar. Generally, anyone familiar with the concepts of user-microprogramming and HP's microprogramming package could present the seminar with the aid of the slide descriptions. If an in-depth technical seminar is desired, it is recommended that the presenter be an SE who has taken the five-day customer training course.

The slides and script can be ordered through the HEART System, attention *Sylvia Cohen,* Building 42U, Data Systems Division. The kit number is BS-13, and the cost will be $105.00.

A demo will also be available for the seminar. It will feature the "Shell Sort" example which we have used here in the factory. The demo requires a 1K WCS card, the WCS driver (DVR36) and a 2645/48 display console. In order to get the demo, send me a blank magnetic tape (at least 200 feet) and I will return it with the demo files.

If you have any questions about the seminar, just send me a TWX or give me a call on extension 3134 at DSD.

Sorry, Wrong Numbers

By: Ted Proske/DSD

Because of a goof in our internal record-keeping, two different pieces of literature have been given the same 5953-literature stock number. These are the envelope for the HP 1000 Direct Mail Flyer and the new HP 1000 Computers Hardware Data book, which replaces the 21MX Computers Hardware Data book. To avoid confusion at the Sales Literature Depot when ordering either item, please have your literature clerk specify 5953-0894Z and HP 1000/EN for the envelope, or 5953-0894 and HP 1000/DB for the HP 1000 Computers Hardware Data book.

We here at Data Systems and the people at the literature depot will appreciate your help in keeping these two items straight and it will also help expedite your requests for them. Thanks for your cooperation.

Check Array Boards Underpriced, Ha! Ha!

By: Ted Proske/DSD

Some funny things happened to the *HP 1000 Computers Selection and Configuration Guide* (5953-0896) on the way to NPT. One of the funny things was the pricing of the 12779A and 12780A Fault Control Check-Bit Array Boards on page 12. The 12779A price, shown as $2,400, is actually $2,750. The 12780A price, shown as $4,000, is actually $4,600. On page 11, "High Performance" slipped into the description for Option 014 for 2109EK and 2109E, which is wrong, since standard performance memory is supplied with those computers. If you see any more "funny things" in this guide, or in any of the literature, please call me or send me a note here at Data Systems, so I can laugh at that one, too.

Order Processing

HP-ATS Quotations — Terms and Conditions

By: Eric Isacson/DSD

As outlined in the Field Training Manual, HP-ATS systems are quoted using the CSG quotation form (No. 9320-3861). However, the Terms and Conditions on that form are not complete for HP-ATS. Therefore, they must be modified by adding a note to the front of the quotation and attaching a sheet with the complete Terms and Conditions.

The Terms and Conditions unique to HP-ATS fall into three categories: First, the charge for change orders is greater than for computers, due to the difficulty of changing configuration of an ATS once it has been started. Second, the warranties for Integration Services, ATS Switches, and the DTU are different than for computer products. They bear characteristics of both the computer product and instrument warranties. Finally, the instruments in an HP-ATS system will normally be quoted on the Computer Systems Group quote form. Therefore, its warranty provisions must be changed to indicate their warranty.

A one-page addendum modifying the Terms and Conditions on the CSG quote form is now being distributed. IT MUST BE ATTACHED TO ALL QUOTATIONS WHICH INCLUDE AN HP-ATS INTEGRATION SERVICE, PRODUCT NOS. 93282A, 93283A, OR 93284A. This addendum should be referenced on the front of the quote by a note such as the following:

"THIS QUOTATION IS SUBJECT TO ADDITIONAL TERMS ON THE ATTACHED SHEET."

ALERT! Specify 2240A-952 to Insure Your Quota/Commission

By: Peter Palm/DSD

The HP 2240A Corporate Price List and HEART system now list sales Force 01 as the "prime" 2240A sales force (shown as 01,02 on the CPL). To insure your proper commission and quota credit, be sure to add 2240A-952 (Sales Force Two special option) to identify Computer Systems Group (SF02) 2240A orders. The "system" (HEART, etc.) defaults to SF01 if 2240A option 952 is not specified.

Easy Ordering for HP 1000 Computer Memory

By: Bill Elmore/DSD

With the introduction of new computer and memory products, we've devised a simpler way of ordering computer memory. Basically, this has been accomplished by offering the base computer with memory packages that can be substituted for the memory already included in the computer.

Except for the 2105A Computer, all HP 1000 computers now come equipped with memory as shown below:

Computer	
2108MK 2109EK	Memory Controller 32 Kbytes standard performance memory
2108M 2109E	Memory Controller 64 Kbytes standard performance memory
2111F	Memory Controller 64 Kbytes high performance memory
2112M 2113E	Memory Controller 128 Kbytes standard performance memory Dynamic Mapping System
2117F	Memory Controller 128 Kbytes high performance memory Dynamic Mapping System

Computer Option 014 will allow you to delete the computer memory system and substitute a different memory size, performance, or fault control. Then, just pick the memory package you desire from the table below.

Packaged Memory Systems for HP 1000 Computers

	M-Series Performance Memory Packages		E-Series Standard Performance Memory Packages		E and F-Series High Performance Memory Packages	
Memory Sizes	**No fault ctrl**	**W/fault ctrl**	**No fault ctrl**	**W/fault ctrl**	**No fault ctrl**	**W/fault ctrl**
128 Kbytes	12784A	12785A	12786A	12787A	12788A	12789A
256 Kbytes	12784B	12785B	12786B	12787B	12788B	12789B
512 Kbytes	12784C	12785C	12786C	12787C	12788C	12789C
1024 Kbytes	12784D	12785D	12786D	12787D	12788D	12789D

To summarize:

1. Pick a computer: M-Series, E-Series, or F-Series.
2. Pick standard or high performance.
3. Pick fault control, or no fault control.
4. Pick a memory size 128 Kbytes to 1 Mbytes.

HP-ATS Orders from Europe

By: Dawson Mabey/DSD

Effective immediately European customers who are ordering HP-ATS systems with 93284A Configuration/System Test Service, may order the HP 1000 portion of their system in the following manner:

1. Order the HP 1000 directly from DSD. In this case the HP 1000 is subject to the 10% Consolidation charge as described in the HP-ATS Configuration Guide. HP 93284A-006 at $5000 is *not* required.
2. Order the HP 1000 from Grenoble in the normal way. The 10% Consolidation charge does *not* apply; however, in this case, HP 93284A-006 is required at $5000.

This reflects a change to those portions of the HP-ATS Configuration Guide and data sheet that refer to European orders.

Note that in most cases item (1) above will be more expensive than item (2). Some customers may still prefer item (1) because the system and the computer will be tested together, and the configured software will include the exact peripheral set rather than a "minimum" set.

We hope these choices will allow you a way to order HP-ATS systems in a manner that best fits your customer's needs. Let us know if you have any questions.

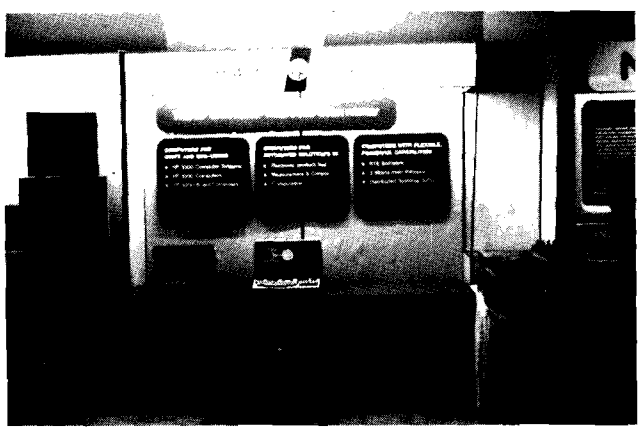
General News

The HP 1000 Computer Family Goes on the Caravan Tour!

By: George Low/DSD

DSD's participation in this year's Computer Caravan shows the breadth of the HP 1000 Real Time Computer Family offering, from total computer systems for the end-users to stand-alone controllers and computer CPU boards for OEMs. The first show on this year's tour kicked off at the Disneyland Hotel in Anaheim, California on March 21-23.

The HP 1000 Model 30 System in the DSD booth has a 2113B Computer with one megabyte main memory. No other competitor at the show can approach us in this regard. What's more, we told amazed customers that with the HP 1000 Model 40 System (upright cabinet) they can have up to two megabytes of main memory!



In this year's Computer Caravan DSD's exhibit features an HP 1000 Model 30 System, a remote HB-IB test setup controlled by a stand-alone HP 1000 (2109B) Computer, and an HP 1000 (2108K) Board Computer. Demos included DS/1000, IMAGE/QUERY, and graphics capabilities.

A separate HP-IB test setup performed a QA evaluation of resistors controlled by a stand-alone RTE-M based 2109B Computer which is booted up from the Model 30 System via the DS/1000 link. Data entry for this test is made on a 3070A Terminal, and test results can be routed back via the DS/1000 link for display on the HP 1000 Model 30 system console. Other demos included in the DSD booth are IMAGE/QUERY database management capabilities and several interactive graphics demos.

Mike Andrews, Fullerton FE, explains the benefits of the HP 1000 Computer Family to interested customers at the DSD booth.

The Computer Caravan will tour nine major cities. GSD, DTD, and Boise Divisions are also participating. By the time you receive this issue of the *CS Newsletter*, the remaining stops will be in Chicago (May 2-4), New York (May 9-11), Detroit (May 23-25) and Boston (May 30-June 1). Watch for your region's show and happy selling!

ATS Training for 2nd Half FY '78

By: Larry Sanford/DSD

HP-ATS and TESTAID III training dates have been established as follows:

Course No.	Title	Location	Dates
92780A	HP-ATS	DSD	May 1-5 Jun 5-9 Jul 10-14 Sep 25-29
92770A	Digital Test Programming	LID	May 1-12 Jun 5-16 Jul 10-21 Aug 7-18 Sep 11-22 Oct 2-13

The above courses require the two week 22965B RTE II/III class or equivalent knowledge and experience as a prequisite. For those customers who require HP-ATS training to be coordinated with TESTAID III training (i.e., Europe), the September courses should be taken in sequence.

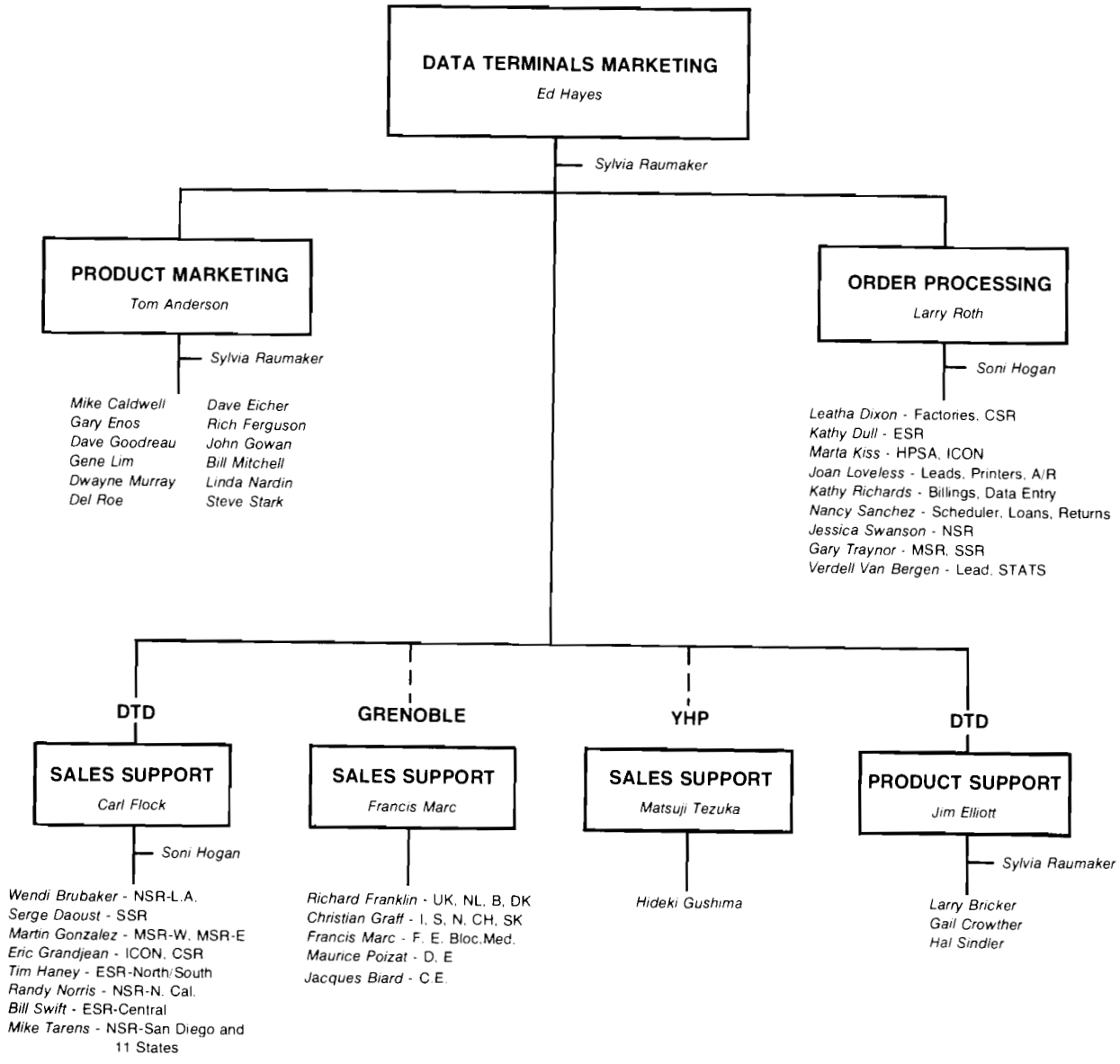
The appropriate training registrars are *Pam Navarro - DSD* and *Linda Shannon - LID*.

DATA TERMINALS NEWS

Division News

DTD Marketing Organization Chart — April 1978

By: Sylvia Raumaker/DTD



Terminal Training Course: June 12, 1978

By: Carl Flock/DTD

Data Terminals will be conducting an in-depth sales/technical training class starting June 12, 1978, for five days in Cupertino.

The class is intended for those FE's and SE's who in one way or another "specialize" in our product lines. It will be of particular benefit to those who are out getting "new business."

The main objective is to provide an in-depth look at our product lines so that the FE or SE can handle the question from a customer, "Will your terminal work on my computer?" Along with this, attention will be given to ways in which the products can be more effectively presented and demonstrated to prospects.

To this end, extensive use of "hands-on" lab sessions will be used along with factory specialists giving lectures and guidance. It will be an intensive period of hard work including nightly homework assignments and quizzes for those in attendance.

If you feel that you or a member of your sales team will benefit by attending, please fill in the coupon below and send it to *Soni Hogan* at DTD for a seat reservation. The class size must be limited to 10, so your prompt response will be greatly appreciated. In addition, preference for seat reservations will be given to those with large terminal quotas.

June 12 Class

NAME: _____
(Print)

OFFICE: _____

TERMINAL QUOTA: _____

DM APPROVAL: _____
(Signature Required)

Sales Aids

Advanced Application Note #6: A Stroll Down Memory Lane, Part 2.

By: Serge Daoust/DSD

The display memory from 52K to 63K is logically divided into fixed-size sixteen (16) bytes blocks of RAM. All display memory from 52K to 63K not currently allocated is kept in a forward-linked list pool of free storage. The storage allocated for a row may be as little as one (1) block or as much as fourteen (14) blocks. Memory currently allocated is linked as follows: Individual rows from a doubly-linked list; i.e., an individual row is linked to the previous row and to the following row. Blocks within a row are linked only in the forward direction. (See Figures 1 and 2a, b, c and d.)

Display memory from 63K to 64K is used as buffer space for the terminal and to store variables used by the firmware of the terminal. This portion of memory is contiguous storage; i.e., it is not a link-list structure.

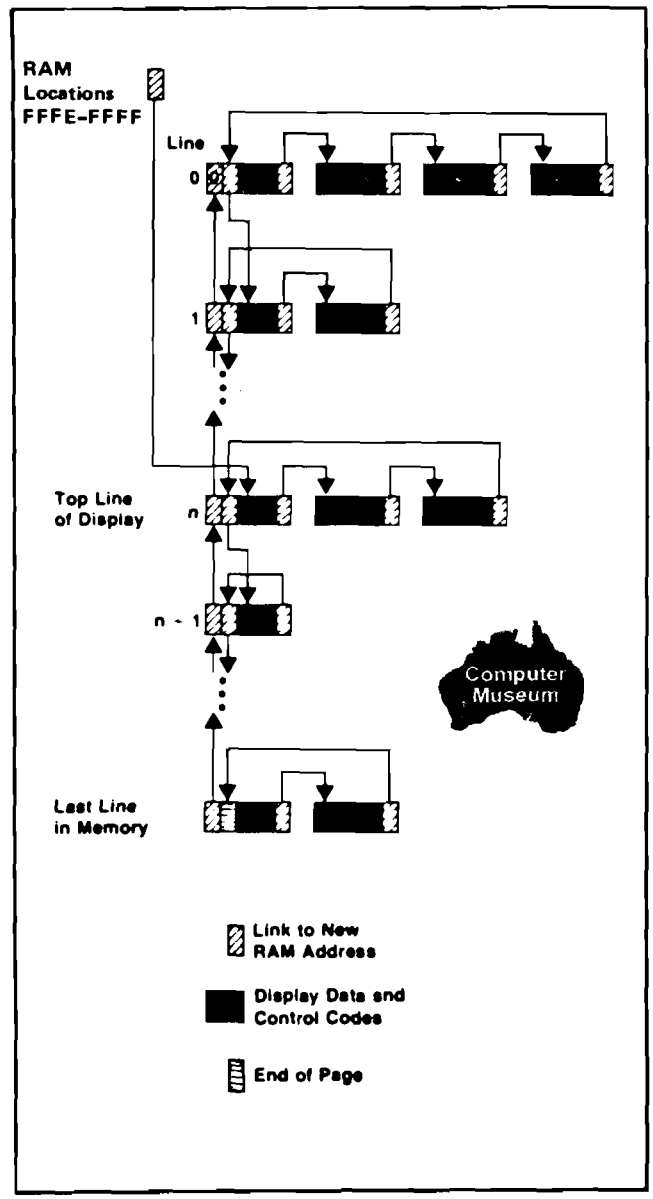


Figure 1

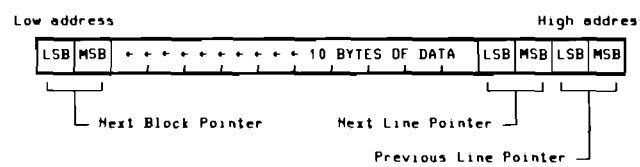


Figure 2a. First Block in a Line

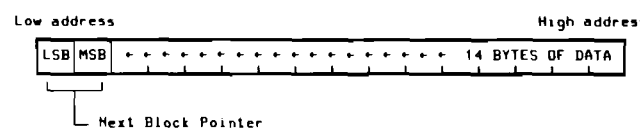


Figure 2b. Middle Blocks in a Line

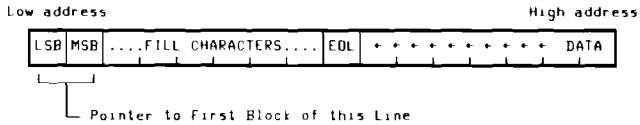


Figure 2c. Last Block in a Line

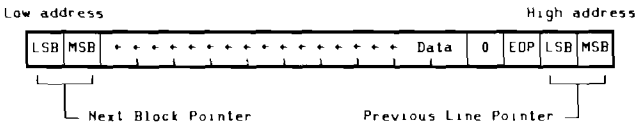


Figure 2d. First Block in Last Line of Display List

FILL CHARACTERS = 303 = C3
8 16

EOL = End-Of-Line = 314 = CC
8 16

EOP = End-Of-Page = 316 = CE
8 16

The list is set up such that the display hardware can start at the first address on the display screen and follow the list to produce an entire screen of information. This address is located in the common variable area of display memory (see the display memory allocation map in the Advanced Application Note #3) starting at hex-location FFFE for two (2) bytes. Hex-location FFFE contains the MSB (most significant byte) of that address and hex-location FFFF contains the LSB (least significant byte) of that address. Display memory is scanned by the display hardware in order of decreasing addresses. This is the reason that the display data is stored in reverse order.

Included as data are the ASCII displayable data characters and display enhancement flags. The displayable data characters are limited to the octal values 0 through 177 (hex values 0 through 7F). This means that the high order bit (bit 7) of a displayable character is always zero (0). Bytes with octal values 200 through 277 (hex values 80 through BF) are interpreted by the display hardware as display enhancement flags. For example, the display hardware will interpret octal value 225 (hex value 95) as the flag to begin a field using the alternate set #1, underline and blinking. (See Figure 3.) Bytes with octal values 300 through 317 (hex values C0 through CF) are interpreted by the display hardware as software display flags. For example, the display hardware will interpret octal value 301 (hex value C1) as the flag to begin an unprotected field. (See Figure 4.) Bytes with octal values 320 through 377 (hex values D0 through FF) are interpreted by the display hardware as the MSB of a block pointer. The byte immediately following an MSB is interpreted as the LSB of the block pointer.

Bit 7 6 5 4 3 2 1 0
1 0 c c e e e e
character set enhancement

Character Set (cc) Codes

00 = ↑) @ = Base set
01 = ↑) A = Alternate set #1
10 = ↑) B = Alternate set #2
11 = ↑) C = Alternate set #3

Enhancement (eeee) Codes

0 - End Enhancement (@)
1 - Blinking (A)
2 - Inverse Video (B)
3 - Blinking, Inverse Video (C)
4 - Underline (D)
5 - Underline, Blinking (E)
6 - Underline, Inverse Video (F)
7 - Underline, Inverse Video, Blinking (G)
8 - Half-Bright (H)
9 - Half-Bright, Blinking (I)
A - Half-Bright, Inverse Video (J)
B - Half-Bright, Inverse Video, Blinking (K)
C - Half-Bright, Underline (L)
D - Half-Bright, Underline, Blinking (M)
E - Half-Bright, Underline, Inverse Video (N)
F - Half-Bright, Underline, Inverse Video, Blinking (O)

Examples:

81 = Base set, blinking
95 = Alternate set #1, underline, blinking
AA = Alternate set #2, half-bright, inverse video
BD = Alternate set #3, half-bright, underline, blinking

Figure 3. Display Enhancement Flags

Bit 7 6 5 4 3 2 1 0
1 1 0 0 s s s s
C_{16} software display code

Software Display (ssss) Codes

0 - End of Unprotected or Transmit Only Field
1 - Begin Unprotected Field
2 - Begin Transmit Only Field
3 - Fill character
4 - Non-displaying Terminator
5 - Alpha Field
6 - Numeric Field
7 - Alphanumeric Field
8 - Soft key attribute field
9 - (not used)
A - (not used)
B - (not used)
C - End of Line
D - (not used)
E - End of Page
F - (not used)

Examples:

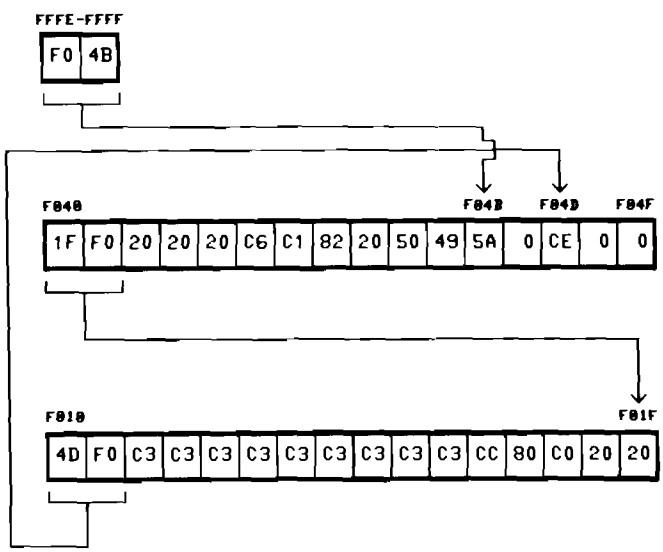
C1 = Begin unprotected field
C3 = Fill character
CC = End of line

Figure 4. Software Display Flags

Suppose you wish to define a form consisting of one protected and one unprotected field such as: ZIP [redacted] with the following criteria:

1. The form starts in column 0 of line 0.
2. The length of the unprotected field is 5 bytes.
3. There is one blank between ZIP and the beginning of the unprotected field.
4. The unprotected field is a numeric only inverse video field.
5. There are no characters following the end of the unprotected field.

Remember that hex memory locations FFFE and FFFF contain the address of the first data character on the display screen. The display memory organization of the above form follows. (Note that all the following codes are in hexadecimal.)



where: CE is the hex code for the End-Of-Page flag
5A is the hex code for the letter Z
49 is the hex code for the letter I
50 is the hex code for the letter P
20 is the hex code for the space character
82 is the hex code for the inverse video flag
C1 is the hex code for the begin unprotected field flag
C6 is the hex code for the numeric only field flag
C0 is the hex code for the end unprotected field flag
80 is the hex code for the end enhancement flag
CC is the hex code for the End-Of-Line flag
C3 is the hex code for fill characters

The Case Of . . . 1 Null = THE or not? And — 56 Nulls = No Nulls!

By: Mike Tarens/DTD

How many of you terminal specialists have connected a 2645A or 2648A to a serial printer? If you have, you know that the 13250B (02640-60089 or 02648-60143) data communications card is required. When strapped with an octal address 12 the datacomm card becomes a Serial Printer Interface card which allows us to connect to many types of serial printers. When referencing the Operating Manual for the HP 13250A/B (13250-90004), there are various strapping options presented to allow us proper interface capabilities. There are two types of serial printer interfacing; *transmit handshake enabled* and *no transmit handshaking*.

When transmit handshake is enabled (as in the Versatec 1200) the THE strap on the 13250B card is *closed*. This enables an external device to signal a "busy" condition. The result is that data transmission stops until the appropriate "ready" condition is received at which time data transmission resumes. Conversely, when the THE strap is opened, the transmit handshake is disabled — or is this actually the case?

As it turns out, when the THE strap is open, one *logically* assumes that there is no transmit handshaking. In this case, the 13250B Operating Manual calls for a number of nulls to be sent to the printer. These nulls allow the printer to get ready for subsequent data and thus eliminate and overrun problems that may occur with slower printers which would cause loss of some characters. Table 3 on page 9 of the manual indicates how to strap the 13250B for the correct number of null characters. (The data sheets on the various serial printers specify how many nulls should be sent.)

Table 3. Null Character Selection.

No. Nulls	FC7	FC6	FC5
1	Closed	Closed	Closed
8	Closed	Closed	Open
16	Closed	Open	Closed
24	Closed	Open	Open
32	Open	Closed	Closed
40	Open	Closed	Open
48	Open	Open	Closed
56	Open	Open	Open

As it turns out, Table 3 is simultaneously correct, incorrect and misleading. There are three different conditions that alter how this table should be used:

When configuring a 264X terminal to a serial printer *without* transmit handshake, the table is correct with the exception of transmitting *one* null. As it turns out, one null indicates to the datacomm firmware that transmit handshake is *enabled*,

regardless of the setting of THE. Therefore, what happens when THE is disabled and one null is required by a serial printer? You've got it — the terminal hangs up with a "PRINT FAIL" error message because it expects a "READY" signal which it never receives. The solution in this situation is to transmit more than one null (in this case 8 nulls.) The terminal and serial printer will work conjugally and the speed impairment of transmitting 8 nulls with each line of data should be transparent to the user. (Another solution would be to physically ground pin N (SB line) on the hood connector which will allow one null to be used.)

(One note is that THE *enabled* will require transmit handshaking, regardless of the strapping of FC7, FC6, FC5 for null characters.)

The next question to be addressed is: Can I transmit *zero* nulls with THE disabled? The answer, of course, is *YES* and *NO*!

Table 3 is current for the 2645A. Zero nulls is not an option; thus, the minimum nulls allowable is 8. (Remember what one null does!) Subsequent to the publication of the 13250A/B Operating Manual, the 2648A was introduced by DTD. Because of popular demand from the field, the firmware was modified to allow for *zero* nulls as an option. How do you configure the 13250A/B board to transmit *zero* nulls? Easy — you select 56 nulls which to the 2648A firmware means zero nulls. (Have you got all this?)

The following table will summarize the narrative description. If you have any questions, please TWX or call me at DTD on X2130.

Many thanks to *John Moyer, Chuck Rulofson* and *Steve Berman*, without whose efforts and eventual joint agreement this article would not have been possible, and to *George Workman* at Neely Santa Clara, as he is the one who instigated this research effort.

Table 3. (Corrected) Null Character Selection.

No. Nulls	FC7	FC6	FC5	2645A	2648A	Comments
1	Closed	Closed	Closed	Do not use	Do not use	Use THE to enable/ disable
8	Closed	Closed	Open	OK	OK	transmit handshake
16	Closed	Open	Closed	OK	OK	
24	Closed	Open	Open	OK	OK	
32	Open	Closed	Closed	OK	OK	
40	Open	Closed	Opened	OK	OK	
48	Open	Open	Closed	OK	OK	
56	Open	Open	Open	OK	Transmits 0 nulls	Note difference between 2645A and 2648A

GENERAL SYSTEMS NEWS

Sales Aids

GSD and HP 3000 Sales Force Launches Campaign to Attract Software Suppliers

By: Gary Gubitz/GSD

In an effort to acquire additional application software for the HP 3000, GSD is sponsoring a half-hour seminar at *Computer Caravan EXPO '78*. Conducted by the local sales force, the seminar will be held each Wednesday afternoon at 1:30 p.m. in the nine Caravan cities and will focus on how Software Suppliers can benefit from a third-party relationship with HP.

Briefly, the seminar highlights:

1. The Hewlett-Packard Company: Provides Software Suppliers with a broad understanding of HP's Products, and illustrates our profitability, reputation and long-term stability in the Computer business.

2. The Increasing Demand for Software Supplier Services: Discusses the growing opportunities for Software Suppliers with the HP 3000 Business System.

3. What HP offers Software Suppliers:
   - State-of-the-Art Products

     The HP 3000 is a powerful, reliable, general purpose business system that Software Suppliers can build solutions on with confidence.
   - A Large Market Opportunity

     With a large and rapidly growing installed base, and the general purpose business nature of the HP 3000, HP affords Software Suppliers a large business opportunity in a wide variety of areas for their applications expertise.
   - A Flexible Business Relationship

     Either as OEMs or Software Houses, Software Suppliers benefit from a business relationship with HP that highlights:

     Sales assistance through cooperative sales calls and a formal referral program and

     Start-up assistance with an extremely attractive development system discount

   - Full Commerical Support

     By providing complete on-going HP hardware and HP software support to the Software Supplier *or* its end customer, Hewlett-Packard helps ensure customer satisfaction. The Software Supplier can focus all its resources on doing what it does best; applying applications software expertise to provide sucessful computer solutions.

Several sales regions have been using the slides from the *Caravan* presentation to hold local Software Supplier seminars. We at GSD have been supplementing this effort by supplying a seminar kit. It is available to you by submitting an IOS-coded HEART Order for part #30000-90133 to GSD Marketing Communications, Attention: *Bob Hall*, and it contains:

- 24 color overhead transparencies
- Transcript describing key points for each slide
- Sample invitation letter, reply card, and registration/evaluation form
- A copy of "A Guide to a Successful Relationship" brochure #5953-3000
- A Software Supplier Agreement form
- A copy of the policies of the Software Supplier program (*Doug Chance's* memo)

If you have any questions regarding this seminar or the Software Supplier program in general, do not hesitate to contact me at GSD (X3150).

With a continually growing demand for third party software services, the time is ripe to launch your own campaign!

GOOD SELLING!!!!

Original Project Prelude Brochures Available

By: Larry Hartge/GSD

This brochure was used at the actual Prelude demonstration and is now available in bulk! If you are planning seminars, in conjuction with the out-of-this-world CARE package discussed in the April 1 issue of the *CS Newsletter*, you may want to order these in quantity at a price of $.75 each.

The content of this brochure is oriented toward business communications of the 80's and was written by SBS. The January issue of *Computer Advances* describes Project Prelude from HP's computer system viewpoint in a general way and the March *HP Journal* describes Prelude in a technical manner.

Before ordering this brochure review it in relation to the others — all of which are included in the CARE package. Then send your IOS or HEART order for Part Number 30000-90134 Project Prelude Brochure to *Bea Cornejo* in GSD Sales Development.

Plan ahead — the delivery of these brochures will most likely be four weeks after receipt of order.

Promote Our Computers, Your Customers And Your Sales

By: Rudann Ramsey/GSD

Those of us in Marketing Communications at GSD are making a concerted effort to generate more and better PR for the HP 3000. We would like to see our computers represented in application stories in every issue of *Computerworld, Datamation, Minicomputer News*, etc. In order to accomplish this objective, we need your help.

Your intimate knowledge of the installations and applications in your area could be a tremendous help to us in generating the leads we need. If you know of an interesting, successful application which has been up and running for six months or more, consider whether your customer would be willing to let us tell the world about it. If the installation seems to fit these qualifications, give us a call. You can contact *Jerry Epps* at (408) 249-7020 ext. 2771, or *Rudann Ramsey* at ext. 2770. In the meantime, we may be calling you to further qualify PR leads which we receive from other sources, such as Sales Development.

Remember, many (if not most) customers are anxious to talk about their successes and thus create their own positive publicity. This publicity, in turn, can stimulate interest in the HP 3000 and result in new sales leads for you.

Thanks for your help!

How Are HP 3000 Software Bug Reports Processed?

By: Dan Jorgenson/GSD

To help you understand the way we process bugs, we've documented the procedures for processing the HP 3000 Software Maintenance request (popularly known as an SMR or "bug" report) in a General Systems Division *Systems Engineering Note*, Number 5. This note has been distributed to all 3000 System Engineers, Operating Systems Specialists, SE Managers and Supervisors, CE Managers and and District Managers.

This note details what an SMR is, and the responsibilities of the customer, field support organization and the factory for submitting, responding to and resolving an SMR. Additionally, it describes how to fill out an SMR form, what additional documentation to supply, and how to use the software tools that provide the necessary information to investigate the SMR.

Salient points brought out in this note are:

1. The customer's System Manager is responsible for identifying and isolating the problem and reporting it on an SMR form. This form can also be used for enhancement requests.
2. The customer must forward the SMR to the Phone-In-Consulting-Service (PICS) Center at the local HP Sales Office where the problem must be verified by a local System Engineer or operating system specialist.
3. If the problem cannot be solved at the field office, the SMR should be submitted to General Systems Division in care of "SMR Monitor".
4. Each SMR is assigned a unique number and acknowledged by letter.
5. If the SMR represents a real software bug that has not been previously reported, it will be listed in the *Software Status Bulletin* (SSB) which is distributed to customers and SE's twice monthly.

You may obtain your copy of SE Note #5, if you have not already received one, by sending a Comgram, or calling *Carol Ramsey* (extension 2908) at General Systems Division.

Competition

Performance Update—HP 3000 Series II Outruns the DEC 2020

By: Fred Gibbons & Gwen Miller/GSD

We have recently received some preliminary benchmark information comparing the HP 3000 Series II and DEC's new 2020 system. Using measurement scripts patterned after the large EDP mix described in our *Technical Summary* Brochure, the HP 3000 significantly outperformed the 2020 in both batch throughput *and particularly* terminal response time for equal memory sizes.

What this tells us is that we can sell confidently against the 2020 and that whenever we run up against the 2020 we should suggest benchmarking. In particular, the HP 3000 is especially strong in benchmarks which are written in COBOL and use packed decimal (comp-3) calculations extensively. This is because the 2020 lacks the HP 3000's firmware implementation of packed decimal arithmetic. Once again the HP 3000 continues to look strong against the latest product offerings of our competitors.

GOOD SELLING

New DECNET Fixes or "Phase II"

By: Richard Scott/GSD

DEC has announced "a new phase" of DECNET software. This "Phase II" stage includes new products and increased capability for the earlier offerings. Now under all implementations of DECNET, there exists program-to-program communication and remote file transfer (not the same as remote file access) using 8-bit ASCII data only. There is no indication that binary or EBCDIC files can be transferred as with DS/3000. Also included is "remote resource access" which permits programs or users at one node to utilize mass storage peripherals and input/output devices at another node. Remote resource access also allows a program to open files at a remote node and to perform sequential input or output of ASCII data in that file.

DECNET capability in one form or another has been extended beyond that existing for the real-time RSX-11 system and the IAS multi-function system to include the commercially oriented RSTS/E system and the new VAX 11/780 system. Until recently, the primary DEC competitor to the HP 3000 was an 11/70 equipped with RSTS/E (Resource Sharing-Timesharing System/Extended). Lately, however, DEC has been quoting some RSX-11M systems with the 11/70 processor.

By omission DEC's press announcement of February 22 indicated that the DECNET/E capability for RSTS/E does not support the remote resource access feature. Therefore, a user or program resident on an RSTS/E system cannot utilize mass storage or input/output devices at another node nor can it open or transfer files at that node.

HP DSN vs. DECNET

Nothing in DEC's announcement seems to change its competitive position.

How does "Phase II" of DECNET compare with DC/3000? We believe DEC still lacks a transparent (virtual) terminal capability between systems. Its version of our remote file access capability is limited to transfer from sequential ASCII files. RSTS/E systems lack even this capability and can only transfer *complete* ASCII sequential files or use program-to-program communication.

Remember to demonstrate DS/3000 wherever possible. Hopefully, the customer will then specifically request a DECNET demonstration. That's the way to turn those DECNET prospects into multiple HP 3000 orders!!

General News

European HP 3000 Users' Meeting Scheduled

By: Ralph Manies/GSD

European users of the HP 3000 will meet in London June 28th through June 30th. The meeting will be held at the *London Graduate School of Business Studies*, and will be hosted by *John Eaton*, Director of Computing Services for the School. Invitations will be mailed shortly to the *Communicator* mail list for Europe, International Users' Group members in Europe, and Regional Users' Groups representatives in Europe.

We expect more than 100 people to attend: in addition, HP will have ample representation. We will keep you posted via the *CS Newsletter* on additional details as soon as the arrangements are finalized.

Prospective speakers and other interested users are asked to contact *John Eaton* at:

London Graduate School of Business Studies,
Sussex Place, Regents Park,
London, NW1 4SA
England.

Der eine Computer für

Das müssen Sie wissen. Ein System nur für Stapelverarbeitung ist nur ein halbes System. Erfolgreiche Unternehmen brauchen heute einen Computer, der neben den notwendigen buchhalterischen Daten auch gleichzeitig zuverlässige Management-Informationen liefern kann. Die HP 3000 von Hewlett-Packard kann das.

Die HP 3000 erledigt die Lohnabrechnung, erstellt Rechnungen, druckt Außenstände aus und führt das Hauptbuch. Gleichzeitig erhalten Sie über Bildschirmterminal oder Drucker die letzten Verkaufszahlen, Lagerlisten, Kostenaufstellungen,

Die DM 173.000,--Lösung

Preis für das abgebildete Basissystem HP 3000/Serie I, einschließlich Betriebssoftware, jedoch ohne den zusätzlichen Drucker.

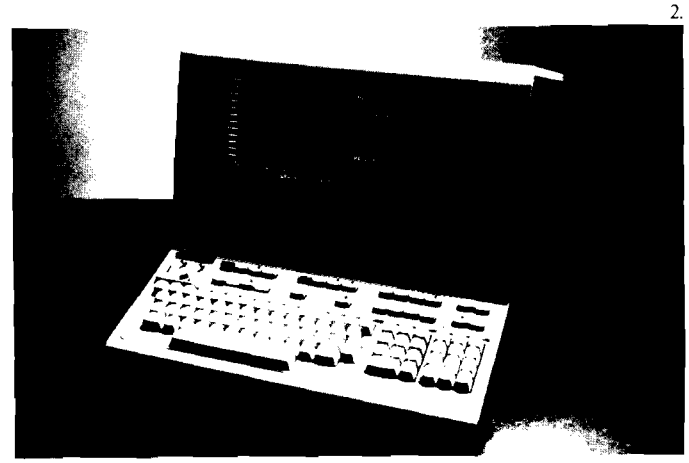
die Ein-Computer-Firma.

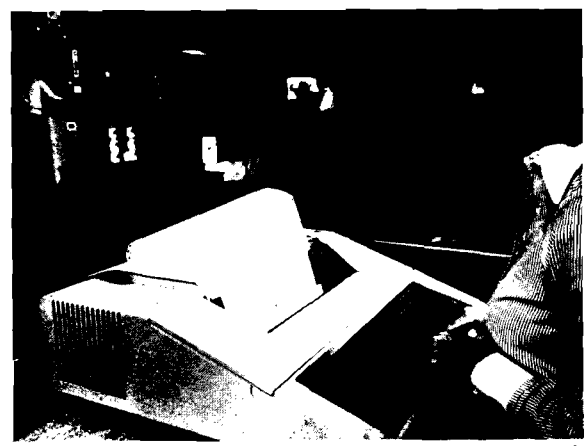
Planzahlen und Veränderungen von Außenständen und Verbindlichkeiten nach dem letzten Stand.

Viele Unternehmen, von Herstellern und Großhändlern bis zu Einzelhändlern und Verlagen haben das richtig erkannt. Sie sind bereits von Stapelverarbeitungssystemen auf die HP 3000 umgestiegen.

Wenden Sie sich bitte an unser nächstes Büro – wir zeigen Ihnen warum.

1.


2.


3.

Zu Ihrer Information: Die weitverbreitete Ansicht, daß nur Großcomputer die aktuellen Daten liefern können, die Sie für sofortige Entscheidungen brauchen, stimmt nicht mehr.

Die HP 3000 mit ihren umfassenden Datenbankmöglichkeiten liefert Ihnen alle speziellen Informationen, die Sie benötigen. Sie erhalten sofort Auskunft über ein Bildschirmterminal (1), ohne auf unhandliche Ausdrucke warten zu müssen. Unser neues Grafikterminal (2), setzt die Daten sogar in grafische Darstellungen um. Und während Sie mit dem Computer interaktiv arbeiten, kann er gleichzeitig lange Listen über den Schnelldrucker erstellen.

Da nahezu alle Geräte unserer Systeme HP 3000 in eigenen Werken produziert werden, ist es leicht, ein System genau Ihren speziellen Erfordernissen anzupassen, z. B. zusätzliche Druckterminals (3) für die Lagerverwaltung anzuschließen.

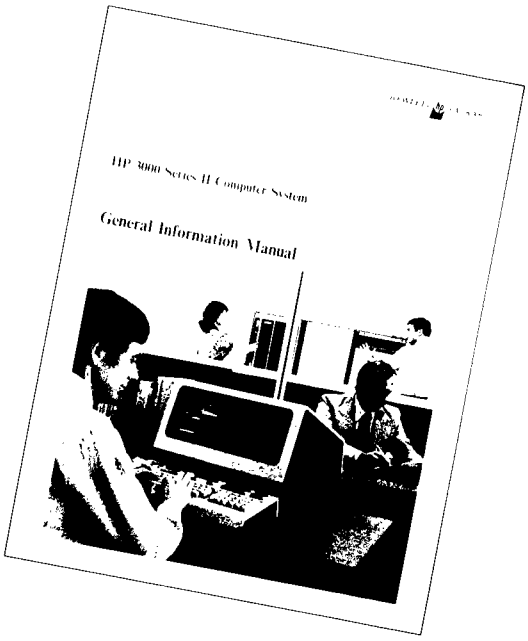
Für weitere Informationen schreiben Sie uns oder rufen Sie uns einfach an. Denn warum sollten Sie sich mit einem Computer zufriedengeben, der Ihre Arbeit nur halb erledigt, wenn Sie einen haben können, der alles macht.

HEWLETT hp PACKARD

Hewlett-Packard GmbH/Vertrieb, Berner Straße 117, 6000 Frankfurt/M. 56, Telefon: (0611) 50041

Error in the General Information Manual

By: Brian Fischer/GSD



Several times in the last few months I have received questions regarding the 2780/3780 Emulator line speed.

As outlined in the *G.I.M.* (issued 6/77, p. 77), RJE is limited to 4800 baud. However, according to the Price/Configuration Guide, RJE can go to 9600 baud (modem and line-dependent, of course!).

The *G.I.M.* is wrong; RJE *can* go to 9600 baud. This point should be brought out if you are giving a potential RJE prospect the *G.I.M.*

Additionally, there is one other point that might escape the reader's attention on the first pass: Under the sections titled "IBM 2780 Data Transmission Terminal" and "IBM 3780 Data Transmission Terminal", there is a description of IBM's respective configurations. Some readers might mistake the 3780/2780 limitations (i.e. 300 lpm line printer on the 2780; 425 lpm line printer on the 3780) for HP 3000 limitations.

This is not the case; in most cases the output from a Remote Job will be SPOOL'd, which makes lpm and line speed limitations meaningless.

P.S. Did you know that SPOOL is an acronym for *S*imultaneous *P*eripheral *O*perations *O*n-*L*ine? Don't let your customer NEEDLE you on this point!

RES (Job Entry Station)

By: Richard Scott/GSD

If you have found yourself in sales situations where RES (job entry station) capability was a crucial factor, we would like to know about it in order to plan enhancements to MRJE/3000. At present, MRJE/3000 works with standard HASPII (versions 3.1 and 4.0) and JES2 host capabilities. RES is generally encountered at smaller IBM 370/145 to 370/158 installations equipped with OS/VS1. If the above applies to your potential customer, please contact your factory sales development engineer with the details of your potential customer's installation. Specifically, we need to know the particular host system involved (IBM 370/145, etc); whether or not the customer plans to upgrade its host system to another operating system in the future, (and if so when); the customer's name; and how many HP 3000 Series II sales are at stake.

HP GRENOBLE NEWS

Division News

HP 3070B Gets Top Management Attention

By: Peter Stuart/HPG

We recently had the pleasure of receiving a visit by senior management of the Company. During the limited time they were with us, they nevertheless took the time to review the first three 3070B's to come off the production line.

Seen here in the photo, from left to right are: *John A. Young* - President and Chief Operating Officer, *Cyril Yansouni* - General Manager (HP Grenoble), *Paul C. Ely* - Vice President - Computer Systems Group, *Jean Melot* - Manufacturing Manager (HP Grenoble).

Also present during the visit were: *Doug Chance* - Computer Systems Group Marketing Manager and *John Russell* - Group Finance Manager.

Reactions from the visit? SUPER POSITIVE!

Now, it is just up to us to get our new products out of the door.

Product News

The Terminals Specialist's Kit

By: Maurice Poizat/HPG

Which helpful equipment do you need? Which sales aids and documentation should you have to sell terminals efficiently and to answer the diverse questions of your exacting customers?

Here is the demo equipment you need:

- **2645A:** You should have at least two of them with the following options: 001-007-013-015-030;
- **2648A:** Again, two of them is a minimum. Options: 001-007-013-015-030 are the required basic options;
- **264X Accessories:** They will allow you to change the configuration of your 2645 or 2648 terminals, according to what you want to show or demonstrate to your customers. Options: 13231A -201-202-203 (x 2), 13234A (x 4), 13238A (x 2), 13254A (x 2), 13260A (x 2), 13260B (x 2), 13260C (x 3), 13260D (x 2), 13297A (x 4), or 93982A (x 4); The last item will be very useful to configure one of your terminals into a 13290B development terminal;
- **2631A:** One unit is a minimum. Order it with options 015 - 210;
- **2635A:** One unit is also a minimum. Order it with options 015 - 041;
- **236X Accessories:** You should have the following interfaces to be able to connect the terminals or printers in different environments: 2609A -040, 26095A -042, 26095A -044, 26095A -046 and: 0950-1576 (x 2), 02631-60060 (x 5) as spare parts (heads and ribbons);
- **3070B:** Two units are recommended. Order demo kit 40200A-G89 from Grenoble for really impressive demos.
- **Cables:** Do not forget the cables you may need! Order them according to which equipment you have or you will have. See data sheet of every product to get the part number of the appropriate cable. By the way,

something difficult to find in the literature is the part numbers of the RS-232C extended cables:

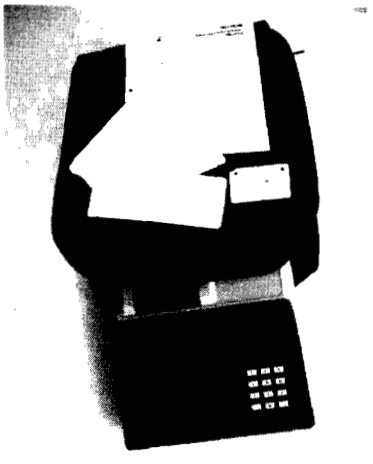
30062-60006 (25 ft.)
30062-60009 (50 ft.)
30062-60012 (100 ft.)

A list of the literature and sales aids available for these products will appear in one of the next issues of the *CS Newsletter*.

SELL 264X, 263X and 307X!

3070B Demo Kit

By: John Willett/HPG



We now have a demo kit available to make the 3070B even easier to carry around and demonstrate. The kit (P/N 40200A-G89, price: $30) consists of a padded 3070B carrying case, a demo guide, and a selection of punched/marked cards and badges.

Just start those orders rolling!

Order Processing

Order Processing

By: Kathy Romani/HPG

As you can see, HPG has 2640's and 2645's rolling at a rapid pace. Due to the new factory lay-out and production organization, we have brought down our delivery time considerably.

Actual availability:

- 2640B, N, S : 4 weeks
- 2645A, S. : 6 weeks

For special delivery problems, contact your OP Coordinator in Grenoble.

Paul Ely visiting Terminal Production Line with *Jean Melot,* (left), Manufacturing Manager - March 1978.

CS GROUP NEWS

CSG News

Use of Hewlett-Packard's Computational Products Brochure

By: Russ Berg/Corp.

By now many of you will have received your own copy of a new Computational Products brochure.

1. It is a new and different kind of sales brochure:
   - It spells out HP's unique selling proposition.
   - It contains selected resource information normally found in our annual report.
   - It covers a range of HP's computational products in nontechnical language.
   - It contains customer results stories and references.
   - It is designed to be used in a personal way by HP sales people (an HP individual's card is to be permanently attached). As a consequence it could not be effectively employed as a mass mailer.
   - The pocket in the back cover enables HP sales people to put any related offerings (product or otherwise) into our overall business context—even a product announced after the printing of the brochure.
2. It is sales situationally adaptable:
   - It can be used as an introduction to prospects: Management and professional staff.
   - It can be used as an information piece for buying influences—not normally seen—within either customer organizations or organizations where a proposal is being made.
   - It can be used as a backgrounder for systems and software OEM's.
3. It should always be sent with a covering note appended to the brochure. This note should clarify the purpose for which the brochure is being sent. The note should not repeat any of the content of the brochure—only position the brochure in the recipient's mind.
4. A typical covering note to corporate officers in a prospect organization might read:

"Dear Mr. Jones:

As you may know, we are making a proposal to Jim Smith of your company for a distributed computer network. I thought the attached booklet would be of interest to you to the extent that you may become involved in vendor review and selection.

Yours sincerely,

HP Sales Representative

P.S. At the back of the booklet is a piece that describes our approach to distributed computer networking."

NEW VIDEOTAPE INFORMATION

New Videotapes from Corporate Training

By: Chuck Ernst/Corp.

Title:	COLLEGE INFORMATION SYSTEM (COLOR)
Audience:	College administrators, counselors and teachers. HP sales engineers (02).
Purpose:	To demonstrate the C.I.S. software product.
Content:	This new software product for the HP 3000 is called the "College Information System" (C.I.S.). It is a student record-keeping system that compiles and maintains a complete academic history for every student who goes through a college, beginning when the student makes application and continuing until the student is graduated, transfers, or terminates. C.I.S. develops class schedules and rosters; records grades and computes grade point averages; keeps track of scholarships and the other financial aid each student receives; provides on-line access to biographical, financial, and other data for teachers, counselors and administrators; and collects data for transcripts.
Time:	11 minutes.
Part Number:	90768Z
Date Released:	April 1978
How To Order:	Transmit a HEART (COCHISE) I2 order to Video Products, Product Line 95, Division 0700, Palo Alto. Order 90768Z for a videocassette.

COMPUTER SYSTEMS NEWSLETTER

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