

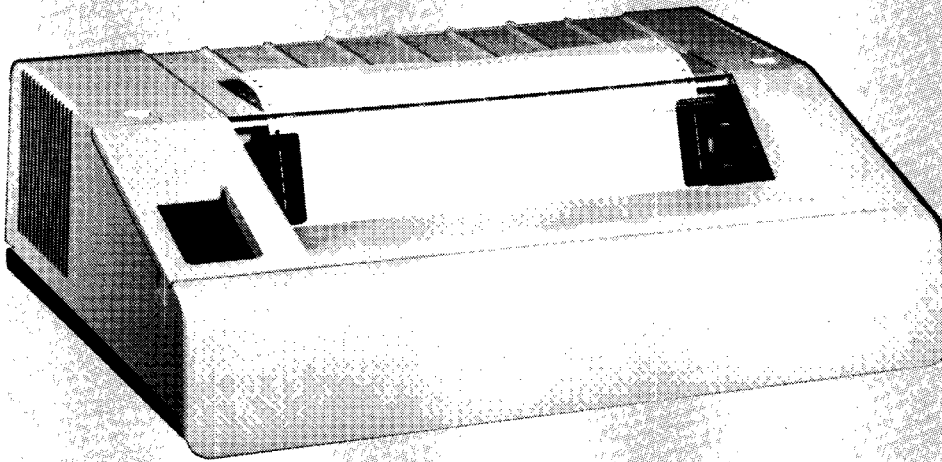
COMPUTER SYSTEMS NEWSLETTER

For HP Field Sales Personnel

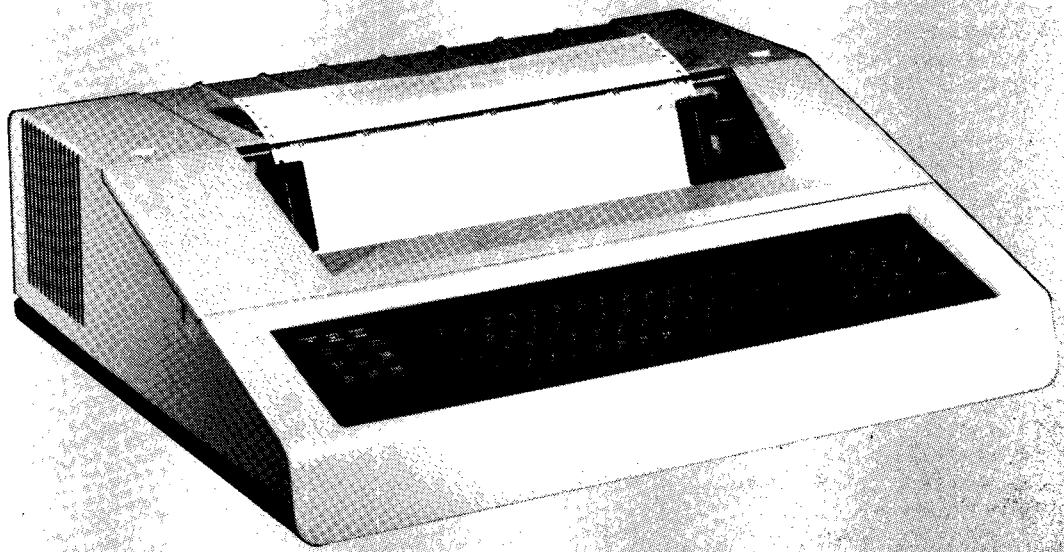
HEWLETT  PACKARD

Vol. 2, No. 21
Sept. 15, 1977

BOISE Announces . . .



**The HP 2631A
Printer**



**The HP 2635
Printing Terminal**

Boise Announces Two New Products

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AMD DIVISION NEWS

Division News

Key Account Microwave Presentation

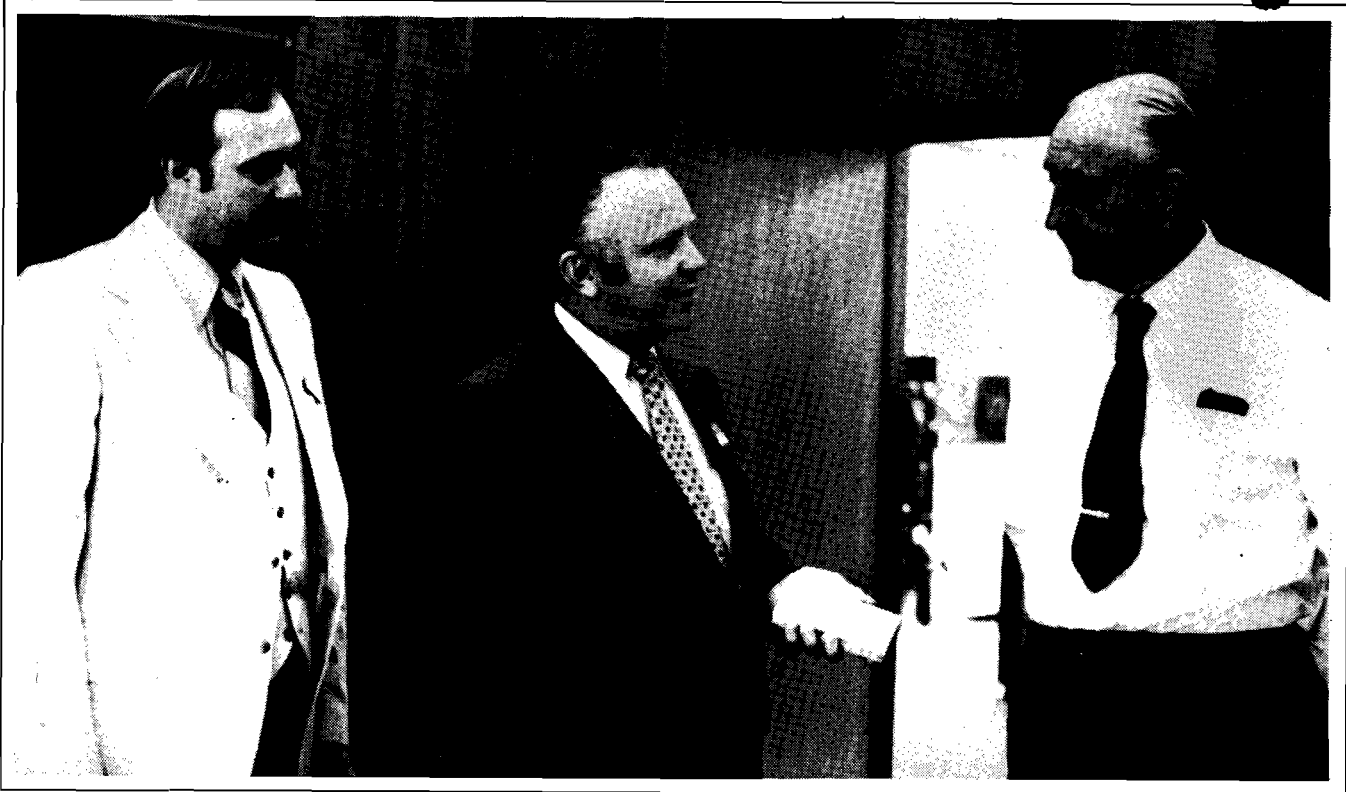
By: *Ralph Kenton/AMD*

We have recently delivered our 300th Automatic Microwave Measurement System to International Telephone and Telegraph Company (ITT). In a special ceremony at HP Corporate Headquarters, *Dave Packard* presented a milestone plaque to *Albert Noland*, president of the Defense Communications Division of ITT. *Rick Zagorski*, ESR Sales Rep, *Bob Brunner*, and *Ralph Kenton* participated in the event.

The ITT system, an HP 8542B Automatic Network Analyzer, is the 300th microwave system in HP's 8500 Product Line since the introduction of the 8540A analyzer in 1968. The new system will be operated by the Defense Communications Division of ITT at its manufacturing complex in Nutley, New Jersey. The 8542B will be used in production testing for present in-house and future programs.

Rick feels that this high level meeting has been of immeasurable help to him in opening doors to some very significant new business at ITT, an account selected for aggressive development this year. The presentation was *Rick's* idea, and was very much appreciated by *Mr. Noland*.

Nice going, *Rick!*

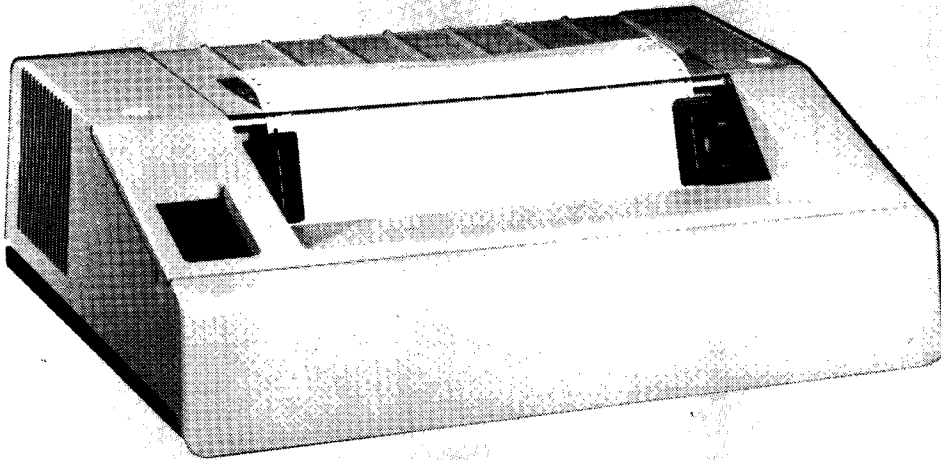


Mr. Al Noland (center) of ITT receives his plaque from *Dave Packard* as *Rick Zagorski* (left) nods his approval.

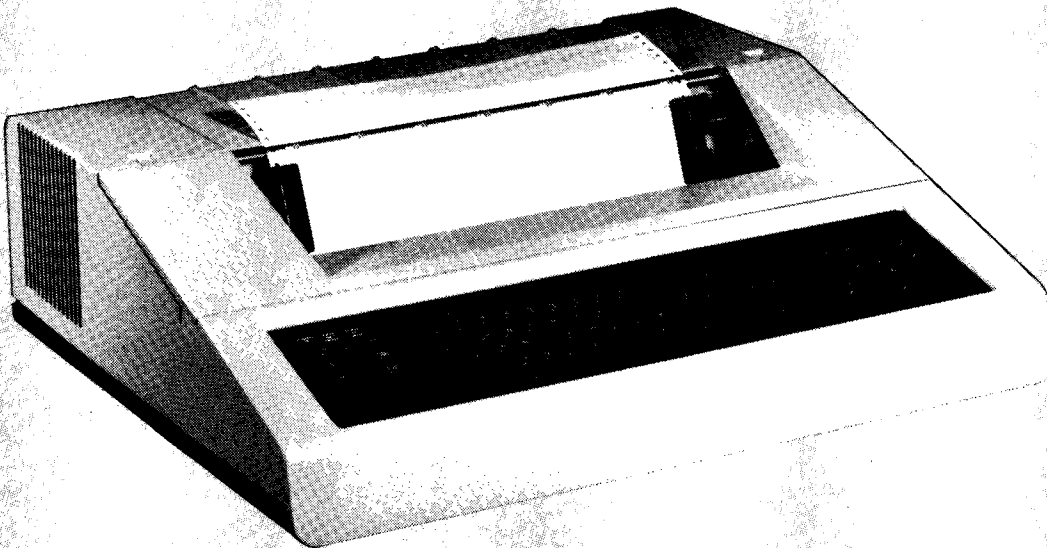
HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

BOISE Announces . . .



The HP 2631A Printer



The HP 2635 Printing Terminal

BOISE DIVISION NEWS

Product News

2631 Printer and 2635 Printer Terminal Announced by Boise Division

By: Larry Andrews/BOISE

On Sept. 15, Boise Division announced to the world two significant new products. The 2631A Printer and 2635A Printer Terminal, utilizing HP's SOS microprocessor technology, combine print versatility and optimized throughput to provide the best price/performance in the industry.

A complete set of Training and Sales Literature has been distributed to the field and we are currently accepting orders for both products. Both products are discountable to both end-users and OEM's and can be combined with 2640 Series CRT Terminals and data collection devices for discount calculations.

User convenience took high priority during the development of the 2630 family. An easily replaceable ribbon cartridge, conservatively rated a 10 million characters, alleviates the mess and bother of frequent ribbon changes. Unit Self-Test can be initiated by the operator or via program control. In addition, both machines can be pedestal or table-top mounted.

The 2630 family provides substantial sales opportunities both with HP Computer Systems and to OEM's and end-users as well. We have a number of sales aids currently available and have planned several promotional activities (see Sales Support plans).

Jump on the 2630 family bandwagon and start selling HP's newest and hottest product line!

Features

- High throughput
- High resolution dot matrix characters
- 128 USASCII character set
- Long life print head
- Cartridge ribbon
- Single or multipart forms
- 8 channel fixed VFC

- Special user features
 - variable horizontal pitch
 - variable vertical pitch
 - horizontal tabulation
 - display functions
 - self test
 - paper out detection
 - auto line feed ('35)
 - auto-underline
 - selectable view mode
- Typewriter style keyboard ('35)
- Numeric keypad ('35)
- Variety of interfaces

High Throughput

The 2630 Family has a print speed of 180 characters per second. Print speed, however, is only one of several factors which affect throughput. The 2630 Family optimizes throughput by printing bi-directionally, suppressing leading and trailing blanks, skipping over embedded blanks and returning the carriage at high speed. The 2630 Family utilizes the newly developed HP CMOS/SOS microprocessor to optimize printing functions, data manipulation, and other control functions.

High Resolution Dot Matrix

The 2630 Family utilizes a high resolution seven column by nine row dot matrix character cell for crisp, clear, character formation. The nine high matrix allows true descenders, commas, semi-colons, and underlining. Dot matrix is especially well suited for multipart forms; since each dot is formed with equal intensity, the sixth copy has surprisingly good character resolution.

128 USASCII Character Set

Most printers will print the 64 USASCII set (upper case alphabet, numbers and symbols), a few will print the 96 USASCII set (upper and lower case alphabet, numbers and symbols), but the 2630 Family is unique in allowing the user to print the entire 128 USASCII character set (upper and lower case alphabet, numbers, symbols, and control codes). The control codes are accessed through a feature called "display functions". "Display functions" is available through program control or operator selection, and is useful for program de-bugging and special formatting. Optional secondary character sets give the 2630 Family true bilingual capability. Two complete 128-character sets can reside in the printer simultaneously and are selectable under program control.

Long Life Print Head

The nine-wire print head used in the 2630 Family provides clear, consistent printout on up to six copies. The average life of the print head is conservatively rated at 100 million characters making replacement an infrequent task. However, when replacement is required, this self-aligning head is easily replaced using the hex key supplied with the printer.

Cartridge Ribbon

Responding to the demands of users, the 2630 Family introduces a new, extended life, easy to use cartridge ribbon. The user never touches the ribbon fabric when changing cartridges, thus avoids soiling his or her hands. The cartridge employs a mobius loop and a slanted ribbon path to maximize time between cartridge changes and eliminate unnecessary ribbon handling. This allows the user to print more than 10 million characters (about 3 months of normal use) without changing the ribbon. When a ribbon change is necessary, it is a quick, simple, and clean task.

Single or Multipart Forms

Up to 6-part forms (up to .43mm thick) may be accepted by the 2630 Family. Due to a unique head design, adjustment for forms thickness variations between .08mm (.003") and .43mm (.017") is usually not required. A lever adjustment on the print head carriage is provided to allow optimization of print quality on various forms. To ensure smooth paper feed, it is recommended that the bottom paper feed slot be used when feeding multipart forms. This requires the use of a pedestal or table with a paper slot. A rear paper slot is provided for convenience when using single part forms. The use of forms tractors in the 2630 Family allows edge perforated, fan fold forms to be advanced quickly and reliably. The printer will accept forms as wide as 400mm (15.748") edge to edge and as narrow as 31mm (1.22") perforation to perforation. Multipart forms and card stock should be tried for satisfactory feeding, registration, and print quality.

8 Channel Fixed VFC

Vertical forms control is provided through an eight channel fixed electronic VFC. There is no paper tape or paper tape reader to worry about, the VFC is located in read only memory (ROM). The eight channels provide the following forms advance capability:

- channel 1 slew to top of next page
- channel 2 slew to bottom of current page
- channel 3 single space
- channel 4 slew to next double space
- channel 5 slew to next triple space
- channel 6 slew to next half page
- channel 7 slew to next quarter page
- channel 8 slew to next tenth space

Note: "Page" is defined to be 11 inches. "Space" is defined as 1/6 inch, unless 8 lpi mode is being used, in which case "space" is defined as 1/8 inch.

Special User Features

There are several unique features which make the 2630 Family especially versatile for the user. The first is variable

horizontal pitch. The 2630 Family provides three different horizontal printing modes; compressed (16.7 characters per inch), normal (10 characters per inch), and expanded (5 characters per inch).

Normal mode is the standard on most printers and will provide 136 characters per line on 14 $\frac{7}{8}$ inch wide computer paper. Compressed printing is useful for printing long lines (227 characters per line on 14 $\frac{7}{8}$ inch wide paper) or saving paper (132 characters per line on 8 $\frac{1}{2}$ inch wide paper). Expanded mode creates characters which are useful for titles and headings. These three print modes may be selected from the control panel or by escape sequences embedded in the data stream. The three different modes may be intermixed on a single line. Auto-underlining in all print modes provides additional emphasis to key words and phrases in your output.

The 2630 Family features the ability to space lines at vertical pitches of 1, 2, 3, 4, 6, 8, or 12 lines per inch. The operator may select 6 or 8 lines per inch from the control panel on the 2631A. All pitches are available through escape sequences embedded in the data system.

Horizontal tabs may be set, cleared, and accessed in any of 227 print positions. These functions may be selected from the keyboard or through escape sequences embedded in the data stream.

A switch on the control panel enables the display functions feature. With display functions on, embedded control sequences are printed rather than executed. Carriage return (control M), on-line (escape n), off-line (escape o), and display functions off (escape Z) are exceptions; they are displayed and executed. The display functions feature may also be turned on and off through an embedded escape sequence.

The self test button starts a sequence of internal tests which verify proper operation of the device. This feature is also accessible through an embedded escape sequence. The printer will print out a full character set in the various print mode combinations as verification of operation after the self test button is depressed. The interface is not verified by self test.

A switch detects a paper out condition. When paper out is detected, printing is halted and an audible alarm is sounded. The printer will not go "on line" as long as the paper out condition exists. No characters in the data stream are lost when the paper out condition is detected.

Typewriter Style Keyboard

The HP 2635A terminal incorporates a full ASCII keyboard for high speed alphanumeric input. The keys are located in positions which are compatible with office typewriting.

Numeric Pad

The 15 key numeric pad is standard on the HP 2635A. The numeric pad contains keys for entering numerals (0 through 9) arranged in the standard 10 key adding machine locations. Also included are "tab", "minus", "enter", "deci-

mal point", and "comma". The zero (0) key is extra wide, and the enter key is positioned to the right of the numeral keys to facilitate high speed numeric data entry similar to a 10 key adding machine.

Physical Specifications:

2631A:

469mm (18.5")D x 640mm (25.2")W x 215mm (8.5")H
23.5 Kg (51 lb) net weight (without pedestal)
31 Kg (67 lb) ship weight (without pedestal)

2635A:

595mm (23.1")D x 640mm (25.2")W x 215mm (8.5")H
23.5 Kg (56 lb) net weight (without pedestal)
31 Kg (72 lb) ship weight (without pedestal)

Product Safety:

Products are Underwriters Laboratories and Canadian Safety Administration certified in the following categories:

- EDP equipment
- Office appliances
- Teaching equipment

UL and CSA labels are applied to equipment shipped to the U.S. and Canada.

Products also meet all European safety standards for EDP equipment (i.e., VDE, IEC).

Product Support:

Warranty: 90 day on-site parts and labor.

Hardware supplied:

- HP 2631A Printer, or 2635A Terminal, cartridge ribbon, cleaning brush
- 2.5mm hex key

Documentation supplied:

- Operators manual, reference manual

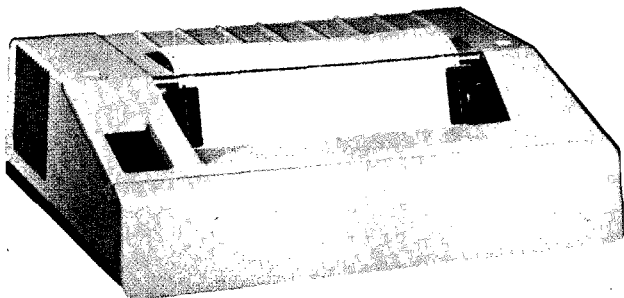
Available documentation:

- Service manual

Installation:

In most cases product preparation can be performed by the user. Refer to the Operators Manual supplied for detailed instructions. HP assistance is available for installation upon request and at prevailing rates. However, Option 210 (21XX subsystem) and 300 (3000 subsystem) includes installation.

Ordering Information:



2631A:

180 character per second printer, 136 characters per line at 10 characters per inch. Expanded and compressed print modes for 68 and 227 characters per line respectively.

Automatic bidirectional printing. Automatic underline and display function modes. 8 channel fixed VFU (Nonprogrammable), horizontal tabs. 8-bit differential line driver internal interface. 120 volts, 48-62 Hz.

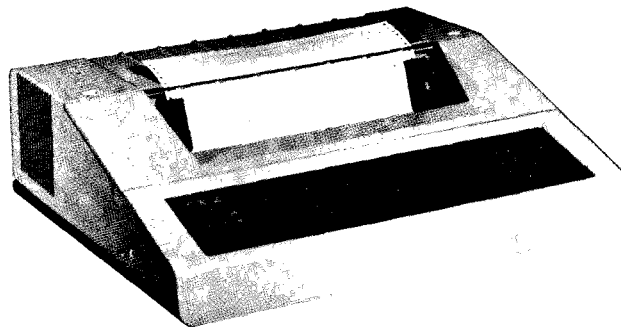
- 001 Adds Swedish/Finnish character set.
- 002 Adds Norwegian/Danish character set.
- 003 Adds French character set.
- 004 Adds German character set.
- 005 Adds United Kingdom character set. (Character set has English pound sign)
- 006 Adds Spanish character set.

Alternate Voltages

- 015 220V, 48-62 Hz
- 016 100V, 48-62 Hz
- 017 240V, 48-62 Hz
- 040 Replace standard interface with EIA RS232C. No modem control. For use with 103-type modems, or some hardwired applications.
- 041 Replace standard interface with EIA RS232C with 202-type modem control.
- 042 Replace standard interface with 20 milliamp current loop.
- 043 Replace standard interface with 8-bit TTL, OEM type interface.
- 044 Replace standard interface with 8-bit TTL, OEM type 9871A compatible.
- 046 Replace standard interface with HP-IB.
- 051 Same as option 041 except RS232 connector is replaced with 2640 type edge connector.
- 210 Adds 12845B interface kit and documentation for use with 2100/21MX series computers. Installation included.
- 240 For use with 2640 series terminals. Includes 13232J cable and 13238A interface. Installation not included.
- 300 Adds HP 3000 interface cable, documentation, and installation. 30209 interface board must be ordered from GSD.
- 715 Adds service documentation

26098A Stand for 2631A

- 001 Adds Casters



2635A:

180 character per second printing terminal, 136 characters per line at 10 characters per inch. Expanded and compressed print modes for 68 and 227 characters per line respectively. Automatic bi-directional printing. Automatic underline and display function modes. 8 channel fixed VFU (nonprogrammable), horizontal tabs. EIA RS232C interface without modem control. (For use with 103-type modems or some hardwired applications.) 120 volts, 48-62 Hz.

Alternate Voltages

- 015 220V, 48-62 Hz.
 - 016 100V, 48-62 Hz.
 - 017 240V, 48-62 Hz.
 - 041 Adds 202-type standard I/O with 20 milliamp current loop.
 - 051 Same as option 041 except RS232 connector is replaced by 2640 type edge connector.
 - 715 Adds service documentation
- 26097A: Stand for 2635A
- 001 Add Casters.

2630 Family Sales Support Plans Revealed

By: John Whitesell/BOISE

Coinciding with the introduction of the 2631A Printer and 2635A Printing terminal, Boise Division will be instituting its Sales Support Program for these new products.

On September 15th, press releases will be issued to over 150 trade publications. A direct mail campaign targeted for the big systems houses will also be initiated at this time.

Additional direct mailings will be made to all 2630-Series Terminal customers and all HP system users. Beginning in late September, these prospects will receive a kit consisting of a cover letter, product brochure for both the 2631A and 2635A and a postpaid inquiry card.

New Product Training Tour sessions have been scheduled throughout the U.S. and will run from September 27th to October 15th. In Europe and ICON, the NPT Tour sessions will be scheduled in December. The NPT kits will be distributed in Mid-September to each sales office. These kits will consist of a Field Training Manual, Product Brochures, Data sheets, and print samples. Ordering information and procedures are clearly outlined in these manuals.

Over 100 instruments have been earmarked as field consignment units and will be shipped in late September/early October.

By pairing the 2631A Printer with a 2645 CRT, an effective demonstration system results. Included with all consignment units will be a specially programmed demo data cartridge for this purpose. It contains routines which display the full range of features and capabilities of the new device. Each office service kit shipments will be coordinated with consignment units.

Advertisements featuring the new products will appear in *DATAMATION*, *COMPUTER WORLD*, *ELECTRONIC NEWS* and *INFO SYSTEMS* starting on October.

In addition, we'll be working closely with District Sales Managers in arranging for roadshows and seminars to help spread the word about the 2630 Family.

We think we've got a "red-hot" product line here and we're most anxious to get it off to a roaring start. If you have any questions or we can help in any way, don't hesitate to call.

Division News

John Klonick Joins Sales Development

By: John Whitesell/BOISE

We're happy to have *John Klonick* joining the Boise Division Sales Development team.

John hails from the Rochester, N.Y. area, and will be supporting the Eastern Sales Region. He received his BSEE at Duke University and then worked at G.E. for approximately 3 years, where he was in the field sales organization of G.E.'s Industrial Sales Group. *John* then returned to school and received his MBA at Harvard just before joining us in Boise.

John is a distance runner and skiing enthusiast—and is quickly coming up to speed on our products.

Welcome aboard *John*!



Boise Division's Regional Sales Development Team:

(Left to Right: *John Whitesell*, *John Klonick* (ESR), *Steve Richardson* (NSR, HPSA, MSR/W), *Lillian Blankinship* (Secretary), *Steve Davis* (CSR, ICON, MSR/E), and *Chuck Ulfers* (SSR, Intra Corp).

WE'RE HERE TO HELP YOU SELL BOISE PRODUCTS!

HP 263X Support for Europe

By: John Whitesell/BOISE

With the introduction of the 2630 series printers, we are establishing HPSA sales support responsibility for this product family in Grenoble, under the guidance of *Francis Marc*.

All HPSA salespeople seeking any kind of factory assistance should contact *Francis* (except for delivery information, in which case contact *Steve Bailey*, Order Processing, Boise).

As the product specialist for Europe, *Francis* will also be responsible for the 263X European NPT and all other HPSA training programs related to the 2630-family.

Steve Richardson in Boise will continue to be your sales support contact for all other Boise Division products (line printers, tape drives, etc.). We hope this arrangement will provide you continuity of sales support for our older products while offering nearby 263X support to allow you to more effectively attack a new and highly competitive market.

As always, be sure to let us know if you find ways where we can improve on our sales support program.

Good Selling!

Guide to HP Printers Book II

By: John Freeman/BOISE

A new "Guide to HP Printers" has been released and should be in your hands by the time you read this article. A number of changes have been made.

To name a few:

- 2617 duty cycle recommendations have been reduced from 40% to 30%.
- *Reliability Data* has been updated to explain how MTBF and the "real life" coincide.
- *Printer Throughput Chart* has been added explaining where printers should be used and how a secondary printer can be used.
- *Options Table* on the last page shows the customer what options are available.
- *An Insert* explaining the "Multiple Printer Environment of the HP 3000" explains some key advantages.

The best approach to selling printers is to provide a number of alternatives for your customer to select from so that he can weigh the pros and cons, and he should appreciate the extra effort in selling the complete system.

DISC MEMORY NEWS

Division News

DMD Sales Development Upgrade

By: Bob Hoke/DMD

Rejoice! Field Sales Force, you now have a friend in the factory. You no longer need be plunged into the depths of despair when questions about the black art surrounding disc devices arise!



On board with us now is our newest, and only, Sales Development Engineer, *Jon Bolt*. *Jon* comes to us after recently graduating from the University of Idaho. Prior to college in Idaho, he was a native of San Diego for 20 years. *Jon* will be our Sales Development contact for all regions until further notice. By way of a nickname, we have tagged *Jon* our DMD "disc jockey." So, when you find yourself faced with a seemingly disastrous disc dilemma of devastating dimensions, fear not! Just pick up your phone and whistle your tune to our DMD DJ. *Jon* will be happy to provide you with a definitely desirable solution to your disc drive dilemma.

Product News

Business Opportunity

By: Bob Hoke/DMD

As our peripheral strength increases, the possibility occurs of using HP peripherals as an entry into large DEC and DG users. The 7905/7920 family of disc drives may offer just that opportunity. I have a package of information that we've prepared on interfacing the 7905/7920 to DEC. If you have a customer that would be interested in increasing the performance and reliability of his PDP-11 system through the use of HP discs, give us a call.

GOOD SELLING!

Damaged Freight Policy

By: Jon Bolt/DMD

Responsibility for freight damaged merchandise depends upon how the parcel is shipped—FOB Origin or FOB Destination.

If the parcel is shipped FOB Origin, then title to the parcel transfers to the customer at the factory (Origin). Hence, any shipping damage occurs after the customer has taken possession of the product. Consequently the customer must handle shipping damage claims himself.

If the product is shipped FOB Destination, the title transfers to the customer at his location. Shipping damage in this case occurs while HP "owns" the product; hence, we are responsible. Damaged freight shipped FOB Destination should be inspected immediately upon arrival at the destination before the statute of limitations on damaged freight is exceeded. A shipper's damage report form copy should then be sent to factory (DMD-Boise) so we can begin handling the claim.

Repair to the damaged product can begin immediately by the CE. The Sales Office can then send the bill for CE repair to the accounting department here in the factory. Send the bill to *Judy Bedal* in accounting. Accounting will then credit the Sales Office account with the recovered shipping claim which will offset the repair bill.

Cable Fable

By: Jon Bolt/DMD

Did you ever need a special length multi-unit cable (13013A) not listed in the DMD price list? Consider how this problem was recently overcome at our Hobokin Hollow sales office.

In this episode, we find Clarence Customer asking the persistent Peter Persuasive (salesman-at-large), "Say, Pete, can you get me a multi-unit cable that's over 18 feet long so I can mount my disc drive on the ceiling?"

Peter, having recently discussed this very subject with his DMD Sales Development contact, the infamous "Disc Jockey," plays Clarence the following tune:

1. All special cable of ANY length will have the same product number: 13013A 8 OPT. H05

2. Price of these cables will be:

13013A	\$250.00
OPT. H05	284.00

Total Cost \$534.00 for each cable of ANY length

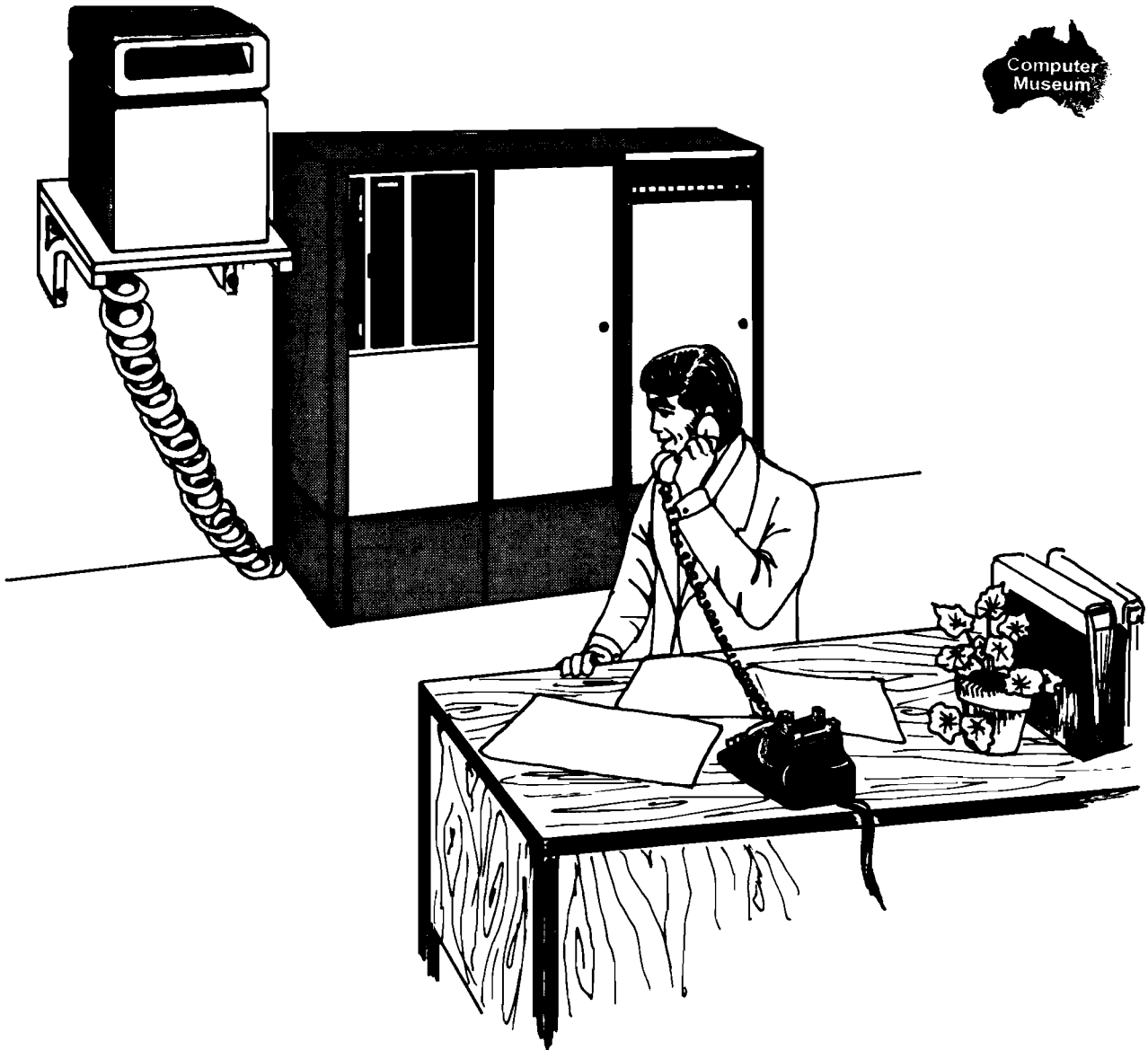
3. If you receive other cables in your order that you don't need (i.e., those included in subsystems which will be replaced by special length cables), have your sales

office transmit a credit, and send the standard cables back to DMD.

Isn't it simple?

"By the way, Clarence, why do you need to mount your drive on the ceiling?" says Pete.

Clarence replies, "It's for high level programming, of course!"



DATA SYSTEMS NEWS

Division News

Measurement and Control Sales Development/Support now at DSD

By: Don Rowe/DSD

The Measurement and Control product line has now been transferred to DSD. Since Measurement and Control is often an important part of a system, we have moved your Sales Development and Support contact point from AMD to DSD. So if you need help in either the System or Measurement and Control Subsystem, simply call your DSD Sales Development Engineer.

Product News

New E-Series Mini-Manual

By: Orrin Mahoney/DSD

A new and exciting mini-manual is now available for the 21MX E-Series Computer, titled "The 21MX E-Series Computer Technical Reference Handbook." This handy pocket guide combines the 21MX E-Series Operating and Reference Manual, and the 21MX I/O Interfacing Guide into a single low-cost, easy-to-carry package. With a list price of \$3.50 and a very low transfer price, this manual is just the ticket to use as a giveaway item for prospective 21MX or 21MX E-Series customers. The part no. is 5950-3765 and HEART orders can be placed through C.P.C. They should be coded "I2" to insure transfer at cost, if you're going to give them away.

93723 Racking Service

By: Jim McCabe/DSD

A few of your customers use the 93723 racking service from DSD. Beginning October 1 the racking service will be further simplified with only three options appearing on the price list:

93723A

Option 001 - Rack and checkout tape reader, punch and 21MX/7900A disc computer

Option 004 - Rack and checkout tape reader, punch and 21MX/7905A disc computer

Option 006 - Rack and checkout tape reader, punch, 21MX computer, memory extender and I/O extender

Note that you must order a disc computer in order to get the disc from DSD. Otherwise, it will come from Boise. Also, remember that the racking service covers only the specified items (reader, punch, CPU, etc.) or a subset thereof.

Options 101, 104, 106 have been dropped because it is now possible to order cabinet front doors separately.

Cabinet Front Doors Now Available

By: Jim McCabe/DSD

Beginning October 1 your customers can order cabinet front doors identical to those used on HP 1000 systems.

29402B Cabinet

Option 050 Hinged Locking Front Door \$400

Option 050 adds a hinged, locking front door to either a master cabinet or add-on cabinet. The front door is shipped with a solid front panel, but also includes a shorter panel to provide access space for a 7900 series cartridge disc drive. Option 050 is compatible only with Option 200, 210, 400, and 410 cabinets. It cannot be field installed on a 29402B cabinet.

Option 051 Snap-on Front Door \$400

Option 051 adds a snap-on, non-locking front door to either a master cabinet or add-on cabinet. The front door is shipped with a solid front panel, but also includes shorter panels to provide access for a 7970 magnetic tape drive and/or a 7900 series cartridge disc drive. Option 051 is compatible only with Option 200, 210, 400, and 410 cabinets. It cannot be field installed on a 29402B cabinet.

These front doors will permit your customers to field upgrade HP 1000 systems with peripheral and instrumentation bays. A new cabinet data sheet will be available October 1 with more details.

Transfer of 12575C Tape Winder to CSD*By: Orrin Mahoney/DSD*

As of September 1, 1977, Marketing and Supplying responsibility for the 12575C Tape Winder will transfer to Computer Service Division (Division 50). This change is part of the effort underway to consolidate consumables and supplies for computer products at C.S.D.

Competition**Competitive Challenge!!!***By: Frank Jackson/DSD*

In order that we can supply you the latest competitive information we need a SUPERSALESPERSON to take up this challenge. Our competitive contacts folder is outdated.

CHALLENGE!

Would that SUPERSALESPERSON (wherever you are) please find a way to obtain copies of the new DEC and DG contracts and send them to me at DSD?

Anything would be appreciated at this time but both OEM and End User (or whatever the competition calls them) would be PAR EXCELLENCE.

Who will take up the CHALLENGE?

Sales Aids**OEM Senior Sales Workshop—
A Super Success***By: Carlos Avila/DSD*

On August 9-12, thirteen of our senior OEM sales representatives from the U.S., Canada, and Europe attended the first Data Systems OEM Senior Sales Workshop held at the Marriott Hotel in Santa Clara. The purpose of the workshop was 1) to provide feedback from the field to the factory on Data Systems products and sales aids relative to the OEM marketplace, and 2) to pool the sales techniques and experiences of the attendees into an OEM Sales Guide that will be used to train new OEM sales representatives.

The attendees met with *Dick Anderson*, members of Marketing, and the Lab to discuss problem areas and suggested improvements in products, sales aids, technical support, and order processing. A summary of the workshop along with action items generated by the various sessions will soon be distributed to the field.

Because of the excellent information exchange between field and factory during these sessions, Data Systems in the future will sponsor OEM Senior Sales Workshops at six month intervals. These workshops will help Data Systems focus on the products, policies, and sales aids that will make it easier for you to SELL OEM.

**3070A Factory Data Collection System is
in Full Operation at DSD***By: Dave Hendrix/DSD*

DSD's manufacturing group has implemented a data retrieval system operating in an RTE-III environment using HP 3070A Data Entry Terminals. It's a super plus for us because it gives us another showpiece on our manufacturing floor when we have plant tours for our visiting customers. We have used it as an ideal demonstration to customers specifically interested in manufacturing data collection. What does it do?

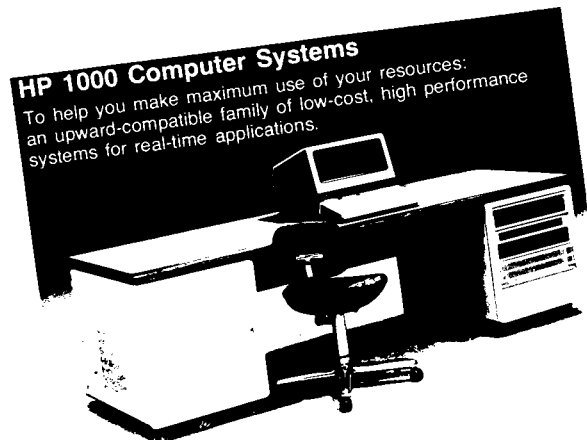
Today its applications are being used for labor voucher collection and technician performance feedback. Its main purpose has been to replace the manual requirements for filling out work order vouchers by each technician. A spin-off from this has been a performance feedback to the technician comparing his work with a historically established standard.

In the future (next six month time frame), work and process monitoring and material moves application programs will be added to the system.

All in all, this gives us a real live application to show in our facilities and provides that warm feeling to the customer that we really do use our own equipment. An added benefit from this effort is the in-house factory expertise our manufacturing engineers have developed regarding factory data collection. We can now provide a very professional attitude concerning manufacturing data collection to any visiting customers. You now have another resource!

OEM Brochures for Local Mailing*By: John Dilks/DSD*

Limited quantities of the OEM brochure, # 5953-0829(22) which were sent out with our HP 1000 direct mail package are still available at the Corporate Literature Depot on a first-come, first-served basis for your local mailings. We did not print extra copies of the HP 1000 brochure, # 5953-0859, because of the dated offer on the back cover "for the HP 1000 Technical Reference Library."



HP Sponsored Data Acquisition and Control Clinic

By: Jim Gruneisen/DSD

The regional meeting of the Instrument Society of America is to be held in Niagara Falls, New York on October 16-20. Van Diehl and myself will be conducting a six-hour clinic entitled "Minicomputer Systems for Data Acquisition and Control". Briefly, the clinic is intended to give answers to the question: Where are we headed in minicomputer systems for data acquisition and control? The course will give an introduction to minicomputer hardware, operating systems, and programming. It will also include sensor I/O

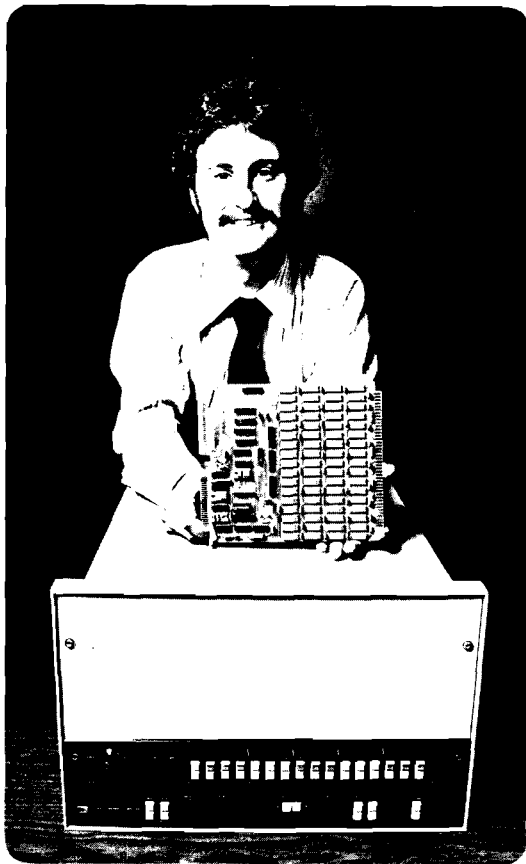
interface, sensors available, distributed systems and back-up techniques.

Please encourage all your customers to attend this informative discussion of measurement and control. The course will be geared to the new user and as a refresher course for the sophisticated user. Emphasis will be placed on concepts to allow a wide variety of subjects to be covered.

A similar course will be added to the neophyte training course beginning in December. This addition will cover the subject of industrial measurement and control. Included will be instruction on HP's current products for the industry. We hope to emphasize in both the neophyte training and the ISA clinic HP's commitment to the field of measurement and control.



MODEL 20



Small wonder: a breadbox-size computer with up to 1 million bytes of fault-control, semiconductor memory—at 5¢ a byte.

For technically and/or environmentally demanding applications where processing reliability, or high speed, or both, are essential, HP 21MX and HP 1000 computers can now contain up to 1 megabyte of memory in modules of 128k bytes.

With up to 1 million bytes of fault-control semiconductor memory, HP's small computers can go to

work in demanding applications where large or disc-based systems were previously needed:

- in rugged environments such as ships and airplanes, or in remote, unattended locations such as offshore oilwell platforms—applications where reliability is critical and downtime must be held to a schedule;
- in applications such as physics and electronics labs, where data must be acquired at speeds beyond those possible with a disc.

A new fault-control memory system uses 22-bit Hemming error correction code to ensure high reliability: Because the system automatically corrects all single-bit errors, programs can continue even if a memory chip malfunctions. Additionally, the system reports all double-bit errors and most errors of three bits or more. Fault-indicating LED's pinpoint failures at chip level. Maintenance can be performed on a scheduled rather than emergency basis, and unscheduled downtime is effectively avoided.

Reliability tests indicate that mean time between failures (MTBF) for an HP 21MX computer with 1 megabyte of high-density, fault-control memory is 6000 to 8000 hours—roughly a year without probability of failure.

The 128k byte high-density memory modules that make it all possible cost \$6400* each, and can be used with 21MX K, M, and E series computers, and HP 1000 computer systems.

Here are prices for typical configured computers:

0.5 megabyte: An 8½-inch-high 21MX E Series computer with 512k bytes of memory, fully capable of running the supporting RTE software: \$35,950*.

1 megabyte: A 12¼-inch-high E Series computer with 1024k bytes of memory: \$59,800*.

1.8 megabytes: A 12¼-inch-high E Series computer with an optional memory extender adding 768k bytes, for a total of 1792k bytes of memory: \$108,800*.



1504 Page Mill Road, Palo Alto, California 94304

For assistance call Washington (301) 948-6370, Chicago (312) 255-9800, Atlanta (404) 955-1500, Los Angeles (213) 877-1282.

Mail to: Hewlett-Packard, 1504 Page Mill Road, Palo Alto, CA 94304.
Please send me further information on

HP-01
 HP 2240 measurement and control processor
 HP high-density memory module

Name _____
Company _____
Address _____
City _____ State _____ Zip _____

*Domestic U.S. prices only.

90748

This advertisement will first appear in SCIENTIFIC AMERICAN in September, 1977.

DATA TERMINALS NEWS

Division News

Graphics Hardcopy with Versatec

By: Rich Ferguson/DTD

DTD does it again—you asked for an alternative to the Tek hardcopy unit and now you have it! Versatec has successfully interfaced their video hardcopy unit to the 2648A Graphics Terminal. Their system offers more features and flexibility than the Tektronix 4632 hardcopy unit. It should be noted that since their Model 1640 Hardcopy System uses the 13254A Video Output card the unit can be used with all 2640 series products.

The main advantages the Versatec system offers are:

- Video Hardcopy, Printer and Plotter function all in one box.
- Speed.
- Copy costs are low.
- Copies don't deteriorate with age.
- Up to eight terminals can be hooked to one Versatec unit for video hardcopy.

As a video hardcopy unit, the Versatec 1640 System provides:

1. Permanent hardcopy output of archival quality (copies don't fade).
2. Hardcopy time is ten seconds.
3. Can accept up to eight terminals.
4. Hardcopy cost is 2¢ a page, compared to 10¢ for dry silver paper (Tek uses dry silver).
5. Paper can be stored in ambient conditions.
6. Copy is easy to write on with pen or pencil.
7. Can provide a reverse image (Inverse Video).

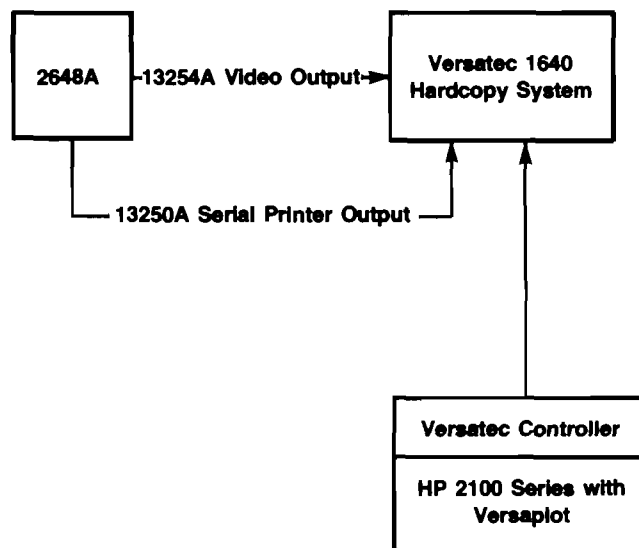
As a line printer, it will accept ASCII, parallel or serial input and has the following specifications:

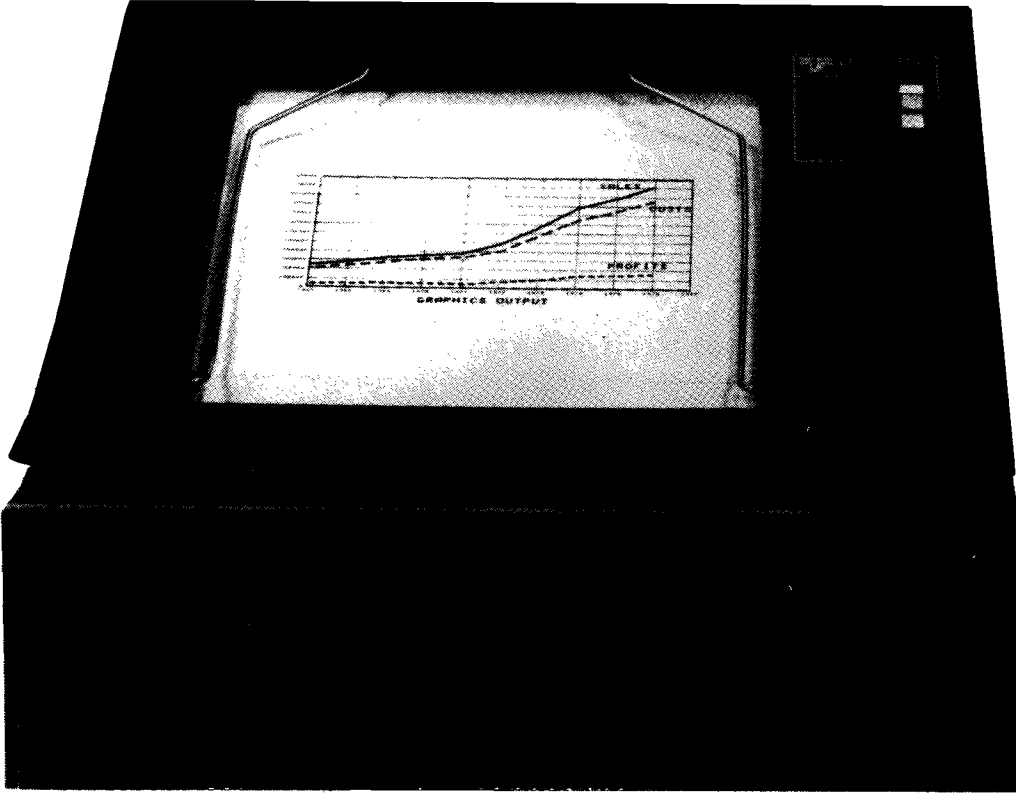
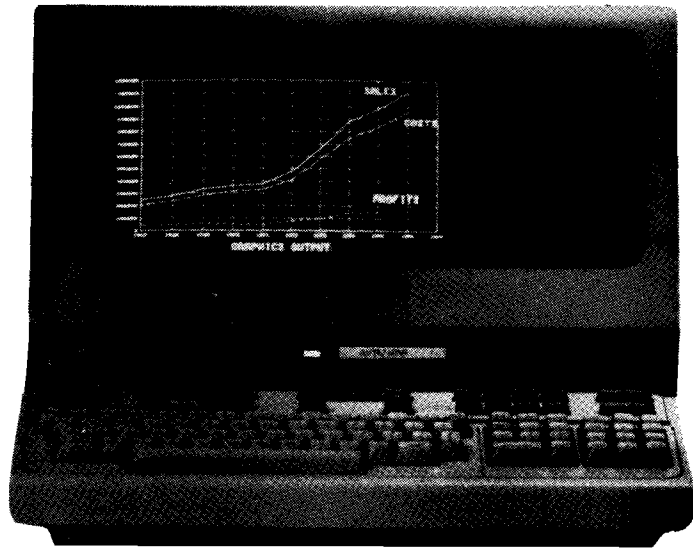
Character set: 96

Lines per minute:	1000
Columns per line:	100
Characters per inch:	10
Printed lines per inch:	7
Printed lines per fanfold page:	60
Font, dot matrix:	16 x 16
Input signals:	ASCII, parallel and serial
Parallel Inputs:	One million ASCII characters/second maximum; TTL voltage levels
Serial Inputs:	Model 1640 operates asynchronously in a Receive-Only mode and is pin and voltage level compatible with RS232C standard. Ten or 11-bit code is accepted. Recommended operating rates are 600, 1200, 2400, 4800, and 9600 baud.

Also, the Versatec 1640 can be used as a plotter. Normally, you would use a parallel interface to a computer running Versaplot software. (Versatec has a version of Versaplot that runs on HP 2100 series computers.)

A block diagram of potential hookups is as follows:





Versatec 1640 hard copy system produces sharp, permanent hard copy from H-P display terminals. The system also functions as a high speed computer printer and plotter.

Ordering information from Versatec:

- Versatec 1640 Hardcopy System\$ 9950
- Versatec 1640-8 (Supports up to 8 terminals) ...\$10940

As a note, if 1640-8 is ordered, remote copy request isn't supported, but is with a single terminal hookup. The Model 1640 cannot be upgraded in the field to a Model 1640-8 configuration.

For more information your customers can contact:

Mr. Carl Larson
 Marketing Communications Manager
 Versatec Corporation
 2805 Bowers Avenue
 Santa Clara, CA 95051
 (408) 988-2800

Order Processing

The 2648A and GSA

By: Rich Ferguson/DTD

As you may know the 2648A Graphics Terminal is not yet on the GSA purchase schedule. GSA is currently reviewing all their contracts and has a request from HP to put the 2648A on the GSA schedule. The earliest date that the terminal can get on the schedule is October 1. This is what we're shooting for.

One change which should be noted (in contrast to the recent past) is that the 2648A, along with the rest of the terminal product line, will appear on the Class 70 schedule as opposed to the Class 58 schedule.

We will keep you informed if there are any changes or extensions beyond the October 1st date.

Product News

2K Byte Datacomm Buffer Requires Physical Switching on 2648A

By: Carl Flock/DTD

(WARNING — WHEN USING THE 2648A COMPATIBILITY MODE, YOU SHOULD PHYSICALLY SET THE P AND/OR Q SWITCHES IN ORDER TO GET A 2K-BYTE BUFFER!)

On the 2648A, a 2K-byte datacomm buffer is set aside ONLY on power-up or full-reset if either P and/or Q switches are OPEN. If both P and Q are closed (this is the way the terminal is shipped), only an 80-byte buffer is established. While you can programatically change the switch settings with an "Esc&s ..." sequence, this will NOT change the buffer.

The following table shows the possible combination of P and Q:

Switches		Description
(Open=1, Closed=0)		
P	Q	
0	0	Normal graphics operation
0	1	Unscaled Compatibility Mode (expanded datacomm buffer)
1	0	Scaled Compatibility Mode (expanded datacomm buffer)
1	1	Normal graphics operation (expanded datacomm buffer)

You need the large buffer in compatibility mode to stop data overruns—don't forget the physical setting is necessary!

Just to be safe, always set P and Q open.

Video Output and the 2640 Family

By: Rich Ferguson/DTD

The 13254A Video Output Interface is designed to allow connection of a 264X terminal to a compatible video monitor or a compatible video hardcopy unit. The requirements for compatibility are:

Requirements for External Peripherals	60 Hz	50 Hz
Horizontal Scan Rate	22,500 Hz	18,750 Hz
Horizontal Retrace Rate	10 μ S	12 μ S
Vertical Scan Rate	60 Hz	50 Hz
Vertical Retrace Time	600 μ S	700 μ S
Video Bandwidth	20 MHz	20 MHz
Non-Interlaced	1.4 Volts (P-P)	1.4 Volts (P-P)
Composite Video Level	750	625
Line Rate	750	625

This information can also be found in the 13254A data sheet. Compatible monitors are manufactured by Conrac—(Conrac QQA Series monitor modified to drawing #503-451, line rate setting of 750 (60 Hz) or 625 (50 Hz).

Compatible video hardcopy units are manufactured by Tektronix (4632-007) and Versatec (1640).

At this writing, the Versatec unit is expected to hook up to eight terminals per hardcopy unit. Some special cables might be needed, however.

The HP 2641 and IBM APL/SV, or ... BEAUTY AND THE BEAST

By: Tom Lee/DTD

A package is now available from Com-Pro, a software house in Southern California, which allows users of IBM 370-1XX computers to use HP 2641 terminals with APL/SV. The package which is installed in either a 3704 or 3705 communications front end reportedly makes the terminal look like an IBM 2740 or 2741 terminal (Selectric hardcopy terminal). The package also makes a translation from typewriter-paired to bit-paired keyboards. The maximum speed supported by the package is 1200 baud either hardwired or over modems.

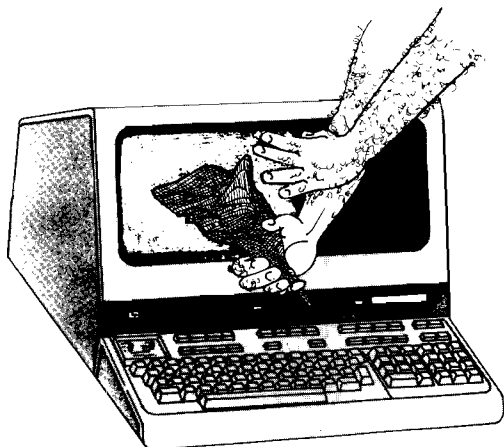
Bay Area EDP (HP's Corporate Data Center) has installed the package on our 370-168 and it appears to work as claimed. The 370 is running APL/SV under the OS/VS2

operating system. According to BAEDP, the standard translation table sends a DC1 to the terminal allowing the use of tape cartridges. The address of the company is:

COM-PRO ASSOC.
638 14th Street, Suite 700
Manhattan Beach, California 90266
(213) 376-1344

How to Store a Graphics Picture

By: Rich Ferguson/DTD



To store pictures on tape using the 2648A, you must store the vector commands (i.e., Escape sequences). There has been some confusion on this point, in that it was thought we could store a "dot image" of the screen on tape.

This "dot image" facility doesn't exist on the 2648A. Rather, one needs to store the command sequences that generate the vectors on tape instead.

It turns out that this is in many ways much better. The reason is because of speed and compactness of information on tape. It takes much less tape to store vector command sequences than the corresponding dot image pattern. To store a dot image of the screen would require one-half the tape, where vector command information usually requires much less, depending upon the density of the picture.

So, if your customer has a computer-generated picture and wants to save it on tape, use RECORD mode with tape as a destination device.

For trial graphics with Rubber Band Line, use EDIT mode with display functions. Both these techniques will store the vector commands on tape.

Don't Talk Back! Soft Key Application #13

By: Bill Swift/DTD

Whenever you successfully execute a device control sequence (Esc& p . . .) or complete a transfer of information, the terminal responds to the CPU with an "S." This occurs even when the escape sequence is executed from a soft key

and doesn't require CPU intervention. From some CPU's, receiving an unexpected "S" can cause problems. If you've seen this problem, we have an answer for you. The following sequence, when appended to a soft key device control sequence, will succeed in clearing all the datacomm flags before the soft key ends and suppress the "S":

```

L
^c177120a1d370dd315d125dd303
                                d117dd177120aE
    
```

For example, if you precede this sequence with a printer command, then you can stimulate the 2640A/B's PRINT key with no undesired side effects:

```

L
^H^p3s4dM^c177120a1d370dd315
                                d125dd303d117dd177120aE
    
```

Auto-Enter-Soft Key Application #14 (Or, How to Press the "ENTER" Key Without Really Trying . . .)

By: Steve Berman/DTD

Auto-enter allows "ENTER" to occur at the end of a form without pressing the "ENTER" key. It requires the user to place one extra field at the end of the form as described in the following instructions:

To use, simply follow the instructions; keep in mind that as soon as the last field (containing the ~) is reached, an ENTER will occur. Note that pressing f2 will disable the Auto-enter feature; pressing f1 will enable it. Also, the code shown contains the sequences required to define f1 and f2 as required.

INSTRUCTIONS FOR USE OF AUTO-ENTER:

NOTE!!! THIS IS NOT AN HP PRODUCT, AND NO
SUPPORT OR WARRANTY IS ASSOCIATED
WITH IT!!!

1. Load your form. Last field of the form must be unprotected and start with the single character ~ (append this field to your present form; you cannot use this field for any data entry). HINT: Use a single character unprotected field on the same line as the last presently on the form.
2. f1 enables auto-center
f2 disables auto-center
3. Press f1.
4. Turn on format mode (Note: auto-enter is automatically not used when not in format mode).
5. Enter data. Note that as soon as you position the cursor under the ~, an ENTER occurs.

6. You MUST NOT use the ~ for anything else; otherwise you may experience ENTER's occurring at inopportune moments.

Note that the ~ (which is used here for the flag character to tell the terminal to ENTER) could be changed to any other character.

Essentially the program performs an ENTER whenever (1) auto-enter is enabled AND (2) you are in format mode AND (3) the cursor is positioned directly under a ~.

The message buffer area is used here for program storage. A long message (like LOCATING LOAD POINT ON RIGHT DRIVE) could bomb the program. Thus, if you see such a message, you may have to reload the program.

Note that you do get the ~ as the last field transmitted.

Store the following on a cartridge tape; READ the file back to initialize the program:

```

&c177000a315d173d31d310d41d120d376d
 176d267d300d66d1d315d256dd32d376d
 176d302d46d376d315d330d22d315d144
 dd315d377d30d76d176d315d24d43d315
 d141dd257d62d120d376d311D

```

```

&f1k1a26L&c110551ad376d110550a303D

```

```

&f2k1a14L&c110550a311D

```

2648A Firmware vs. 2645A Firmware

By: Rich Ferguson/DTD

The 2648A features are a superset of the 2645A features. These features are added by using an additional firmware board in the 2648A. You might wrongly conclude that the "2645A features" firmware board in the 2648A is the same board, with the same chips as in the 2645A . . . IT ISN'T. There is no commonality between the firmware boards in the 2645A and the 2648A.

Sales Aids

Selling Against the TEK 4051

By: Rich Ferguson/DTD

If your customer compares the 2648A to the TEK 4051, or you try to sell against it . . . then you are barking up the wrong tree. Remember from your NPT Tour that graphics terminals with prices greater than \$10K are in the medium price range. They are also PROGRAMMABLE, executing some type of graphics-oriented software.

The 4051 has a BASIC language facility for local execution, so the 2648A wasn't intended to compete with it.

Your customer will probably note TEK's low base list price for the 4051 at \$6995. For most applications, however, the following options will be needed:

Model 4051.	\$ 6,995
Datacomm Interface	1,500
Printer Interface	550
16K Bytes Total Memory	2,150
	\$11,195

A description of the 4051 is in your field training manual but briefly it has:

- 8" x 6" Storage Tube CRT
- LSI Microprocessor Unit
- ASCII Character Set
- 780 x 1024 Viewable Points
- 3M DC300A Cartridge Unit (Single)
- BASIC Language Facility
- 2400 Baud Asynchronous Communications

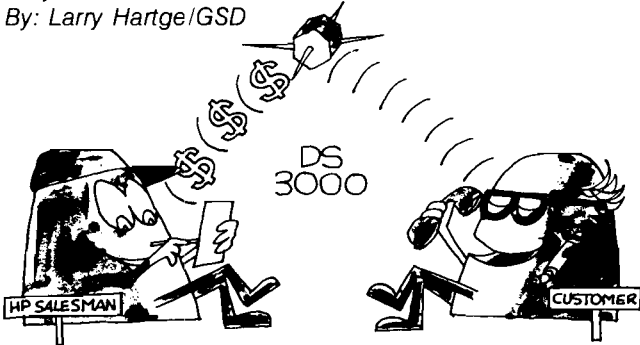
Right now HP has the hottest graphics terminal on the market. More interest has been generated for the 2648A than almost any other terminal introduced. Capitalize on this wave of enthusiasm and sell the 2648A. It will open new doors for you in untapped customer sites. As you know a single terminal sale often leads to a computer system sale later on.

GENERAL SYSTEMS NEWS

Product News

DS/3000 is Launched 22,000 Miles Into the Future

By: Larry Hartge/GSD



Hewlett-Packard has been chosen as the computer systems network supplier for an advanced communications experiment, known as PROJECT PRELUDE. This experiment will be conducted in the fourth quarter of this year by Satellite Business Systems (SBS) in cooperation with three major business organizations and six equipment suppliers.

The PROJECT PRELUDE experiments will use the NASA Communications Technology Satellite (CTS) in stationary orbit at 22,000 miles altitude, to test emerging concepts for intra-company communications, including high-speed data transmissions, teleconferencing, and facsimile. Wide-band transmission of high-speed digitized communications will be in the 12 and 14 Gigahertz bands.

During the experiments, the six participating manufacturers will install equipment at two widely separated locations, at each of three different business organizations. These participating business organizations will have an HP 3000 at each of their sites, communicating via portable earth stations, for a few weeks. The companies, their participating locations, and tentative dates are:

Rockwell International Corporation (November):

Headquarters in Pittsburgh, PA, and a corporate facility in Seal Beach, California, near Los Angeles

Texaco, Inc. (December):

Executive offices in Harrison, New York, and a regional facility in Bellaire, Texas, near Houston

Montgomery Ward and Co., Inc. (January):

Headquarters in Chicago, Illinois, and a regional facility in Catonsville, Maryland, near Baltimore

DS/3000 will be an integral part of the three on-going presentations that are oriented toward top management, data processing management and document distribution management of the three participating business organizations. These same presentations will be given to customers selected by the HP sales force (watch the *Newsletter* for final details which will give the SBS coordinator's name, the number of people you're allowed, and the dates—Please **DO NOT** contact participating firms until advised!)



The SBS Crew—Some of the major contributors.

(left to right): Back row—Lloyd Summers, Elio Toschi, Rita Williams; Front row—Larry Kelly, Howard Morris, Nadine Halsted

The entire General Systems Division has responded to the requests of our enthusiastic SBS task force, thereby assuring that we will be able to do the necessary demonstrations in a very short period of time. The results of our commitment are already rolling in. Hewlett-Packard has already been identified as the computer systems network supplier in articles appearing in: *New York Times* 8/18, *Defense Space Daily* 8/18, and *Electronic News* 8/22.

The PROJECT PRELUDE experiment is under the overall direction of SBS, which is a partnership formed by wholly-owned subsidiaries of COMSAT General Corporation, IBM, and the Aetna Casualty and Surety Company. SBS has been authorized by the Federal Communications Commission to establish an all-digital, 12/14 GHz satellite

system to serve businesses, government agencies, and other large communications users. The SBS system, planned for commercial operation beginning in January 1981, will provide switched, private networks for users with small fixed earth terminals sited on the users' premises. (See *Fortune*, June 77, for further information on SBS.)

Performance Enhancement for DEL

By: Dennis Rieger/GSD

As of the next MIT tape release, DEL will have full PAGE MODE support! NO MORE FIELD-BY-FIELD TERMINAL I/O! (Unless you want it that way). A future issue of the Communicator/3000 will contain full details.

What this means to the customer who has a large number of fields per form (particularly those who are using packet switching networks) is a significant decrease in response time. Initial testing indicates the typical performance improvement can be about 50%, and in some cases, even more. That is, response time in PAGE MODE may be half that of some applications currently using DEL.

Other changes were made to DEL. These include: more edit performance enhancements; NRANGE and CNRANGE will now accept signed as well as unsigned range values; OPENTERM has been modified to correctly handle a DS/3000 pseudoterminal; and TELL messages will be prevented from being displayed on a DEL form.

There will be two situations where PAGE MODE DEL will not work. One is with the 2640A and the other is with the 3000 Series I.

We intend to do some more specific performance testing within the next few weeks, and when the results become available, they will be published. Manual changes to DEL will also be distributed after the MIT is released.

Existing OEM's and the New Software Program

By: Rich Edwards/GSD



Many of you have worked with GSD recently on presenting the new 3000 software program to your existing OEM's. The following "case study" is intended to cover many of the issues raised recently.

Phidough (Fi-Do) Systems, Inc., signed an OEM agreement on January 14, 1977 for 24 Type 4 functional units (6 HP 3000 Series II). Their first system was a Model 5 with COBOL, DEL, IMAGE/QUERY.

Tomorrow you're meeting with them to discuss their order for KSAM along with their fourth HP 3000. At the meeting you'd like to outline the new software program as well.

Question: How do I buy KSAM as an OEM? Do I need to buy multiple copies?

Answer: As an existing OEM under your "old" contract you need only buy one copy of KSAM; it can be copied for each system purchased under the existing contract. The add-on software should be purchased under the new "prepaid" purchase plan (\$2,250); this is so you have title and can continue to copy it under the existing agreement.

Q. Will I still receive a discount on the KSAM purchase?

A. Yes; the hardware discount applies (as before August 1) to the initial payment (\$1,500) and the prepaid purchase option (HP 32208 option 002 . . . \$450). The 12 months of prepaid monthly software fees (HP 22823A option 010 @ \$25/mo. ♦ total \$300) are not discounted. The \$1,950 of the purchase that is discounted will be eligible for the retroactive discount credit as additional systems are purchased in the future; this is the same as before August 1.

Q. Do I have to sign a Software Purchase Agreement to buy KSAM?

A. No; the discount terms are from the OEM Purchase Agreement (hardware).

Q. Next January after I sign a new OEM agreement, can I copy the software I already own for 3000 systems ordered under the new agreement?

A. No; each 3000 system must have software ordered for it. Next January you'll also sign a Software Purchase Agreement and receive discounts on software based on the total number of 3000's installed—not just the current contracted quantity.

Sales Aids

Looking for Computer Solutions for Higher Education?

By: Gary Stump/GSD

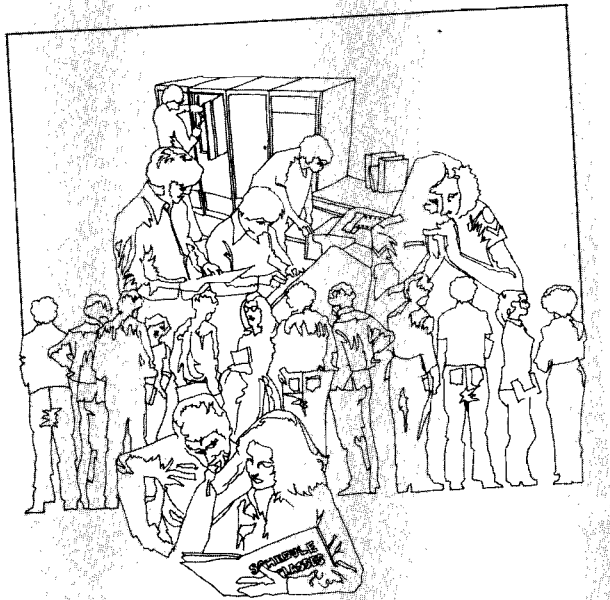
Well, look no more!!! The newest brochure from Educational Marketing, entitled "Computer Solutions for Higher Education", describes HP Educational systems as creative solutions for higher education. Addressing such applications as administrative, instructional, and networking, this distinctive 16-page brochure is a welcome addition to the entire list of Educational Marketing's sales literature.

Copies should already be in your hands. If they aren't, simply write or call Literature Distribution (9B-Palo Alto) for Part No. 5953-0523.

Computer solutions for higher education

Full capability systems for
administration and instruction

HEWLETT  PACKARD



DS/3000 Customer Slides

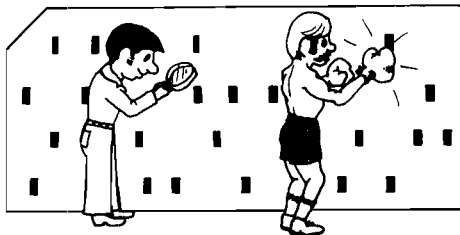
By: Larry Hartge/GSD

A "mini pitch" on Distributed Systems/3000 is now available from GSD. These colored overhead transparencies are the first 28 slides of the DS/3000 NPT Tour slides.

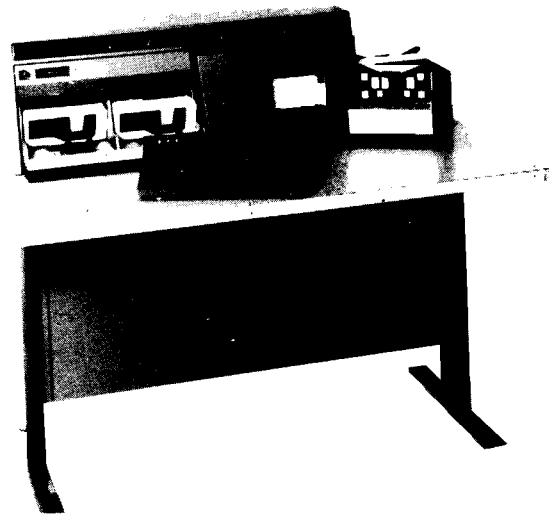
Order your set now! Send an IOS to *Bob Hall* at GSD for the DS/3000 Mini Pitch, slide set number 47-770824 at a cost of \$42.

What's a Cardreader Punch?

By: Ed North/GSD



It's an HP 3000 peripheral that gives you leverage! Whenever you encounter a situation where a potential customer is presently running a card shop it can be an invaluable tool for introducing him to the HP 3000.



Cards may be an integral part of his business for such uses as payroll, cost accounting, inventory control, or production scheduling and tracking, which he simply cannot substitute or replace. Or he may need these cards until conversion to an on-line operation is possible. For that customer, our card reader punch is a necessary and versatile peripheral. It can be a card reader, card punch, or off-line key punch all rolled into one unit. (One function at a time, please). A brief description of the card reader punch is given below.

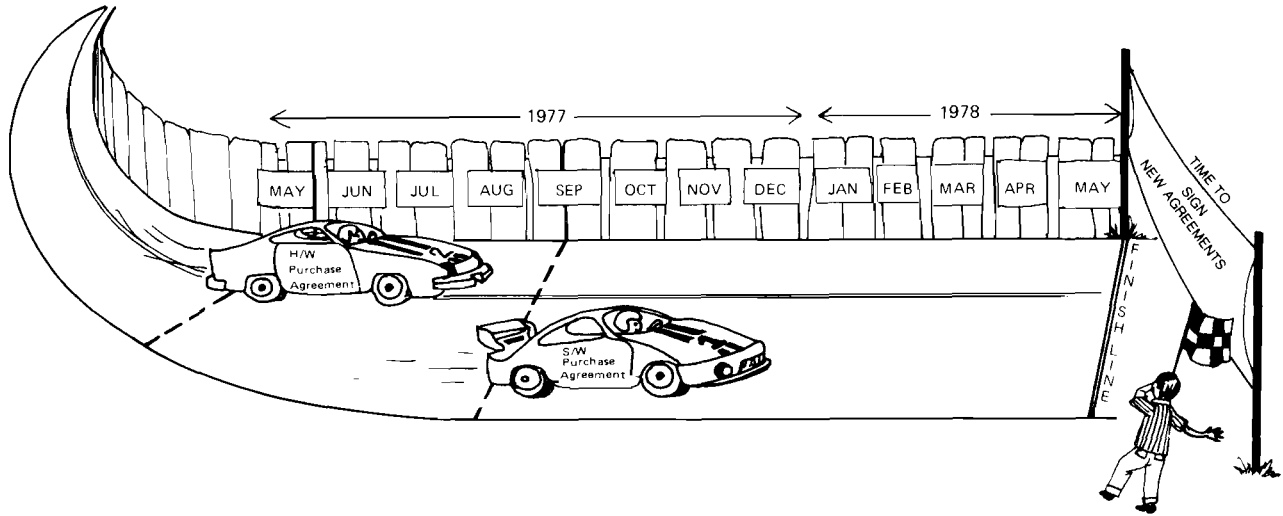
- On-line 80 column card reading, card punching and card printing
- Read, punch and print functions independently computer controlled
- Dual input hoppers and output stackers are program selectable
- Off-line data recorder capability (option 002 configuration)
- Punch, print, verify, reproduce capability
- Buffered operation

The Optoelectronics Division (OED) of HP purchased an HP 3000 in 1975 replacing an IBM System 3 Model 10. As you might expect, the computer operation was very card oriented and with the HP 3000 they purchased a card reader punch. OED utilizes the card reader punch for a variety of tasks. Cards are utilized in the labor collection system; the peripheral unit generates pull decks for material runs; and issue cards are punched for use in inventory control. Once a year we take physical inventory at HP and OED generates account cards with the card reader punch which are used in counting inventory. OED also utilizes the card reader punch extensively in the off-line key punch mode.

OED is an excellent example of how a manufacturing company can utilize the card reader punch. The card reader punch is a peripheral that can provide leverage for you in penetrating those card oriented manufacturing accounts.

Don't Think Twice—It's a 'Photo' Finish


By: Rich Edwards/GSD



Coterminous 3000 Hardware and Software Purchase Agreements

Many of you have inquired how to have an existing VEU or OEM sign a 12-month Software Purchase Agreement (SPA), when this wouldn't coincide with the expiration date of this existing Hardware Purchase Agreement.

The goal is to have all agreements end on a common date—"coterminous agreements." Implementation is very simple. On the SPA Exhibit C (Terms & Conditions) change



COMPUTER SYSTEMS SOFTWARE PURCHASE AGREEMENT

EXHIBIT C

TERMS AND CONDITIONS

paragraph 6 — TERM — to the following, before having your existing VEU/OEM customer sign the SPA:

6. TERM
 Unless terminated earlier as provided for in paragraph 8, Buyer may order Software under this agreement up to (EXPIRATION DATE OF HARDWARE PURCHASE AGREEMENT).

Competition

Why be an HP 3000 OEM? Answer: We are Still the Best Deal Around!

By: Ross Hunt/GSD

Now that we have changed our OEM discount schedule and software purchasing policies, why should a software house want to continue to be an HP OEM and what would attract a new OEM to HP? Simple! More dollars and flexible terms! HP still offers one of the most financially attractive OEM agreements available in the industry.

Using the most current OEM agreements available at Computer Systems Group, let's compare DEC, DG and HP.

Digital Equipment OEM Discount Schedule:

CPU Units	11/03 Thru		Software
	11/60	11/70's	
1	15%	8%	16%
2-4	17	10	20
5-9	20	13	26
10-19	23	16	32
20-34	26	19	38
35-49	29	22	44
50-74	32	25	50
75-99	34	27	54
100+	34	28	56

Compare HP policies versus DEC policies:

- DEC** — A CPU regardless of size (11/03 or 11/70) counts as one unit.

HP — Uses a functional unit concept where consideration is given for higher cost systems; a Series II carries four functional units, a Series I two functional units.
- DEC** — The discount schedule provides for no warranty or installation; 90 day warranty and installation reduces the schedule 5% at each level!

HP — 90 Day warranty and installation is included on all HP 3000's.
- DEC** — The OEM contract involves a quantity commitment with a bill-back clause for non-fulfillment.

HP — Has a stair-step discount schedule where additional discounts are earned and received with each new purchase and are retroactive to previous purchases.
- DEC** — 10% to 30% cancellation or reschedule charge for changes 90 days in advance of shipment.

HP — 5% or actual cost incurred cancellation charge.
- DEC** — Discount only applies to equipment with CPU's; add-on orders for peripherals are not discountable.

HP — Provides separate schedules for peripheral purchases.

Data General's OEM Discount Schedule:

CPU Units	Discount
1	0%
2	5
3-5	9
6-9	13
10-14	16
15-19	19
20-29	21
30-49	24
50-74	26
75-99	27
100-149	28
150-199	29
200+	



Compare HP policies to Data General Policies:

- DG** — Software is non-discountable and must be purchased at full price with each new CPU.

HP — Has a significant discount for multiple purchases of software, up to 70%!
- DG** — Like DEC all CPU's (Nova to large Eclipse) count as 1 unit.

HP — Functional units.
- DG** — Contract involves quantity commitment with a bill-back clause like DEC. Additionally if an OEM sells greater than contracted amount he receives the new discount level only on the incremental units, no retroactive credit.

HP — Stair-step retroactive discount.
- DG** — 20% to 50% cancellation charge.

HP — 5%.

HP's OEM Discount Schedule:

A. Hardware

Functional Units	HP 3000 (Schedule G)
1-9	10%
10-14	13
15-19	15
20-24	17
25-34	19
35-49	20
50-59	22
60-70	23
80-99	24
100-199	25

B. Software

Total # of 3000's Purchased	Software Discount
1	0%
2-3	20
4-5	30
6-10	40
11-15	50
16-20	60
21-25	65
26+	70

If you do not look closely both DEC and DG can appear to be a better financial deal, but before you retreat to your "end run" strategy, let's go a little deeper and see if we can win a straight dollar-for-dollar sale.

Consider the following examples:

Case 1:

Small local Software House new to HP

- Can sell 4 systems during contract period (2 Series I's and 2 Series II's or 2 DEC 11/34's and 2 11/70's or 2 DG 230's and 2 Eclipse 330's.
- Needs vendor installation and warranty
- Will purchase the same software with each system.

	HP	DG	DEC	
			11/34's	11/70's
Hardware Discount	13%	9%	12%	5%
Software Discount	30%	0	20%	20%

Case 2

Medium to large System House

- Can commit to 10 or more systems.
- Product mix and other parameters the same as Case 1

	HP	DG	DEC	
			11/34's	11/70's
Hardware Discount	19%	16%	15%	8%
Software Discount	60%	0	32%	32%

As you can see HP's OEM program clearly offers that software house in your territory the best margin and operating flexibility. If you add all the comparative strengths of the HP 3000, what other choice could they make?

Order Processing

How to Prepare a Coordinated Shipment APO

By: Sharon Bradley/GSD

The following procedures will help us process your next APO quickly and efficiently.

1. Address TWX to all divisions involved (remember COMSYS codes of all divisions).
2. Note S.O. #
3. Provide Customer Name
4. Include required ship date (longest available) and 2 week window
5. List equipment required

Example

Coordinator — GSD From — Salesman and O/P person

Coordinator — DMD

Coordinator — DTD

Coordinator — Boise

S.O. # XXX-XXXX

Westinghouse

Required —	Window
1 ea 32416A	GSD
1 ea #500	GSD
4 ea 2645A	DTD
1 ea 30209A	GSD
1 ea 7920S	DMD
1 ea 2617A	Boise

GSD APO Procedures

1. APO's will be scheduled to reflect longest availability of items.
2. GSD will send a TWX to salesman, S.O. order processing person, and any C.S. division, advising our estimated ship date and our automatic cancellation date.
3. APO's will be honored for a period of four weeks and then cancelled *automatically*. An additional four weeks may be granted if requested. All requests for extension must be requested by the responsible Regional Sales Manager. Request for extensions should be TWX'd to the order processing supervisor, *Sharon Bradley/GSD*.
4. If an APO extension is granted, rescheduling may be necessary in order to avoid having an issue date fall within an APO period. All APO's will be rescheduled 30 days prior to scheduled ship date. Upon rescheduling, order processing will TWX new scheduled ship date to S.O.
5. If firm order is received with a different configuration than APO, the APO acknowledged ship date may not be achievable.

GSD will be rigidly enforcing the above procedures, due to our large backlog and the increasing amount of APO's. Following these procedures will allow us to meet customer required dates on firm orders.

After transmitting the order with required date equal to availability and if the customer then wants equipment expedited, TWX all divisions asking for improved delivery. We will do our best to meet your requested delivery.

General Comments

APO's will not be processed without a required date.

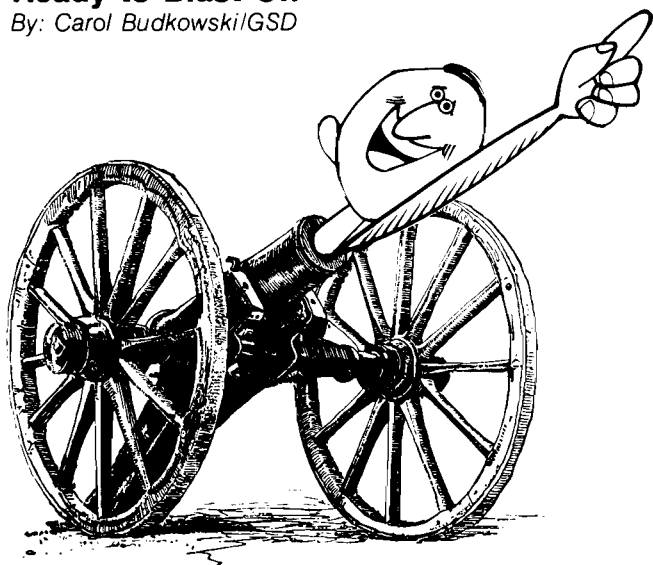
Be sure to reference confirming advanced order when transmitting firm order.

Also, we receive many orders that do not firm up against the sales order as S.O. # on APO. This causes confusion and extra work. Please try to maintain the same sales order number or advise the divisions of the change via TWX or in special instructions.

Division News

Educational User's Group Activities Ready to Blast Off

By: Carol Budkowski/GSD



We are ready to blast off with the HP Educational User's Group activities planned for this 1977-78 academic year. However, before we do, it's important that you understand membership/subscription price changes and procedures, and our Newsletter plans.

User Membership and Subscription Fees Increase

On October 1, 1977, the HP Educational User's Group membership fees will increase. Educational User's Group memberships will cost \$8.00 per year. This fee includes payment for the Newsletter, user group services, and meeting costs. Site representatives and four individuals of their choice will receive these services free. However, in order for these four people to begin benefitting from our user services, the site representative must sign their membership form. Non-HP users pay a year subscription fee of \$20.00 . . . an increase of \$14.00.

How Your Customer Can Start Benefitting From HP User Services

Upon successfully making an Education sale, the information off your order is used to generate a questionnaire. Once you complete this form and designate a site representative, we are able to communicate with your customer on how to join the HP Educational User's Group. Then, an invitation, five membership forms, and a copy of the HP Educational User Services Group brochure (5952-4522) is sent out for distribution to your site representative.

Newsletter Plans in the Making

The *HP Educational User's Group Newsletter* is designed to serve the information and communication needs of educators using HP computer systems. The Newsletter is published monthly, October through May. Each issue focuses on a special interest area, with in-depth articles in that area, user-written application stories and selected references. General interest items such as announcements, book reviews, and upcoming events are also included.

The Newsletter has just completed its seventh year of publication. This year (1977-78) the Newsletter will present such FOCUS topics as on-line registration, distributed systems, the Handicapped, automated career guidance systems, accounting/financial systems, data base management, and for the first issue . . . resource sharing.* If you have a customer whose application could be of general interest and fits into one of these focus issues, please encourage them to write an article and send it to the EDITOR. The EDITOR is located at HP-GSD (HP Educational User Services Group, 5303 Stevens Creek Blvd., Santa Clara, CA., 95050.)

Newsletter Back Issues Have Three Different Charges

Along with the overall membership and subscription price increase, Newsletter back issue costs have gone up, too. The Newsletter for HP users costs \$1.25 per copy; non-HP users pay only \$1.00 per copy. Complete indexes for all the Newsletters can be obtained by writing or calling the EDITOR at the address listed above or by calling (408) 249-7020 extension 3158.

*October, Volume 8, No. 1.

APL/3000 Customer Checklist

By: Pete Van Kuran/GSD

The following article is a follow-up to the COMGRAM of July 27, 1977, from Rich Zalisk/GSD regarding the status of APL/3000.

Prospective APL/3000 customers need to be qualified quite carefully in order to ensure that our APL/3000 can fulfill the requirements of their application. For this reason a checklist is enclosed that we hope will help you in the qualification of prospective customers.

We are conducting additional performance measurements as well and the results of these will be made available

as soon as they are finished. In the meantime, if you have any questions or comments regarding APL/3000, please call me. I am very interested in your inputs. I can be reached at GSD Santa Clara, extension 2794.

APL/3000 CHECKLIST

- Are the planned applications aimed at problem solving analysis instead of data base management and transaction processing?

To the extent that the applications are aimed at analysis and problem solving, then APL can be a good solution. Among the kinds of applications which can be implemented in this area are:

- Budget planning and control
- Strategic planning
- Sales analysis
- Forecasting
- Project planning and control
- Modeling
- Cost analysis

- Is performance important to the customer?

The customer should realize that the HP 3000 is a mid-computer and not a 370/158. APL/3000 is a solid product with a lot of strong features like the EDITOR and APLGOL, but it cannot match the speed of the larger IBM systems. Sell features not speed; better and cheaper but not necessarily faster!

- Does the customer or his OEM currently use Scientific Timesharing (STSC) or I.P. Sharpe Service Bureaus for APL?

Service Bureau customers should be approached carefully for two reasons:

- There are two extensions to APL that many service bureaus have implemented that are not yet implemented on APL/3000:
 - A component file system. These service bureaus have provided a good interface to external (disc) files. You can sell APL/3000's unlimited workspace capability against this to some extent; but there is a point where the customer has to have files.

APL/3000 uses the IBM shared variable concept for file access. While this feature makes it possible for APL/3000 to do external file accesses, we should not propose APL/3000 in accounts where file access is critical to the success of the installation.
 - A formatting capability. APL/3000 does not yet have this feature that current users of STSC are used to. It basically simplifies the preparation of reports.

- Service bureaus provide significant amounts of consulting and support service, usually for no additional charge. A good APL/3000 prospect should have this capability already in-house or be willing to contract it from someone else (OEM or consultant).

Current users of large in-house IBM systems using APLSV or VSAPL under TSO or VSPC should make better prospects because the current implementations of these products do not contain the file system and formatting enhancements, unless the company's internal EDP personnel have implemented it themselves. Another advantage of these IBM in-house shops is that the expertise in APL already exists and can be transferred to APL/3000 easily.

4. System Configuration Guidelines

Language Memory	Number of Terminals							
	Less Than 4		4-7		8-12		13-16	
	Mult. Lingual	APL Only	Mult. Lingual	APL Only	Mult. Lingual	APL Only	Mult. Lingual	APL Only
256KB	OK	OK*	Not OK	Not OK	Not OK	Not OK	Not OK	Not OK
320KB	OK	OK	OK	OK*	Not OK	Not OK	Not OK	Not OK
384KB	OK	OK	OK	OK	OK*	OK*	Not OK	Not OK
512KB	OK	OK	OK	OK	OK	OK	OK	OK*

*This is a qualified OK, meaning that if the customer is going to use large workspaces and install terminals at the high end of the range, then you are better off to add memory.

Use this configuration chart as follows:

- Determine approximate number of terminals.
- Determine whether the system will be dedicated to APL or if it is a multi-lingual system.
- This will locate the appropriate column, and will give you an approximate indication of which size 3000 is appropriate.

In general:

- The more terminals the customer plans to implement, the more memory he needs.
- More APL language capability also implies more memory.

- Is the customer a current APL user, or a would-be user (has the desire but not the resources)?

The more positively the user feels about APL, the better prospect he is. We should be orienting our efforts toward selling APL/3000 to current APL users, or people who want APL but do not have it. The latter are very good prospects because they are not dependent on existing features.

6. Does the customer have a requirement for quick, one time programs?

Here is an area where APL/3000 excels. APL/3000 programs can be written and implemented quickly. APL traditionally has been used to solve management requests of "what if" questions.

2026 Knowledge Available!

By: *Larry Hartge/GSD*

A sure-fire sales aid is being offered again! Starting on October 17, 1977 a one week 2026 SE class will be taught at GSD. Be sure you capitalize upon the opportunity.

Upon completion of this course, the student will be able to:

- Describe and demonstrate the capabilities, operation and interaction of the major hardware and software modules.
- Use the Data Entry Applications Language (DEAL) to create data entry and data base applications.
- Analyze system and application problems and, if required, build a case of information and documentation for Hewlett-Packard resolution.
- Assume the role of "Central Site Manager" for a network of satellite users.

To enroll please contact *Linda Rodrigues X2708*. The course number will be GSD-28.

GSD Sales Support — Europe: Open for Business!

By: *Bob Lewin/GSD HPSA*

The members of the GSD Sales Support — Europe group have been established in Geneva, Switzerland. The members of the team are:

- Bob Lewin*
- Joe Dietzgen*
- Steve Feo*
- Don Ringen*
- Chuck Sieloff*

Totaling over 40 years of commercial data processing experience; our objective is to aid the European CSG sales force to successfully sell GSD products to commercial customers, particularly in the manufacturing market.

This will be accomplished by:

1. developing and initially giving modules of instruction on the attractiveness of GSD products (particularly the HP 3000) to the commercial customer, and

2. providing pre-sales consulting in cooperation with the local country sales team, with emphasis on key accounts.

The modules of instruction are intended to be available to the worldwide CSG sales force. Our current schedule is to have all modules completed in the next few months.

All of us in the group are looking forward to the opportunity in future articles of telling you about the successful activities of our European sales force and on progress in the group.

3000 Software Support Customer Profile

By: *Sherry Harvey/CSG*

Please note this change to the use of the Profile Form:

Place an X by the name of the customer contact to which you would like the manual updates sent. Otherwise, they will be sent to the S.E. contact, as indicated on the form.

It is vital that this Profile accompany each 3000 Software order. Besides supplying all necessary ordering information, it provides both the CE and SE with the data needed to successfully manager support for the account.

Remember, unless this profile is submitted to Order Processing with your order, update materials cannot be sent to your customer!

SOFTWARE SUPPORT CUSTOMER PROFILE

FE

COMPANY NAME _____

PROFILE IS FOR **NEW SOFTWARE** **EXISTING SOFTWARE**

PLAN I NEW SUPPORT SYSTEM CPU
 OR RENEWAL SERIAL #
 PLAN II CHANGE UPGRADE

CONTRACT DURATION (IN MONTHS) 12 48

BILLING FREQUENCY QUARTERLY YEARLY

CUSTOMER SYSTEM MANAGERS:

1 FOR SE TO CONTACT **X** 2 FOR CE TO CONTACT

NAME _____ PHONE _____	NAME _____ PHONE _____
DEPT _____	DEPT _____
STREET _____	STREET _____
CITY STATE _____ ZIP _____	CITY STATE _____ ZIP _____
COUNTRY _____	COUNTRY _____

PHONE-IN CONSULTING CENTER SUPPORTING CUSTOMER _____

*THIS IS WHERE SOFTWARE UPDATE MATERIAL WILL BE SENT

OP

HP CUSTOMER NUMBER _____

HP ORIGINAL HARDWARE/SOFTWARE ORDER NUMBER (O.T. = T1) _____

HP SOFTWARE SUPPORT ORDER NUMBER (O.T. = S1) _____

CUSTOMER P.O. NUMBER (SOFTWARE SUPPORT O.T. = S1) _____

FE SIGNATURE _____ DATE: _____

"AFTER TRANSMITTING ORDER"
PLEASE FOLD AND MAIL THIS FORM

HP GRENOBLE NEWS

Sales Aids

3070 HP-IB Application Note

By: Richard Franklin/HPG

Remember those 3070's working hard on automatic testing with HP-IB in South Queensferry? Well, we have an application note on this now which will be distributed in the near future.

If you need one now, I have some copies here in Grenoble I can mail you, or get in touch with *Alic Rakhmanoff* in Boise.

A Failure Story with a Happy Ending

By: Richard Franklin/HPG

- A Card Reader Failure
- Failure to Supply a General Purpose Computer
- Failure to Supply European Support

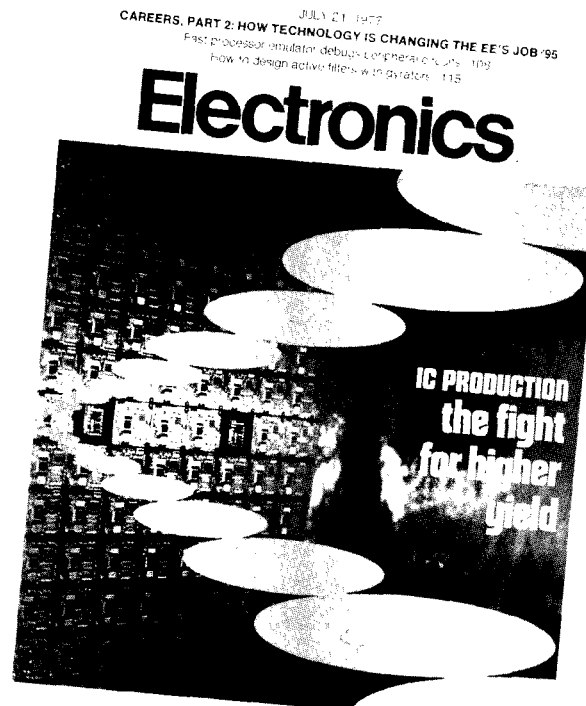
So the fourth manufacturer got the order. A major clothing manufacturer in France is now going to solve its problems of job vouchering, time control and inventory control with ten 3070's and an HP 1000!

Did You See That Article?

By: Richard Franklin/HPG

Electronics magazine (July 21) had a full page article on a significant development in technology and business. That's right, the 3070!

"The HP-Link, a conceptual term to represent the hardware and software involved, allows single instruments or clusters of instruments to be connected through the 3070A to a remote HP 1000 computer system."



CS GROUP NEWS

Computer Systems Sales to Hospitals

By: Paul Ely/CSG-Dean Morton/MPG

We have recently made plans aimed at increasing HP's sales of computer systems to hospitals and we thought you would be interested in knowing about them.

The major change is that, beginning November 1, the Medical Products Group field organization will take quota responsibility for the sales of certain Computer Systems products, such as HP 3000 series and data terminals, to hospitals in four metropolitan areas in the U.S. The cities tentatively chosen for this initial effort are Los Angeles, Chicago, Atlanta and New York.

Upcoming CS Newsletter Index

By: Bob Lindsay/CSG

We've recently had a flurry of interest in an index for the back issues of the *Computer Systems Newsletter*.

Volume #2, Issue #24 of the *Newsletter* will carry a publication date of October 31, 1977 and will be a cumulative index to the previous 23 Issues of Volume #2 and to the 9 Issues of Volume #1.

The current plan for the index is to list all articles chronologically by title, topic (SALES AIDS, ORDER PROCESSING, etc.) and publishing Division (AMD, BOISE, etc.).

If there is a different format that you feel would be particularly helpful, please let me know.

Order Processing

Data Terminals Purchase Agreement

By: Chuck Silberstein/CSG

Effective Sept. 1, 1977 the single page Data Terminals Purchase Agreement (Form #R4-76) will be obsolete and not be replaced.

Customers desiring to enter into a purchase agreement to purchase terminals will need to sign either the OEM or COMBO Agreement.

This decision was made based on a low usage factor and with the approval of CSG's Data Terminals Division.

HEWLETT PACKARD COMPUTER SYSTEMS OEM PURCHASE AGREEMENT

AGREEMENT NUMBER _____

The Buyer named below agrees to purchase and may only purchase the Hewlett-Packard HP equipment types checked below and described in the attached Exhibit B upon the following terms and conditions:

OEM: Type 1 Type 3E
 Type 2 Type 4
 Type 3 Type 6
 Type 6 Type 7

End-user: All Types

1. PRICE

a. The price for equipment purchased hereunder is based on the HP Corporate Price List which shall be the price in effect on the date of purchase. Buyer's orders less the appropriate discount specified in paragraph 1.b. shall be the price in effect on the date of purchase. Buyer may purchase additional quantities in the United States and for ultimate destination outside the 50 United States and possessions at FOB U.S. Port or FOB destination prices as specified in the HP Corporate Price List. The price for equipment purchased hereunder which is not listed in the HP Corporate Price List shall be mutually agreed upon by the Buyer and the HP Corporation.

BUYER'S ESTIMATE

Type 1, Functional Units	_____
Type 2, Functional Units	_____
Type 3, Functional Units	_____
Type 5, Functional Units	_____
Total Functional Units	
Type 6A Quantity	_____
Type 6B Quantity	_____
Total Type 6	
Type 7A Quantity	_____

b. If Buyer orders equipment in excess of Buyer's quantity estimates in paragraph 1.a. or 1.d.) during the term of this agreement, Buyer will be granted discounts on the additional quantities purchased under this agreement at the time contained in the amount on the additional order is issued in excess of Buyer's original quantity commitment shall be adjusted to reflect equipment actually delivered. The issuance of additional orders shall not reduce the price of previous orders.

c. If Buyer had a computer systems purchase agreement with HP the prior year, then Buyer may specify any quantities in paragraph 1.a. up to the actual total Functional Units and/or Quantities purchased under that prior agreement.

d. If Buyer did not have a prior computer systems purchase agreement or if Buyer plans to purchase more than the quantities in paragraph 1.a. shall be mutually agreed upon and the following provisions shall apply.

2. COPYRIGHTED MATERIALS

HP copyrighted materials (software and printed documentation) may be copied for archive purposes to replace a worn copy for each OEM designated Type 1, 2, 3, or 3D processor or system purchased hereunder for external distribution with training or similar services will be provided by HP for each OEM designated Type 1, 2, 3, or 3D processor or system. HP copyrighted materials may not be copied onto any media (e.g., mag tape, paper tape, disc, cassette, Read Only Memory, etc.) for any other purpose than authorization to duplicate copyrighted materials. HP does not authorize the Buyer or Buyer's customers to duplicate HP copyrighted materials in any manner other than that which is provided in this agreement or otherwise approved in writing by HP.

3. INSTALLATION

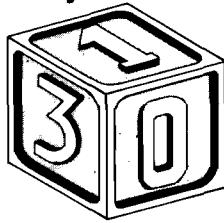
HP will provide HP's standard installation services for HP systems purchased hereunder. For other HP systems purchased hereunder, the Buyer and HP will agree on other mutually agreed upon terms.

4. WARRANTIES

The HP warranty for the equipment specified in paragraph 1.a. shall be the warranty in effect on the date of purchase. Buyer's orders less the appropriate discount shall be the price in effect on the date of purchase. Buyer may purchase additional quantities in the United States and for ultimate destination outside the 50 United States and possessions at FOB U.S. Port or FOB destination prices as specified in the HP Corporate Price List. The price for equipment purchased hereunder which is not listed in the HP Corporate Price List shall be mutually agreed upon by the Buyer and the HP Corporation.

Type "0" is for Non-HP Systems

By: Sherry Harvey/CSG



THANKS for your cooperation in specifying "System Type" on your orders. To help make this easier, we are refining the definitions and providing a place to indicate "System Type" on the new HP quote form which will be available in a few weeks.

Please note the following definitions:

Specify:	If your order is for:
Code 1	21XX products, 21XX-based systems, and all peripherals or add-ons to/for 21XX-based systems. Examples are 2113, 2173, 8580, 9640, 19702, etc.
Code 3	(3000 products) and all peripherals or add-ons to/for 3000 systems. (Same as before.)
Code 0	Stand-alone peripherals, components, or add-ons not used with HP computer systems.

COMPUTER SYSTEMS NEWSLETTER

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