Introducing the HP 1000 A400

A new low-cost computer for real-time applications
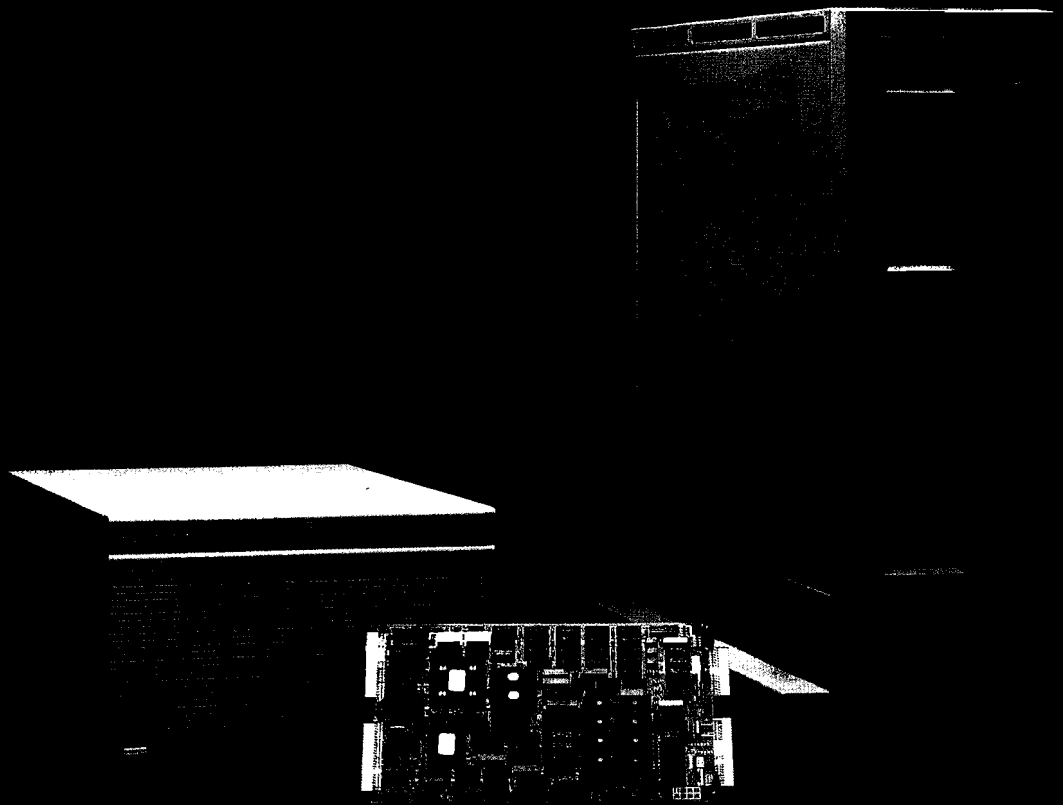
HEWLETT PACKARD

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On the cover

How to get your name added to the distribution for HP *Channels*

Table of Contents

Training

HARDWARE SERVICE TRAINING, AN INVESTMENT IN SELF-SUPPORT

Businesses across the country are currently reassessing their financial and production strategies in view of the impending tax revision which will curtail the long-cherished investment tax credit. And one of their primary concerns is how to extend the useful life of existing equipment with moderate resources.

To keep a computer or instrument running efficiently in or beyond its expected life cycle, there is no better way than an active, preventive maintenance program. The ability to detect minor flaws before they result in a major breakdown, as well as the speed in which the equipment is repaired, are crucial to any business and production-intensive environment. Time is money.

Hewlett-Packard Customer Service Training has the right program to assist hardware owners who desire self-support and preventive maintenance.

Currently, there are 21 classroom computer hardware courses, 57 self-paced computer learning packages, 22 self-paced mentored courses, and 20 classroom instrument service classes available to self-support customers. In addition to the Mountain View head-quarters in California, Customer Service Training also provides classroom computer service instruction at the Dallas, Texas, Technical Training Center, the Rockville, Maryland, Technical Training Center, and the European Technical Training Center in Grenoble, France. All instrument classes are delivered at the respective product division.

For detailed information on classes that provide good, solid service information and techniques on CPUs, discs, printers, PCs, and instruments, please contact Customer Service Training at 415-960-5300/5295, or 800-523-0696 (in the continental US), or 800-882-9595 (within California).

Training

A UNIQUE LEARNING OPPORTUNITY

A unique learning opportunity exists for HP PC and PC peripheral users who are interested in self maintenance and support of their equipment.

The HP Touchscreen PC, LaserJet printer, Integral PC, and Vectra PC are some of the products featured in the HP Customer Service Training SMT (Self-paced Mentored Training) program. SMT offers its participants a self-paced learning program under the supervision of a professional instructor.

Dedicated equipment, the latest technical information, as well as a friendly and productive atmosphere have made SMT an outstanding and unique learning experience.

Aside from the Mountain View, California headquarters, Customer Service Training also offers SMT in the Rockville, Maryland Technical Training Center as well as the Dallas, Texas Technical Training Center.

Current course offerings and schedule are as follows:

Product No.	Option	Course	Length
05092A +	001	HP 110 Portable Computer	2 days
	002	HP 150 Personal Computer	3 days
	003	HP 150I Personal Computer	3 days
	004	HP 150 Emulator	1 day
	005	HP-85A/B Personal Computer	2 days
	006	HP-86A/B Personal Computer	2 days
	007	HP 9121S/D Disc Drives	1 day
	008	HP 9122A Disc Drives	1 day
	009	HP 9133A/34A Disc Drives	1 day
	010	HP 9114A Disc Drive	1 day
	011	HP 2225A ThinkJet Printer	1 day
	012	HP 89095A Printer	1 day
	013*	HP 2686A LaserJet Printer	
	014	HP 7470A Plotter	1 day
	015	HP 7475A Plotter	1 day
	016	HP 9872A Plotter	1 day
	017	HP 262X Terminals	1 day
	018	HP 264X Terminals	3 days
	019	Etherlink/150	1 day
	020	HP 72425A Vectra PC	3 days
	021	HP 15011 Personal Computer	3 days
	022	HP 9807A Integral PC	4 days
	023*	HP 2686A/D LaserJet Printers	4 days

Option 013 has been upgraded to Option 023

Mountain View: the week of November 17, December 15, January 26, 1987, February 23, and March 16.

Rockville: the week of December 15, January 12, 1987, January 19, and March 9.

Dallas: the week of January 19, 1987, and March 23.

"Customer-site" training is also available for above listings. Please call Wei Huang for further information at 415-960-5300/5295, or 800-523-0696 (in the continental U.S.), or 800-882-9595 (within California).

Support

UPDATE ON SUPPORT TRANSITION FOR DISTRIBUTION SOFTWARE

In January 1986, HP sold software product rights for SFD I, SFD II, OM/3, and INVISION software to the Distribution Resources Company (DRC). Since that time, HP has been working closely with DRC to develop a transition plan for the future support of these products. Highlights of this plan for contractual software support services are summarized here.

Important changes to HP support contracts

Three events will take place November 1, 1986, that will affect the software support services SFDIOMI

INVISION users currently receive from HP.

■ Effective November 1, 1986, HP will no longer offer Account Management Support (AMS) service for distribution software. DRC will assume sole responsibility for providing contractual on-site support for these products.

■ All AMS contracts for distribution software will automatically be converted to Response Center Support (RCS) contracts. Users will receive a refund for any months of AMS support paid in advance.

■ HP will continue to provide RCS and Software Materials Subscription (SMS) services for distribution software. HP will also continue to offer AMS support for operating system software for users running distribution software applications.

These changes are summarized in the following table.

November 1 HP Price List changes: distribution software

Product No.	Description
Support products removed from the HP Price List November 1, 1986	
991038+T00	AMS - Distribution Family
Support products available after November 1, 1986	
991038+H00	RCS - Distribution Family
+V00	Extended Distribution Family Support
36403A +S00	SMS - SFD I
+W00	Extended SMS - SFD I
+Q00	Manual Update Service (MUS) - SFD I
36401A +S00	SMS - SFD II
+W00	Extended SMS - SFD II
+Q00	MUS - SFD II
36414A +S00	SMS - INVISION
+W00	Extended SMS - INVISION
+Q00	MUS - INVISION
36415A +S00	SMS - OW3000
+W00	Extended SMS - OW3000
+Q00	MUS - OW3000

DRC's on-site support services for distribution software

DRC will offer two levels of on-site contractual software support for distribution software: Distribution Management Support (DMS) and DMS Plus. DMS and DMS Plus both build on HP's Response Center Support and Software Materials Subscription services.

A user's order for DMS or DMS Plus with Distribution Resources Company will trigger an order with HP for RCS and SMS support. Thus, users will continue to have access to HP's worldwide Response Centers for telephone assistance and to DRC's software and manual updates delivered through HP's Software Distribution Center (SDC).

Exception for UK and South Africa users

The changes described above will affect users in all countries except South Africa and the UK. A separate support agreement is being developed in these countries. When this agreement is finalized, program specifics will be communicated to the users.

If you have questions about these changes, contact your HP sales rep.

General

Using HP 262X Terminals with MPE XL

This article addresses the question on HP 262X terminals we support with the MPE XL HP 3000 Series 930 systems. The table below lists the ROM part numbers required. These newer ROMs ● necessary for proper VPLUS hand-shaking on MPE XL. The terminal will hang if the older ROMs are used.

Terminal	ROM P/N
HP 2622A	1818-3199
	1818-3200
	1818-3201
	1818-3202†
	1818-3203
HP 2623A	1818-3223
	1818-3224
	1818-3225
	1818-3226
	1818-3227
	1818-3228
HP 2624B	1818-3139
	1818-3140
	1818-3141
	1818-3142
	1818-1701
	1818-3143
HP 2627A	1818-3487
	1818-3488
	1818-3489
	1818-3490
	1818-3491

†Only needed for the optional internal printer.

The ROMs are orderable from the Corporate Parts Center (CPC) through your local purchasing department. The user is responsible for paying the HP customer engineer time and materials for upgrading the ROMs.

To find out the ROM part numbers, press the following function keys on your terminal: AIDS, SERVICE KEYS, and IDENTIFY ROMS.

In addition to the terminals listed above, HP 2392A, HP 2393A, HP 2397A, HP 150A/B/C* Touchscreen PC, HP Vectra* PC, and HP 110 Portable PLUS* are also supported on MPE XL.

*These personal computers can be connected to the DTC in terminal emulation mode as on ATPs.

HP 3000

MPE V/E UB-MIT Ships in October

MPE V/E UB-MIT, the latest version of MPE for the HP 3000 family of computers, is scheduled to ship in October. UB-MIT is significant for several reasons, among which include the introduction of several new products and enhancements to MPE which increase its functionality.

UB-MIT contains the latest versions of HP's software products

In the past, due to HP's efforts to provide new products to users as quickly as possible, a temporary divergence existed between "T"-based and "U"-based versions of MPE. There were products available on "T"-based MITs that were not available on "U"-based MITs, and vice versa. UB-MIT contains a roll-in of U-MIT, UA-MIT, and T-Delta-5; therefore, it contains the latest versions of all HP's products. This provides two advantages for users. First, users who are supporting two versions of MPE to obtain the products they require can reduce their support workload by updating all their systems to one version of MPE: UB-MIT. Second, users who have wanted to order products that were released on different versions of MPE, and who also wanted to install the products on one machine, can now do so by updating to UB-MIT.

UB-MIT contains several new products

DBChange is an interactive utility, similar to Adager, used for dynamic restructuring and capacity expansion of TurboIMAGE databases. In the past, users had to unload the data (DBunload), modify the structure of the database, and then reload the data (DBload). DBChange allows the database administrator to dynamically alter the structure of the database, thus reducing database downtime and increasing database availability.

DMI and Meridian S L 1 are two products which reduce the cost of PBX-based terminal connections by reducing the number of data modules and by reducing the required amount of cabling.

UB-MIT contains enhancements to MPE

In addition to the new products, MPE contains enhancements which significantly increase the flexibility and functionality of MPE. The capacity of the System Segmented Library, SL.PUB.SYS, has been doubled. Users can now install more applications and have much more room for growth. In addition, the performance enhancements to the MPE/KERNEL have been carried over from UA-MIT. These enhancements include more efficient memory management, optimized use of the disc caching module, new microcode instructions, and the microcoding of frequently used operating system routines (for the Series 68/70).

With the release of UB-MIT, users can have it all. UB-MIT supports the largest set of HP products, provides increased MPE functionality, and is available now. We strongly recommend that users update to UB-MIT.

HP 3000

MPE V/E T-DELTA-6 PROVIDES INCREASED OFFICE AUTOMATION CAPABILITIES

MPE V/E T-Delta-6 is scheduled to ship to users in late October. This release of MPE V/E includes updated versions of HP DeskManager, HP List-keeper, and HP Slate products. It also includes HP File/Library and HP Schedule, which are two new products that work with the latest version of HP DeskManager (B.00.00).

T-Delta-6 contains a major upgrade for HP DeskManager, the communications backbone of the HP Personal Productivity Center (PPC). HP DeskManager has been significantly enhanced in several ways:

As an "application manager," HP DeskManager allows you to invoke an application from within HP Desk. The applications are not limited to those supplied by HP.

■ The new "interrupt/resume" feature allows users to begin an activity, hit the suspend key – check their calendar, copy information from another area, etc. – then, by touching the resume key, return to their original work exactly as they left it.

■ New maintenance and administration features are included.

■ Additional document converters have been added for AdvanceWrite to HP Word and HP Word13000 to HP Word/150.

■ An optional new product for HP Desk, called HP File/Library, adds the capabilities of community filing, document archiving, and keyword search for document retrieval.

■ Another optional new product for HP Desk, called HP Schedule, provides the ability to examine for free time from the Calendars of designated HP Desk users. It can be used to schedule meetings or for resource selection and booking.

T-Delta-6 is the result of HP's continuing effort to provide new products to our users as quickly as possible. In order to release the newest version of HP DeskManager to waiting users, HP limited the focus of the MIT to HP DeskManager and its related products. T-Delta-6 will not be shipped "in quantity" to the installed base. It will be distributed to users that request it or order a product that was introduced on it.

HP's effort to provide these new products as quickly as possible has led to a temporary divergence between T-Delta-6 and UB-MIT. In order to introduce HP DeskManager and its related products as quickly as practical, HP was not able to "roll" the products of T-Delta-6 into UB-MIT. Instead, the products on T-Delta-6 will be rolled into UB-Delta-1, which is scheduled to release late in calendar year 1986 or early in 1987. Users migrating from T-based versions of MPE to U-based versions should be aware of certain "product trade-offs." To aid users in planning their updates, the table below summarizes the past several MIT releases.

The T-Delta-6 release of MPE V/E provides HP 3000 users with improved office functionality. It is another step in HP's continued commitment to expand the capabilities of our office products.

SYSTEM	System Req'ts	System Notes
Series 37/37XE	• MPE V/E T–MIT or loter	• Maximum of 2 units per system. • Backup limit of 132mb with 1/2 mb main memory. • Backup limit of 220mb with 1 mb of moin memory • Backup obove 220mb requires o 1600 cpi, 6250 cpi or 35401A tape drive.
Series 40 42/42XP Series 52	■ MPE V/E T–MIT (for Series 40/42/42XP) or' loter ■ MPE V/E T–Delta~5 (for Series 52) or later • CPS–E (MPE V/E) microcode for cold load.	• Maximum of 4 units per system. ■ Maximum of 4 units of 9144A and 35401A, in combinotion, per system. • Backup limit 220mb. • Backup obove 220mb requires 1600 cpi, 6250 cpi or 35401A tope drive.
Series 48/58	■ MPE V/E T–MIT or loter • CPS–E (MPE V/E) microcode lor cold load	Maximum of 4 units per system. • Maximum of 4 units of 9144A ond 35401A, in combinatian, per system • Backup limit 220mb. • Backup above 220mb requires 1600 cpi, 6250 cpi or 35401A tope drive.
Series 68/70	■ MPE V/E T–MIT (for Series 68) or loter ■ MPE UA–MIT (for Series 70) or later	• Maximum of 4 units per system. • Maximum of 4 units of 9144A ond 35401A, in combinotion, per system • Backup limit 220mb. • Backup obove 220mb requires 1600 cpi. 6250 cpi or 35401A tope drive. • Not supported os o cold load device. • Cannot be ploced on the same GIC as the System Disc on the Series 68/70.

MPE VIP REMOVED FROM THE HP PRICE LIST SEPTEMBER 1

Due to reduced demand, MPE VIP-Delta-1 has been obsoleted and removed from the HP Price List. As of September, the MPE VIP media product (PIN 51451A) will no longer appear on the HP Price List, and HP's Software Distribution Center (SDC) will no longer accept orders for it. After the MPE UB-Delta-1 MIT is released, factory support for MPE V/P and MPE V/P-Delta-1 will be terminated.

MPE VIP-Delta-1, the last version of MPE V/P FOS developed, was released to users in September 1984. Since then, MPE VIE has been the main focus of MPE development and, therefore, has had significant enhancements made to it. Some of the enhancements include:

RPS. Rotational positional sensing reduces disc access times.

■ *Expanded tables.* Most of the major tables, including the Data Segment Table (DST), the Code Segment Tables (CST & CSTX), and the Process Control Block (PCB), have been significantly enlarged to provide room for future growth and expandability.

■ *Expanded System Segmented Library.* In the soon to be released "UB" version of MPE, the System Segmented Library capacity has been doubled. Thus, MPE will be able to provide users with greater flexibility and additional room for growth.

Extended memory. With MPE VIE, the maximum memory capacity for the Series 68 and 70 has been doubled to 16 Mbytes. By increasing the amount of supported memory, applications may experience performance improvements.

TurboIMAGE DBMS. TurboIMAGE is a significantly improved and fully compatible replacement for IMAGE/3000, which is available only on MPE VIE systems. TurboIMAGE has much larger capacities and can provide significantly

increased performance for DBMS-based applications. A related product, DBchange, is a product that allows users to dynamically restructure the TurboIMAGE database.

■ *NS/3000.* NS/3000 is HP's next-generation replacement for DS/3000. It is fully compatible with DS and complies with the International Standards Organization's "Open Systems Interconnect" model. With NS, it is HP's intention to adhere to industry standards; consequently, it provides the basis for multi-vendor communications.

■ *Performance enhancements.* Several performance enhancements have been incorporated into MPE VIE. These enhancements include more efficient memory management, optimized use of the disc caching module, the microcoding of often-used operating system routines (for the Series 68/70), and more.

■ *Software products.* There have been many software products introduced on MPE VIE. Some of these products include Business Report Writer (a what-you-see-is-what-you-get type of report writer), HPSQL/V (a relational DBMS product), HP System Dictionary (HP's next-generation replacement for Dictionary/3000), HP Trend (a product useful for managing system resources), HP Business Basic, and all the related Personal Productivity Center products (HP's office automation product offerings). In addition to these and other new software products, many of HP's current software products have been enhanced.

■ *Hardware products.* Since the release of MPE VIP-Delta-1, HP has released several new hardware products. The most recent products introduced include the HP 3000 Series 52, Series 58, and the Series 70. These products provide HP customers with more computing power at a lower cost. In addition to new systems, HP has also introduced new peripherals which are supported only on MPE V/E systems.

Users planning on moving from MPE VIP to MPE VIE should be aware of the

difference in firmware. A new firmware board (CPS-E board) is available for the Series 39-48 systems. MPE VIE will run on either the new or the old firmware (with some limitations), while MPE V/P will run only on the old firmware board.

While the MPE V/E firmware board is not required to run MPE VIE, this new firmware allows the user to take full advantage of the expanded system tables. *HP, therefore, recommends that all new systems be ordered with the MPE V/E firmware.* Ordering new systems with the MPE V/E firmware card will allow users to grow into the expanded tables of MPE, even if they are not needed now.

With few exceptions, most HP 3000s are now shipped with the new MPE V/E firmware. Currently, only the Series 42 and 48 systems are shipped with MPE VIP firmware as the default option. Users desiring the MPE VIE firmware with their Series 42/48 systems can specify a no-cost option (Option 409 or 410) which replaces the MPE V/P firmware with MPE VIE firmware. A similar option exists for applicable remarketed HP 3000 systems.

Users who currently have the MPE V/P firmware can, if they desire, upgrade to the MPE V/E firmware. Users who choose to upgrade to the new firmware will be required to purchase it. The only exception is for users who qualify for the free firmware upgrade promotion (discussed below). For users not eligible for the free firmware upgrade program, the MPE V/E firmware can be purchased using P/N 30400A.

Some existing users qualify for HP's free firmware upgrade promotion. Users who purchased a high-performance Series 39/4X and accepted delivery before December 31, 1984, are eligible for a free firmware upgrade. If desired,

these users have until December 31, **1986,** to accept delivery of the no-charge firmware.

HP strongly urges users to update to MPE V/E (either a T-based MIT or the forthcoming UB-MIT). The later releases of MPE V/E have proven to be some of the highest quality releases of MPE FOS distributed. They also contain enhancements that significantly increase the functionality of MPE and MPE-based solutions.

Contact your HP sales rep if you have any questions.

HP 3000

INTRODUCING HP LU 6.2 BASE

HP's new products, the HP LU **6.2** Base and the HP OfficeConnect to DISOSS, provide HP to IBM office communications and data sharing in an SNA network. HP LU **6.2** Base and HP OfficeConnect to DISOSS link HP's Personal Productivity Center (PPC) office solution to IBM's Distributed Office Support System (DISOSS).

HP LU **6.2** Base is used together with HP OfficeConnect to DISOSS. HP OfficeConnect to DISOSS allows multiple HP DeskManager users, on different HP 3000s in an HP Desk-Manager network, access to electronic mail exchange, filing, and document conversion between their HP 3000 system and an IBM mainframe running DISOSS. HP LU **6.2** Base provides SNA program-to-program communication between HP OfficeConnect to DISOSS running on the HP 3000 and DISOSS running on the IBM host mainframe in order to make DISOSS communication transparent to the HP DeskManager user.

To provide the physical connection to the IBM DISOSS host, one HP 3000

system in the HP DeskManager network runs HP OfficeConnect to DISOSS with HP LU **6.2** Base running over SNA Link. Other HP 3000 DeskManager systems running Office-Connect to DISOSS use this single gateway system to access DISOSS, eliminating the need for a dedicated communications line between each HP 3000 system and the IBM main-frame. No additional software on the IBM host is required. HP LU **6.2** Base can also run simultaneously with SNA IMF (interactive SNA 3270 emulation) and SNA NRJE (SNA batch communications) over a single SNA Link and data communications line.

The picture below illustrates this DISOSS connection with two HP 3000s in the HP Desk network. Over time, the HP LU **6.2** Base product can be added to any HP system running HP Office-Connect to DISOSS to provide a higher performance connection to DISOSS.

HP LU **6.2** Base is to be used together with HP OfficeConnect to DISOSS. There is not a programmatic interface to HP LU **6.2** Base for user-written applications developed on the HP 3000. However, there is a product currently being developed by HP that will provide this type of interface for users who wish to write their own LU **6.2** applications.

HP LU 6.2 Base features

In summary, HP LU **6.2** Base provides the following features and benefits:

■ Provides, with SNA Link, the communication link to DISOSS for HP OfficeConnect to DISOSS. This communication link, along with HP Office-Connect, makes DISOSS communication transparent to HP DeskManager users.
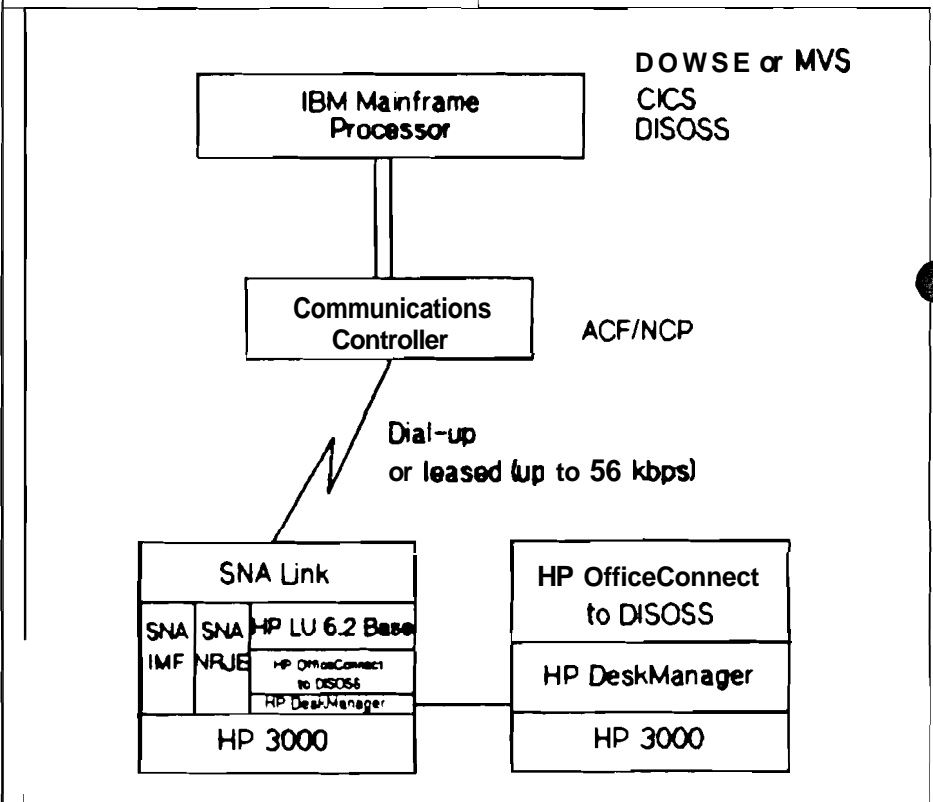
■ Provides, with HP OfficeConnect to DISOSS, HP 3000 integration into an IBM Office network in an SNA environment. In effect, the HP Desk-Manager users are able to communicate to DISOSS on the IBM host main-frame. DISOSS also provides mail distribution and library access services to other IBM Office products such as the IBM 5520, Displaywriter, Personal Services/Personal Computer (PS/PC), Personal Services/36 (PS/36), and Personal Services1370 (PS/370).

Runs simultaneously with other HP SNA products such as SNA IMF and SNA NRJE over the same SNA Link.

■ Subsystem operation of HP LU 6.2 Base can be performed program-matically by HP OfficeConnect to DISOSS, generally eliminating the need for the HP system manager to start and stop HP LU 6.2 Base.

HP ordering information

Product No.	Description
30252A	HPLU 6.2 Base
Opt. 310	For Series 37
Opt. 315	Upgrade from Series 37 to Series 39 through 70
Opt. 320	For Series 39 through 70
30252R	Right to copy HP LU 6.2 Base
Opt. 310	For Series 37
Opt. 315	Upgrade from Series 37 to Series 39 through 70
Opt. 320	For Series 39 through 70

HP 3000

HP DESKMANAGER CAN NOW COMMUNICATE WITH IBM's DISOSS

HP DeskManager users can now communicate with IBM DISOSS users, completing the 1, 2, 3 strategy for IBM connectivity announced in January 1986.

The 1, 2, 3 strategy said:

1) Integrate the IBM PC into the Personal Productivity Center (PPC).

2) Integrate PPC with IBM's professional Office System.

3) Integrate PPC into IBM's DISOSS.

By providing these three stages, HP now has the most complete and transparent range of products for connecting an office system to IBM's office environment.

With the release of two new products, HP LU 6.2 Base (PIN 30252) and HP OfficeConnect to DISOSS (PIN 27515), HP DeskManager users can exchange electronic mail with DISOSS Distribution Services, and access DISOSS Library Services in Final Form Text DCA. With the addition of HP Convert/DCA, Revisable Form Text DCA is also supported for both DISOSS Library and Distribution Services. No other vendor can offer such a complete range of facilities with such a transparent interface. Messages are sent and received from within HP Desk-Manager so there is no need to learn a new mail interface. and both DISOSS

and HP DeskManager users can use the mail addressing formats that they are used to so they don't need to learn any different addressing conventions.

HP OfficeConnect, together with HP DeskManager, is required on any system in a network that wishes to communicate to either DISOSS Distribution and Library Services. Only one system in a network needs to be physically connected to the IBM mainframe using SNA Link (PIN 30246). This system will also need the new HP LU 6.2 Base product.

The ability to link HP DeskManager to a DISOSS mainframe will be welcomed by users committed to both IBM and to HP systems.

The two new products will be available on UB-Delta 1.

HP 3000

HP 3000 LONG LINE PRINTER SOLUTION

The new HP 37204B HP-IB extender provides an ideal solution for HP 3000 systems requiring remote or distributed printing stations. It replaces the HP 37203A Option 010 and is a sister product to the recently launched HP 37204A.
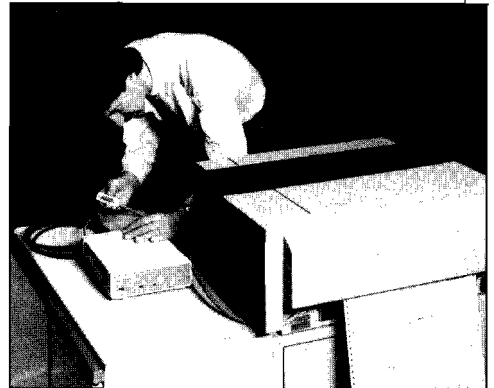
A 250-meter HP-IB cable

A pair of HP 37204Bs provide a link that users can regard like a very long HP-IB cable, up to 250 meters long. The extenders communicate over readily available, low-cost, CATV-type coaxial cable, converting to HP-IB at either end. Installation couldn't be simpler.

Second remote print station

Only one additional extender is needed to add a second remote print station. The third extender is connected in series with the first and second, giving printers a maximum range of 500 meters from the HP 3000.

Maintain or increase number of printers

The maximum number of printers supported per system remains the same, or in the case of the HP 2688A, increases by one. The high speed of the HP 37204B also maintains effective throughput.

Supported printers

The HP 37204B supports the HP 256XA/B, HP 2680A and HP 2688A printers in the HP 3000 Series 4X, 5X, 6X, and 7X.

Ordering information

The HP 37204B comes in standard version only, and is listed on discount exhibit A-1.

The following are recommended for use with the HP 37204B:

- HP 92179G   75-ohm coaxial cable.
- HP 92226A   Single BNC connectors.

More information is available in the data sheet, P/N 5954-7928. Contact your sales rep to receive a copy of this literature.

HP 3000

ANNOUNCING THE SERIES 58 SYSTEM BUNDLE

HP's Finance and Remarketing Division (FRD) has announced an HP 3000 Series 58R bundle effective November 1, 1986, orderable from the HP Price List. The primary focus of this package is to provide midrange system users with an ongoing lower-cost solution.

Product No.	Description
34202AR (for the U.S.)	Series 58R bundle includes (qty each)
34252AR (for non-European countries)	
32558BR	Series 58R (4 Mbytes, 2 GICs)
30018AR	ADCC - Main
Opt. 044	Series 58 cable
HP 7974AR	Tape drive
HP 7933HR	404-Mbyte disc drive
45850AR	Touchscreen II terminal
Opt. 401*	Adds 404-Mbyte disc drive
Opt. 501*	Adds 1 Mbyte of memory

*No quantity limit

Product No.	Description
34202AR (for the U.S.)	Series 58R bundle
34252AR (for non-European countries)	
Opt. 602	Upgrade from Series II with 128 Kbytes
Opt. 603	Upgrade from Series III with 256 Kbytes
Opt. 605	Upgrade from Series 30133 with no memory
Opt. 617	Upgrade from Series 37 with no memory
Opt. 618	Upgrade from Series 37XE with no memory

Please contact your HP sales rep for more information.

HP Integral PC

NEW PRODUCTS FOR THE HP INTEGRAL PC

In the past, the HP Integral PC has received high praise for its Read Only Memory (ROM) implementation of the UNIX™ operating system. The entire kernel and necessary device drivers are all present so that applications can be run anywhere without a hard disc. But many people desired that all of the standard UNIX system commands, the ones that most people think of when they think of the UNIX system (like *ls,* cp, mv, and cc), be part of that transportable system too. We agree. After investigating the available options, we determined that the most timely, reliable, and cost-effective means for providing the commands was in a plug-in ROM module.

So we created the 82987A Software Engineering ROM Module. In addition, we created a companion RS-232 Interface, the 82919A Option 001, that can be plugged onto the Software Engineering ROM so that the combination of the two products takes only one of the Integral PC's two I/O ports.

Features

The Software Engineering ROM Module provides the Integral PC user over 150 popular UNIX system commands (over 4½ Mbytes of code are compressed into 2 Mbytes of ROM) without compromising the transportability of the system. Just plug the

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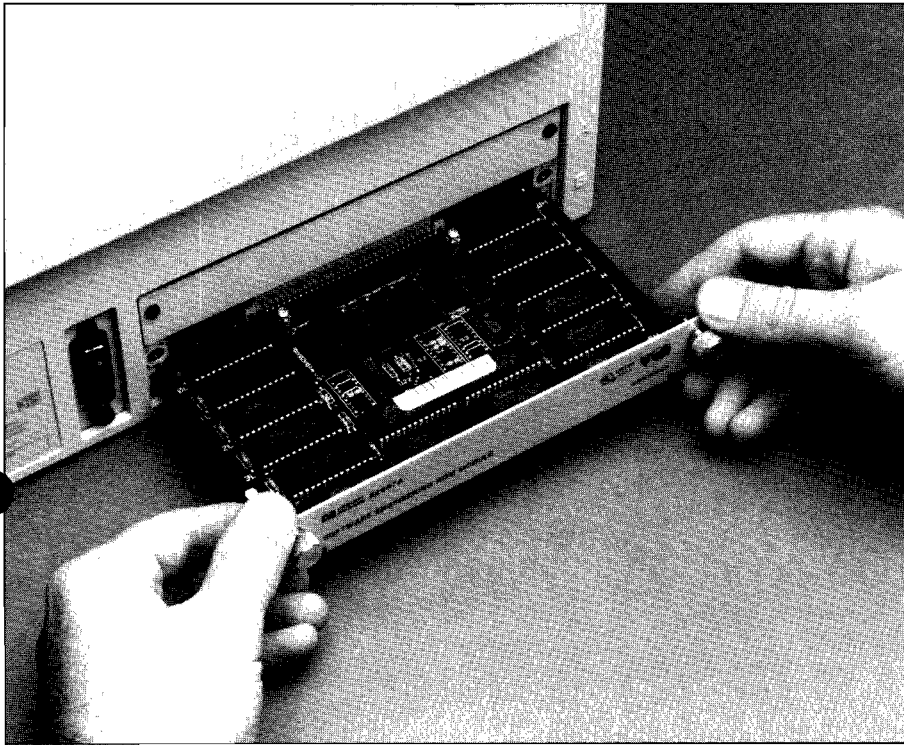
The 82987A Software Engineering ROM Module provides the HP Integral PC with over 150 popular UNIX system commands.

features necessary for efficient C language development are self-contained in this easily carried package.

There are two primary markets for this product. The first is transportable software development. Some major accounts have expressed a high need for a software development system that could be moved easily or taken home. The combination of the Integral PC with its fully integrated design, including printer, disc, and display in a 25-pound package, and the Software Engineering ROM make it a perfect fit for this market. Add the 82919A Option 001 Serial Interface or 82915A 30011200 bps Modem, and you have a system that is not only easy to take where you need it, but can communicate back to the host as well.

A second market that holds much promise is the UNIX system training market. As more organizations adopt the UNIX system as the standard operating system for their computers, the need to train new users becomes a high priority. The Integral PC and Software Engineering ROM make a perfect vehicle for delivering that training; each student gets a complete system. Plus, training rooms do not have to be dedicated to machines and terminals. Finally, students can take a machine to continue their training where they please.

The product is on the HP Price List as of November 1 and is available for shipment.

For additional information about the 82987A Software Engineering ROM and 82919A Option 001 Serial Interface, contact your HP sales rep.

UNIX is a trademark of AT&T Bell Laboratories.

module into one of the I/O ports, and start using the commands. Here is a sampling of the commands included in the module:

■ Complete C compiler system *(cc, cpp, ccom, ld, as,* etc.) including symbolic debugger *(cdb),* all include files, and libraries. Even *yacc* and *lex* are included.

■ Text processing commands like vi, *nroff,* memorandum macros *(mm), spell, tbl,* and *eqn.*

■ All of the 'typical' UNIX system commands like *cp, ls, tail, sh, csh, awk, grep,* and many more.

■ Even the public domain datacommunications program, *kermit,* is included.

Being in ROM has some additional advantages as well. The commands in the ROM module all execute out of ROM. That means they use little valuable RAM, freeing it up for applications and data. Executing out of ROM also means that programs load instantly and execute faster than they would out of RAM providing the best possible performance.

Positioning and target market

The HP Integral PC, with the addition of the 82987A Software Engineering ROM Module, is well positioned as an entry-level HP-UX transportable development environment. All of the

HP 1000

INTRODUCING THE *HP 1000 A400 COMPUTER*
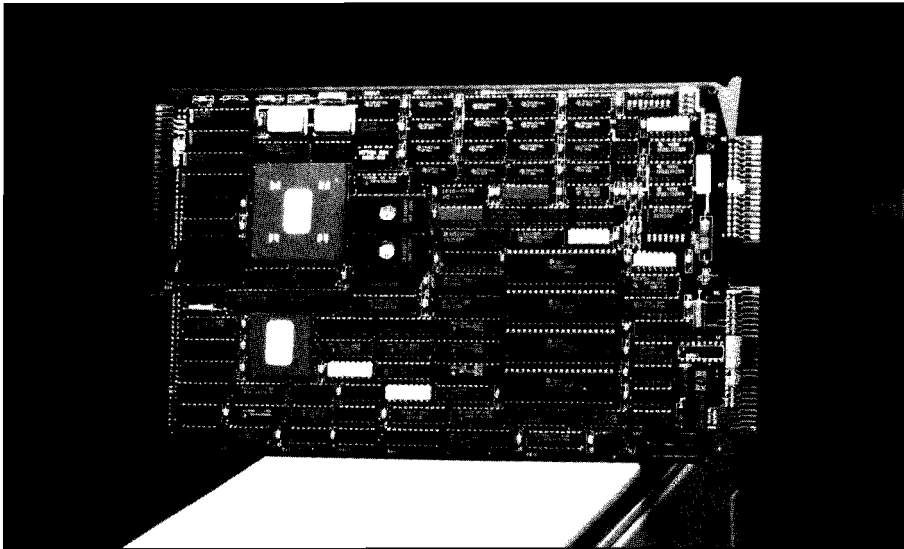
The A400 contains a complete A-Series processor on a VLSI chip, 512 Kbyte memory controller and four serial I/O ports, all on one board.

The A400 is the new low-end CPU in the HP 1000 A-Series product line. Its compactness, open-systems architecture, and low cost will make it ideal for HP's value added businesses targeting real-time markets.

The A400 is a complete A-Series computer integrated onto a single 6¾-inch x 11½-inch printed circuit board. The board's features include:

- A-Series processor on a VLSI CMOS chip

- A600-equivalent performance

- 512 Kbyte memory and memory controller

- Four serial I/O ports

While it offers the same multitasking, real-time functionality as the rest of the A-Series product line, it is priced in the PC range: 20-40 percent lower

than the previous A-Series low end. In addition, software for the A400 costs 30-50 percent less than A600 software.

The A400 can help our value added businesses target new low-end markets,

as well as lower costs in the markets they currently serve. It is excellent for a wide variety of low-end applications, especially those in which a real-time operating system and good I/O performance are required:

- Workcell control

- Direct machine control

- Network gateway

- Real-time data management

- Data acquisition

The A400 represents the largest effort yet in a continuing campaign to lower the cost of an entry-level, real-time system. It began in 1983 with the introduction of the Micro 26, followed in March of 1986 by the Micro 16 and Micro 16 +. Each of those products lowered A600 costs approximately 20 percent by repackaging the A600 CPU and bundling it with discounted I/O and software.

The A400 introduction continues this downward trend in price. In addition to lowering CPU and software costs, it offers users the opportunity to save on both serial I/O and packaging. The A400's on-board serial I/O will save many users the cost of a MUX card,

THE A400:

LOWERING THE COST OF A–SERIES PERFORMANCE
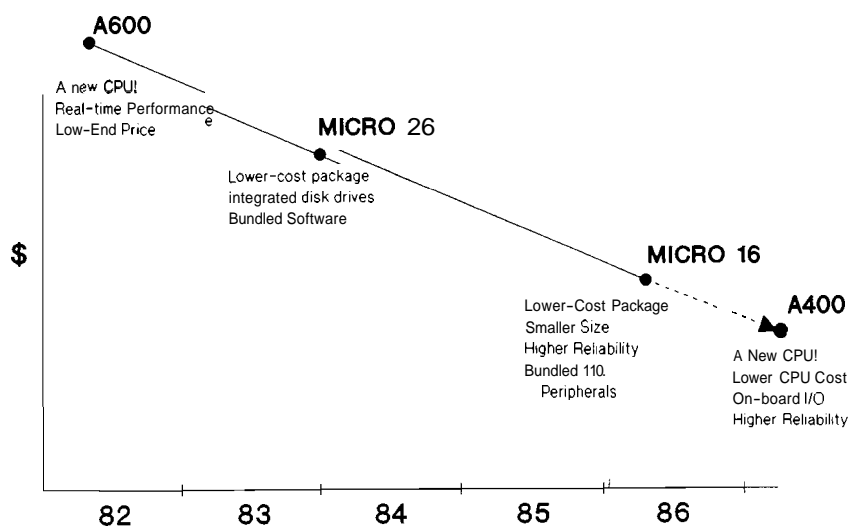
and its compactness makes it an excellent fit for the low-cost six-slot "Cooler" package. Bundled I/O and peripherals will lower the total system cost even further.

Many of HP's Value Added users got an opportunity to see the A400 at the Value Added Business conference in September. They reacted with a great deal of enthusiasm, and many of them began planning to include it in their product lines. They felt that the A400's low cost and compactness, along with all of the real-time functionality of the A-Series, would help them target new low-end markets.

Contact your sales rep for more information on the A400.

HP is offering users four products based upon the new HP 1000 CPU, the A400. The A400 is available as a stand-alone CPU board, in the six-slot "Cooler" package, and in the 14-slot "Micro" package as a CPU or a system. These products are comparable to the A600 family's 2106BK, 2426E, 2436E, and 2486A, respectively.

Ordering information

Product	Description
12100A	A400 Board with cable
2424A	Micro 14 – A400 with 512 Kbyte memory, 5 available I/O channels and right to execute RTE-A 92077E
Opt. 015	230v/50Hz power (deletes power cable)
2434A	Micm 24 – A400 with 512 Kbyte memory, 13 available I/O channels and right to execute RTE-A 92077E
Opt. 015	230v/50Hz power (deletes power cable)
Opt. 151	Prep kit for 12120A/12121A integrated discs (deletes front bezel)
2484A	Micro 24 – A400 with 512 Kbyte memory, original copy RTE-A 92077A, 12 available I/O channels, HP-IB interfare 12009A
Opt. 015	230v/50Hz power (deletes power cable)
opt. 022	System software on CS-80 media
Opt. 044	System software on microfloppy
Opt. 061	System software on mag tape media
Opt. 150	Prep kit for 12120A integrated disc (deletes front bezel and HP-IB)
Opt. 151	Prep kit for 12121A integrated disc (deletes front bezel)

Notes:

1) 2484A Value packs will be available as separate line items. Details forthcoming December 1.

HP 9000 MODEL 840 SUPPORTS NEW HP 7936 AND 7937 DISCS

HP-UX on the HP 9000 Model 840 supports two new discs as system discs. Configuring an HP 7936 or 7937 as the system disc gives you a pricing advantage over DEC's VAX 8500.

Which disc do I configure?

In addition to the 404-Mbyte HP 7933H and 7935H drives, HP-UX on the HP 9000 Model 840 will support a single HP 7914 (132 Mbytes), a single HP 7936A (307 Mbytes), or a single HP 7937A (571 Mbytes) drive as a system disc.

To configure an HP 9000 Model 840, first look at the application. Applications where smaller disc configurations may be useful are:

▪ Target applications (non-development systems) such as monitoring, computer servers, or control systems.

▪ Systems used to port existing software where the number of users is small.

▪ Applications needing only a subset of the subsystems available.

▪ Systems supporting a small number of users.

Configure the software needed, then use the following worksheet to determine the disc space required to install the software:

2) All HP software will have "Option 400" pricing at 30-50 percent under Option 600 Prices.

Product		Space required in: 1,024-byte blocks
92430A	FORTRAN	2400
92431A	Pascal	3100
92436A	Starbase Graphics	1200
92437A	DGL/AGP and Starbase	1400
98194A	LAN/9000 Series 800 Link	1000
98195A	NS/9000 Series 800	140
36217A	ALLBASE DBMS	10,000

Subsystem Software total:	———
10,000-20,000 per developer:	———
Database size:	———
User's application size:	———
User files estimate:	———

Disc space available:

	Subsystems (/usr)	User space (/mnt)
HP 7914 system	11,000	26,000
HP 7914 add-on	–	116,000
HP 7936 system	11,000	180,000
HP 7936 add-on	–	270,000
HP 7937 system	74,000	310,000
HP 7937 add-on	–	500,000

Computer Museum

First, total the subsystems that you wish to install. Second, total the user files by using estimates of codespace per development user and estimates for application and database sizes. Look up the proposed discs under "Disc Space Available." This tells you how many blocks (roughly) are available on the system disc, and on any add-on discs.

What about the HP 7914?

The HP 7914 offers the lowest priced combination of disc and tape, as well as offering "pushbutton" backup. But configure this system carefully, as disc space is really tight if a single disc is used. Have an HP Service Engineer help you remove unwanted tools that are shipped as part of HP-UX to increase available disc space.

Recommendations

For small development projects, consider a single HP 7936 or 7937. Unless you're sure you won't need it, configure an HP 7974A, 1,600 bpi drive, instead of the lower-cost (but slower) HP 9144 cartridge tape drive. If the system is transaction oriented, or uses a large database, combining drives gives the application performance benefits of having two drives with overlapping access. This allows the system to simultaneously access the opening system and user files.

The new HP 7936 and 7937 enhance and extend the HP disc family on the Model 840, allowing you to better tailor systems to your applications.

HP 9000

MODEL 840 SYSTEM RAM PRICE REDUCTION

Effective November I, there are two memory options for the HP 9000 Model 840 that reduce the price of RAM by about 33 percent. These options will automatically be substituted for add-on RAM ordered with a Model 840 prior to November 1.

Ordering information

Product No.	Description
9741A	
Opt. 001	8 Mbyte RAM (16 Mbytes total)
Opt. 002	16 Mbyte RAM (24 Mbytes total)
19748A	8 Mbyte Add-on RAM

HP 9000

RESOURCES FOR UNIX OPERATING SYSTEM USERS

UNIX software directory

Now there is just one resource that contains 752 vertical and horizontal software application packages based on the UNIX™ operating system: the *UNIX Products Directory,* published by /usr/group, contains 1,690 products from 460 vendors listed within (yes, HP is listed). The directory contains all facets of the market: hardware, software, services, publications, and UNIX users groups. This directory is given free to general members of /usr/group; /usr/group associate members pay $25, and non-members pay $50.

UNIX information

Are you looking for UNIX information? The July/August 1986 issue of *CommUNIXations,* published by /usr/group, is the annual UNIX resources issue. Some of the information available in that issue includes listings of UNIX user groups, books, magazines and newsletters, education and training services, conferences and trade shows, and resource directories on UNIX software and hardware products.

To receive a free copy of *Comm-UNIXations* (I would suggest requesting July/August), or to join /usr/group, call 408-986-8840. The general membership fee is $100 and the associate membership fee is $50. Members of /usr/group receive a free subscription to *CommUNIXations.*

The /usr/group is a non-profit association dedicated to the promotion of UNIX-related products and services. Hewlett-Packard is one of the members of the /usr/group Corporate Sponsorship Program.

UNIX is a trademark of AT&T Bell Laboratories

HP 9000

DATA GRAPHER, GRAPHICS EDITOR, AND TEXT EDITOR PRICE CHANGES

Three popular technical office automation products – Data Grapher, Graphics Editor, and Text Editor – recently have been enhanced. The Technical Software Center has spent several months revising these products and removing the requirement for an HP 98546A Display Compatibility Interface Card on the HP 9000 Series 300 BASIC and Pascal computers.

■ *Data Grapher* is a graphics software package that turns numbers into graphics and charts. Files produced by Data Grapher can be merged into documents using HP TechWriter.

■ *Graphics Editor* is a general-purpose graphics package for creating charts and diagrams. HP Techwriter can be used to merge Graphics Editor files into your documents.

■ *Text Editor* is a word processor for creating memos, reports, and high-quality letters.

These revised products are now available with new price increases taking effect November 1, 1986.

Ordering information

Product No.	Name
45480B	Data Grapher
45537B	Graphics Editor
45538B	Text Editor

Upgrade kits for these products are available through Direct Marketing Division.

HP 9000

HP INTRODUCES NEW CHALLENGER TO 3D ME CAD SYSTEMS

The HP DesignCenter ME Series 30 Modeling, Design, and Drafting System is a new addition to the already successful ME Series CAD products. These products are the ME Series 10 2D Design and Drafting System and the ME Series 5 Drafting and Documenta-tion System. The ME Series 30 is based on the ME Series 10 and integrates full solid modeling capability into the 2D system.

One of the main reasons for the suc-cess of the ME Series 5 and 10 is the extreme user friendliness. ME Series 30 maintains this competitive advantage. The techniques used for creating solid models set a new standard for the rest of the industry to follow.

The HP 9000 Series 300 32-bit work-stations running the HP-UX operating system provide the hardware platform. The Model 320SRX high-performance graphics system offers dynamic rotation of hidden-line and color-shaded models.

Introduction of this product will occur during November/December 1986, so make a note of these dates:

■ On HP Price List November 1, 1986

• AUTOFACT '86, Detroit, Michigan (first public unveiling)

Also, watch for a supporting adver-tising program in the major mechanical engineering publications starting Janu-ary 1987.

For more information, check the product literature:

Product No.	Description
5954-7974	ME Series 5/10/30 brochure
5953-4393	M E Series 30 datasheet
5953-4392	**M E Series 10 datasheet**
5953-4391	M E Series 5 datasheet

Contact your sales rep for more infor-mation or for copies of the literature.

HP 9000

HP 9835/45 TO HP 9000 SERIES 200/300 BASIC TRANSLATOR

There is now an updated HP 9835/45 to HP 9000 Series 200/300 BASIC translator available from Oswego Soft-ware for users who are looking for bet-ter performance hardware but don't want to throw away the investment they have made in their BASIC software.

The product is available from Oswego Software, Inc., 507 N. Adams St., Oswego, IL 60543 or call 312-554-3567.

HP 9000

PASCAL INTERNALS MANUAL UPDATE SERVICE

The latest edition of the Pascal Sys-tem Internals Documentation was released last March (PIN 98615-87971). The product number to specify for the Pascal Internals Manual Update Service is 98088A + Q00. Its cost is totally sep-arate from the Manual Update Service for the 98615C Pascal 3.1 Language System product.

General

SOFTWARE FOR THE HP TOUCHSCREEN AND PORTABLE PCS OBSOLETED

The following products will be obsoleted on November 1, 1986, because the vendor no longer offers the products:

Product No.	Product
35151D	The Calendar
35152D	The List Manager
35153D	The Writer
35155D	The Planner
35156D	Personal Correspondence Pack
35157D	Personal Organizer Pack

Portable

NEW PRINTER FOR THE HP BUSINESS CONSULTANT

Your HP-18C Business Consultant Professional Calculator now has a partner – the HP 82240A Infrared Printer. The HP 82240A is a thermal printer that communicates with the Business Consultant Professonal Calculator via an infrared interface. The Business Consultant sends data to the printer by flashing an infrared LED. (See September issue of HP Channels, page 11, for more information about the HP-18C Business Consultant.)

There are no cords or cables to tangle with. Just point your Business Consul-

The new HP 82240A Infrared Printer uses an infrared interface to communicate with the HP Business Consultant Professional Calculator.

tant at the printer and push [PRNT] or select from your printer menu options to provide your clients with a printout of your data or calculations.

The Infrared Printer is powered by four AA alkaline batteries or by an optional AC adapter. The adapter does not recharge the batteries but it will extend battery life considerably.

The HP 82240A is 3.6 inches (9.1cm) wide, 7.3 inches (18.5cm) long and 2.5 inches (6.4cm) tall and weighs just one pound with batteries and paper. It works up to 18 inches (46cm) away from the Business Consultant and uses standard 2.25-inch (58mm) thermal paper.

This completely portable consultant team gives you a printed record of your calculations when you need it – wherever you are.

For more information about HP's Business Consultant partner, ask your

HP sales rep for the Infrared Printer flyer (PIN 5954-1395) and the Business Consultant flyer (PIN 5954-1353).

Product No.	Description
82240A	Infrared Printer
82241A	AC Adapter (U.S.)
HP-18C	Business Consultant Professional Calculator

*The adapter for your country may have a different part number. Contact your sales rep for this information.

MICROSOFT WINDOWS FOR HP VECTRA AND TOUCHSCREEN PCS HAS ARRIVED
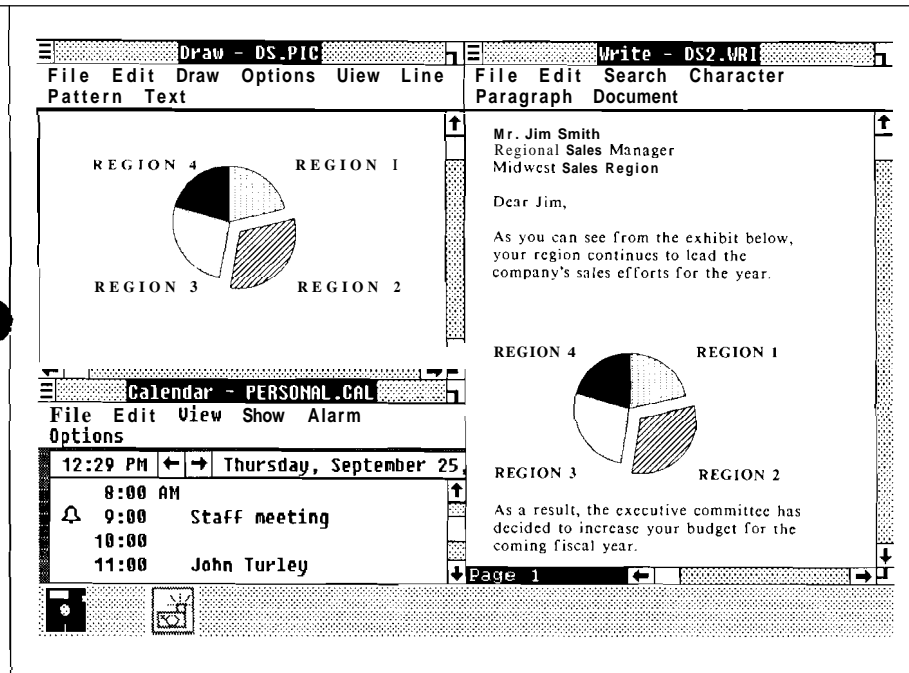
Microsoji Windows for the HP Vectra and Touchscreen PCs displays three applications on the screen at the same time.

Introducing HP's enhanced versions of Microsoft® Windows for both the HP Vectra PC *and* the HP 150/Touchscreen PCs. Both products will be on the November 1 HP Price List and available for immediate delivery.

As a graphics-based *extension* to the standard MS-DOS[a] operating system, Microsoft Windows offers users power and functionality far beyond that of MS-DOS alone – particularly in the areas of applications switching, data exchange between programs, and graphics.

A powerful applications integrator

Whether users use existing standard DOS applications, new Windows applications software, or both, Microsoft Windows is a powerful applications integrator that boosts productivity. Microsoft Windows increases productivity by:

Dramatically reducing the time it takes to switch between applications.

■ Simplifying data exchange and consolidation.

■ Integrating standard DOS applications with Windows applications.

■ Integrating host computer sessions with PC applications (HP Vectra PC only).

Microsoft Windows is designed to accommodate the way many desktop PC users work – dealing with frequent interruptions and juggling several tasks at the same time – so users can quickly and easily move back and forth between applications, exchange data between them, and pick up right where they left off.

New Windows applications

Because Windows applications are developed for Microsoft Windows (not for a particular PC), they run on all machines that run Microsoft Windows. This gives both HP Vectra and Touchscreen PC users immediate access to emerging Windows applications in areas like desktop publishing (DTP) and graphics.

Microsoft Windows extends the capabilities of the standard DOS operating system in many powerful ways. With Windows applications – programs that have been specifically developed for Microsoft Windows – users can take full advantage of the features listed below:

■ *Icons and menus* make Microsoft Windows easy to use.

■ *A consistent user interface* makes learning new Windows applications easier.

■ *Multiple windows* – view more than one task or program simultaneously in different segments or "windows" on the display.

Multitasking – perform two or more tasks simultaneously. For example, a database sort while writing a memo.

■ *Context switching* – switch quickly between applications, *without exiting the programs,* leaving current information and program status intact.

■ *Excellent data exchange* – selectively "copy and paste" both graphics and alphanumeric information.

■ *Graphics support within Windows* – because Microsoft Windows makes use of bit-mapped graphics, it provides users with a highly visual way to work. With many Windows applications, users can see on the display what they will get in hard copy – including proportional spacing, different type styles

and sizes, and integrated text and graphics.

Works with standard DOS applications too

In addition to the productivity gained through using Windows applications, Microsoft Windows enables HP Vectra PC users to integrate Windows functionality with many standard DOS applications. It also enables HP Touchscreen users to integrate Windows functionality with many of their standard Touchscreen applications. The level of Windows functionality for a given DOS application depends upon the degree to which an application directly accesses the hardware.

Most PC DOS applications receive the main benefits available for today's standard DOS applications: context switching and excellent data exchange. For example, a user could be in the middle of a 1-2-3® from Lotus@ spreadsheet, copy part of the spreadsheet, switch to an existing Executive MemoMaker session without exiting 1-2-3, paste the data into a memo, and then switch back to where the 1-2-3 spreadsheet was left off – all without exiting the applications.

Bundled desktop and system applications

Microsoft Windows contains a set of Windows applications designed to aid user productivity, plus a game. These small programs include:

MS-DOS Executive – A DOS file-management program. Run programs; format discs; copy, rename, and delete files; and manage directories.

▪ *Calendar* – Set appointments; daily or monthly viewing.

▪ *Cardfile* – A simple card-filing program.

Notepad – A scratch pad text editor.

▪ *Calculator* – A simple arithmetic calculator.

▪ *Clock* – Displays the time even as an icon.

▪ *Terminal* – A simple telecommunications program for accessing information services like Dow Jones News/Retrieval@.Not recommended for use with the HP 3000; not a full terminal emulator.

Print Spooler – Spools Windows application files for printing.

Reversi – A strategy game.

Promotional bundling of Microsoft Windows Write and Microsoft Windows Paint

For a limited time, Windows Write and Windows Paint will be bundled with Microsoft Windows for the HP Vectra and HP Touchscreen PCs. These useful graphics-based Windows applications vividly demonstrate powerful merged text and graphics capabilities, as well as what lies ahead with emerging Windows applications software.

Windows Write and Windows Paint also provide users with powerful tools for integrating existing DOS software. For example, users can transfer data from DOS products, like dBASE II® or 1-2-3@from Lotus™, to the Windows applications for manipulation and eventual output.

Emerging Windows applications

In addition to Windows Write, Windows Paint, and the bundled desktop applications, exciting Windows software applications that demonstrate the real power of Microsoft Windows are already beginning to appear. To date, more than 40 companies have publicly announced that they are writing Windows applications. Half a dozen applications are already available, including:

▪ *PageMaker® from Aldus* – the desktop publishing (DTP) package that has created a new market for the Apple Macintosh.

In-A-Vision from Micrografx – an impressive, yet easy-to-learn and easy-to-use computer-aided-design program.

▪ *Micrografx Windows "DRAW!"* – a powerful, easy-to-use drawing package that enables users to prepare graphics images with text annotations.

Ordering information

Product No.	Description
45954A	Microsoft Windows for the HP Vectra PC
45875A	Microsoft Windows for the HP 150/Touchscreen PC.*

Microsoft Windows for the HP 150/ Touchscreen PCs requires MS-DOS 3.2. Users may require an upgrade.

dBASE II is a U.S. registered trademark of Ashton-Tate.

Lotus and 1-2-3 are U.S. registered trademarks of Lotus Development Corporation.

MS-DOS and Microsoft are U.S. registered trademarks of Microsoft Corporation.

PageMaker is a U.S. registered trademark of Aldus Corporation.

Desktop

HEWLETT-PACKARD'S ADDED VALUE TO MICROSOFT WINDOWS

Microsoft Windows for the HP Vectra and HP 150/Touchscreen personal computers provides all the same features as Microsoft's product, plus a set of improvements to boost users' overall productivity. In addition to the capabilities provided in the standard Microsoft Windows package, HP provides:

Improved performance – Better memory management when working with standard DOS applications enables users to work with much larger applications and files (for example, a larger

spreadsheet) than is possible with standard Microsoft Windows. Users will also see improved performance of Windows applications when they are being context switched with large DOS applications.

■ *Excellent data exchange for DOS applications* – Windows from Hewlett-Packard provides the capability to selectively copy and paste regions of text between most DOS applications, a feature available to only a few DOS applications when using the standard Microsoft product. Users can now share information between both DOS and Windows applications more effectively.

■ *Support for HP features and peripherals* – Users can take advantage of HP features such as HP Touch, HP Mouse, and new HP-HIL peripherals such as the HP Graphics Tablet. Windows now provides full support for HP high-resolution video modes like the HP Multimode (640 x 400) and popular peripherals such as the HP LaserJet printer and HP ColorPro plotter. Hewlett-Packard offers users a powerful one-vendor Windows solution.

Desktop

MICROSOFT WINDOWS FOR THE HP TOUCHSCREEN PERSONAL COMPUTERS

Microsoft Windows is now available for both the HP 150/Touchscreen personal computers*. It offers the same powerful features as on the HP Vectra PC as well as access to the growing collection of Windows application software.

Windows opens an avenue to future software solutions

Microsoft Windows provides a unique programming interface for application software. Windows applications, the applications written to the

Windows interface, are developed independently of any particular hardware system and will work on all computers running Windows. The same Windows applications that run on the HP Vectra and IBM PC/AT will work on the HP 150/Touchscreen PC without modification.

HP 150/Touchscreen PC users can take advantage of off-the-shelf Windows application software on 5¼-inch flexible discs through the HP 9125A or 9127A disc drives. Windows applications available on 3%-inch IBM-format flexible discs can be read directly by the HP Touchscreen PC. (A double-sided 3%-inch disc drive is required for working with IBM 3%-inch format discs.)

Windows and standard HP Touchscreen DOS applications

Windows also helps to integrate standard DOS applications, like dBASE II® and 1-2-3® from LotusB, which have already been written for the HP Touchscreen PC. However, it is important to note that, *it will not give the HP Touchscreen PC the ability to run standard IBM PC-DOS applications.*

Windows can also be used with the new HP Touchscreen Expanded Memory Board

Within Windows, context switching of HP Touchscreen DOS applications on the HP 150/Touchscreen PC can be noticeably slower than on the HP Vectra PC. For HP Touchscreen PC users requiring faster context switching, the Expanded Memory Board can be used by Windows as an electronic RAM disc, greatly reducing switching time between DOS applications. HP Touchscreen PC users will see significant performance improvement when using the Expanded Memory Board with Microsoft Windows and HP Touchscreen DOS applications.

Microsoft Windows extends the power of your HP Touchscreen PC by providing access to the new Windows

application software and enhanced productivity in DOS application integration.

*Microsoft Windows for the HP 150/ Touchscreen personal computers requires MS-DOS version 3.2.

dBASE II is a U.S. registered trademark of Ashton-Tate.

Lotus and 1-2-3 are U.S. registered trademarks of Lotus Development Corp.

Desktop

EXPANDED MEMORY AVAILABLE FOR HP TOUCHSCREEN PCS

The DOS-imposed limit of 640 Kbytes of conventional memory has been restricting the HP 150/Touchscreen PC user. But now the HP 1501 Touchscreen Expanded Memory Board (EMB) is available to provide users additional memory and more. Much like the Intel Above Board, designed to the LIM (Lotus, Intel, Microsoft) Specification, the EMB will allow specific applications to access memory above and beyond the current 640-Kbyte limit.

It comes standard with 512 Kbytes of memory, and can be upgraded incrementally to 2 Mbytes of expanded memory (memory above the conventional 640-Kbyte level) as needed. In your HP Touchscreen II PC, you can get up to 8 Mbytes of CPU memory in your HP Touchscreen II PC simply by adding four EMBs to the four slots.

Standard with the Expanded Memory Accessory is a RAM disc driver, a SAVERAM utility, HP-HIL, and a print buffer driver.

The RAM disc, also known as "virtual disc," is similar to your system's

floppy or hard disc drive except that it resides in CPU memory. By setting up a RAM disc, the speed at which application software performs becomes noticeably faster. No longer do you wait while the application sends or receives information from the disc drive; all disc processing is done within RAM, which greatly increases the speed at which data is read and written. This feature is especially effective for application software that is disc intensive. Though RAM disc is not new to the HP 1501 Touchscreen PC, the EMB can provide as much as 8 Mbytes of RAM disc. This feature alone can make the EMB a worthwhile investment.

Complementing the RAM disc, the SAVERAM utility lets users copy their RAM disc to a microfloppy or hard disc. This way data is not lost in the event the SPU's power is cut off.

For HP 150A and HP Touchscreen (150B) PC users, the HP-HIL (HP Human Interface Link) allows various input devices to be connected to the Touchscreen PC, e.g., mouse and graphics tablet.

Time spent waiting to use your system while it plots/prints files is a thing of the past. The print buffer lets you edit a file while another is being printed or plotted. In fact, data can be transmitted to two devices while simultaneously editing another file; in other words, you can send one file to a printer, another file to a plotter, *and* edit yet another file. This feature requires MS-DOS 3.2 operating system.

Written to take advantage of expanded memory, 1-2-3® release 2.0l and Symphony^m release 1.1 from Lotus@will automatically swap data between conventional and expanded memory. With the EMB, the application now does the work while the user simply inputs data and gives standard commands. Speed also becomes a factor when using these products in conjunction with the EMB. 1-2-3 and Symphony will run at a much faster

rate. Using 1-2-3, Symphony, and the 8087 Co-processor Accessory (HP 45885A) with the HP Touchscreen II personal computer can provide significantly improved computing power and performance. Already a powerful tool, the combination of this co-processor with the EMB reduces the time it takes to recalculate sophisticated spreadsheets.

With Microsoft Windows (P/N 45875A), the EMB provides speed when context switching between DOS applications. Context switching enables users to move from one application to another without ever closing the application.

Ordering information

Product No.	Description
45890A	HP 150 Expanded Memory Board
45891A*	256-Kbyte Expanded Memory Upgrade Kit

*Optional. For customers needing more than the 512 Kbytes of RAM provided with the Expanded Memory Board.

Lotus, 1-2-3, and Symphony are U.S. registered trademarks of Lotus Development Corp.

Desktop

MS-DOS 3.2 FOR THE HP 150/ TOUCHSCREEN PC

Hewlett-Packard is proud to offer MS-DOS 3.2 for the HP Touchscreen PC. This new DOS release supports IBM-compatible 3%-inch disc formats, Microsoft® Windows, the Expanded Memory Board, and much more. For users who want to get the most out of their HP Touchscreen PC, MS-DOS 3.2 paves the way to future solutions. *MS-DOS 3.2 won't be available in Europe until the middle of December.*

Read, write and format IBM compatible 3%-inchdiscs

Offering several new features, DOS 3.2 accommodates the latest software

and hardware for the HP Touchscreen PC. With DOS 3.2 and a double-sided disc drive, the user's Touchscreen PC can automatically read and write IBM compatible 3%-inch discs. You simply pop in any disc, and the Touchscreen PC knows whether it is working with an HP or IBM formatted disc. Besides reading and writing to the correct format without the user's direct intervention, the user has the flexibility to format a 3%-inch disc to an HP or IBM format. Data transfer between different computers in the office is now only a disc away.

Microsoft Windows: future software solutions

MS-DOS 3.2 also gives the user the capacity to operate Microsoft Windows, opening the door to future software solutions while providing an environment with graphics, pull down menus, and application integration. Windows applications are already beginning to appear. For word processing there is Microsoft Windows Write; for graphics there is Microsoft Windows Paint; and for desktop publishing soon there will be PageMaker^m from Aldus. To date, approximately half a dozen or more Windows applications are available and about 25 software vendors have announced that they are working on Windows programs. In order to take advantage of these future software applications being written for Windows, MS-DOS 3.2 is required.

Since the HP 150/Touchscreen PC with DOS 3.2 can read 3.5-inch IBM compatible discs, applications that are available in this format can be used off-the-shelf.

Supports Expanded Memory Board

The Expanded Memory Board (EMB) will let users expand their horizons to large spreadsheets, print buffers, and RAM discs. Included with the EMB are several productivity tools, one of which is the print buffer. This utility enables users to work – while they print. Users can send output to two different devices while continuing to

work on the HP Touchscreen PC. To take advantage of the EMB's print buffer, MS-DOS 3.2 is required.

Users can also improve their productivity with the RAM disc. By instructing their Touchscreen that another disc drive exists in memory, disc-intensive operations like opening and saving files are completed in seconds.

Additional enhancements

A great new feature which has been implemented is called STORE CONFIG. This will allow the user to store one or more PC and terminal configurations as files on disc. If their site has standardized on a particular Touchscreen PC system, they can store configurations as files and share them with others as needed. STORE CONFIG also comes in handy when the CPU battery has not been replaced in a timely manner. The lost configuration can be easily restored by retrieving the file containing the desired configuration.

Network (OfficeShare ThinLan) and general commands have also been added to DOS 3.2. These new commands, such as ATTRIB, SHARE, ASSIGN, LABEL, JOIN, and SUBST, provide DOS capabilities which did not previously exist. P.A.M. enhancements have also been made. A DOS command line on the P.A.M. screen now allows users to access MS-DOS commands without leaving P.A.M. The dedicated DOS user, however, can continue to bypass P.A.M. and go directly to the DOS prompt.

As expected, an upgrade to MS-DOS 3.2 is compatible with existing HP 150/Touchscreen PC peripherals. In fact, it will actually support a larger family of peripherals.

Software compatibility

Hewlett-Packard continues to support a majority of the applications with MS-DOS 3.2. Previous software releases work with this new operating system although there are a few exceptions. For users who receive a new HP Touchscreen II PC, MS-DOS 3.2, and new software applications, no problems will occur. The only situation where problems may occur is when a user attempts to use an old version of one of the following software packages with MS-DOS 3.2. In such cases, users can use the older applications with the computer/operating system with which it was purchased (MS-DOS 2.11 or 2.10) *or* users can upgrade their applications as described below. Whichever solution is chosen, Hewlett-Packard will provide all the help and support to insure the smooth operation of the HP Touchscreen PC.

For CONDOR users, more information is forthcoming. HP is currently investigating an upgrade path via CONDOR or another database application. Note that these plans are *tentative*. In any case, an interim solution would be to continue to use CONDOR with a previous HP Touchscreen PC and DOS 2.11 or 2.10.

Hewlett-Packard is pleased to be able to offer support for these products. However, please note that HP will not support these older application versions when they are used with the new operating system, MS-DOS 3.2.

Ordering information

The ability to use IBM compatible 3.5-inch discs, Microsoft Windows, and the Expanded Memory Board, demonstrates how MS-DOS 3.2 and the

HP 150/Touchscreen PC will enable users to achieve new heights of performance and convenience – today and tomorrow. The HP Touchscreen PC and MS-DOS 3.2 are a must for users who need to get the most out of their HP Touchscreen PC.

MS-DOS 3.2 is currently shipping with all new units of the HP Touchscreen II PC. To distinguish between old inventory and new inventory, CPUs and PC Kits with DOS 3.2 have an orange label alongside the normal shipping label. Please be informed that a "Touchscreen II Even-Exchange Program" will be offered to dealers in the near future to allow them to exchange pre-DOS 3.2 units.

Upgrades are also available. The MS-DOS 3.2 upgrade is compatible with all versions of the HP Touchscreen PC (150A, HP 150B/Touchscreen, and HP 150C/Touchscreen II) and can be purchased from HP's Personal Computer Distribution Operation (PCDO) alone or together with a tirmware upgrade. The firmware upgrade, which includes new ROMs to enhance the terminal functionality of the Touchscreen PC, includes the MS-DOS 3.2 upgrade.

Please note that these upgrades are discountable from PCDO. For additional information, you may order the new HP Touchscreen II PC data sheet (PIN 5954-2592) and the *Touchscreen System Configuration Information Supplement* (PIN 5954-7212D).

Part No.	Description
45849-63031	OS Upgrade Kit
45849-63024	Firmware and OS Upgrade Kit*

*CE installation required

Microsoji is a U.S. registered trademark of Microsoft Corporation.

PageMaker is a U.S. registered trademark of Aldus Corporation.

WordStar and CorrectStar are U.S. registered trademarks of MicroPro International.

CONDOR, is a U.S. trademark of Condor Computer Corporation.

Application	Older version	Part No.	Upgrade version	Part No.
WordStar®	3.33	45400D	3.34	45400-63030
WordStar	3.3B or less	45400D	3.34	45400-63031
CorrectStar®	3.31 or less	45427D	3.32	45427-63002
GW Basic 2.0	A.01.02 or less	45450D	A.01.03	45450-63002
CONDOR''	2.11B or less	45416A	Call HP rep	Call HP rep
S.100 Graph.	3.00 or less	45410A	Gallery Collection	45437A

Desktop

NEW HP GRAPHICS TABLET FOR HP VECTRA AND TOUCHSCREEN PCs
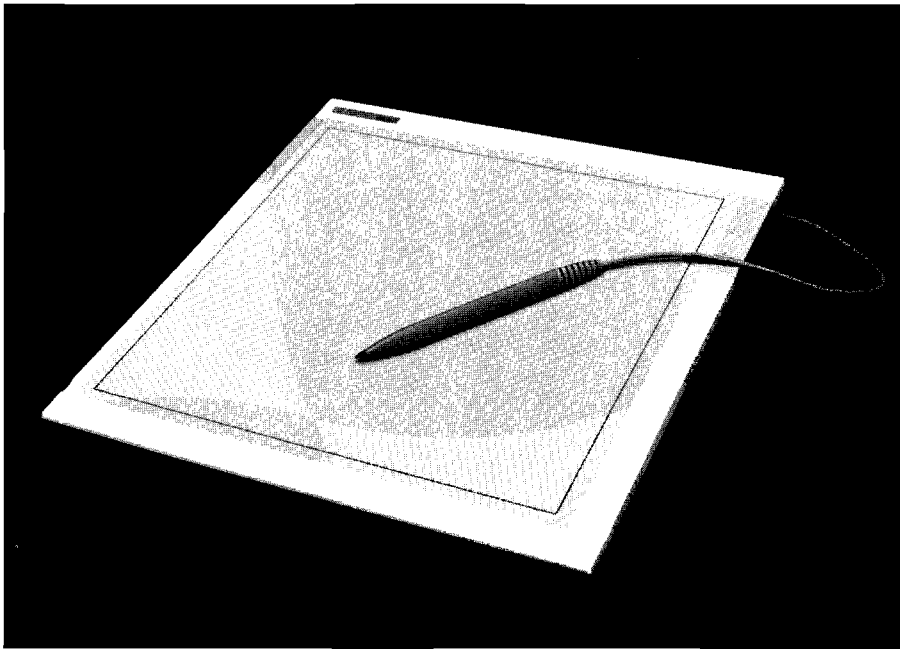
HP's Personal Office Computer Division (POD) introduces the HP 45911A, a high-performance, low-cost graphics tablet. It has very high resolution, high accuracy, 11 x 11-inch active area, and HP-HIL interface. It includes a stylus, HP-HIL cable, and overlay. It is on the November HP Price List.

The HP Graphics Tablet, with computers and applications supporting the Hewlett-Packard Human Interface Link (HP-HIL), is a very effective pointing device. It will increase users' productivity with interactive graphics applications, such as CAD/CAM, presentation graphics, and computer art

Benefits

The HP Graphics Tablet is ideal for tasks such as menu picks, graphics placement, drawing, and tracing. The HP Graphics Tablet can use overlays for menus, which simplify commands, yet not take up any screen area. The stylus gives excellent cursor control, making fast cursor movements and complex drawings as easy as with a pencil and paper. And the stylus makes it easy to trace existing drawings, a task virtually impossible with other input devices.

Features

■ *Excellent performance* – The HP Graphics Tablet has very high resolution (over 1,200 lines per inch), very fast response, and high accuracy.

Low cost – The HP Graphics Tablet incorporates advanced HP technology to offer a superior graphics tablet at a very affordable price. Other tablets with comparable active area and only 200 line-per-inch resolution are priced about $600 and higher.

■ *Easy to use* – The stylus is as easy to use as a pencil. When the stylus tip is moved on the tablet surface, the cursor moves the same way on the monitor. The stylus tip contains a switch that can be activated by a gentle push of the stylus onto the tablet surface.

Saves a serial port – Since HP-HIL input devices have their own port and they daisy chain together, the users' serial ports are free to use other peripherals, such as plotters or printers.

■ *Attractive design* – The HP Graphics Tablet has been designed with keen attention to ergonomics and aesthetics. The tablet slope, stylus shape, slim lines, and color coordination have been chosen to be comfortable in use and pleasing to the eye. In addition, it takes less desk space than most tablets with equivalent active area.

Applications

The following are examples from a growing list of applications which take advantage of the HP Graphics Tablet features.

■ *On the HP Touchscreen PC:**
– HP Painter
– HP Drawing Gallery
– Microsoft Windows for the HP Touchscreen PC**

■ On the HP Vectra PC:
– HP Drawing Gallery
– Microsoft Windows for the HP Vectra PC**

For more details, get a copy of the HP Graphics Tablet data sheet (PIN 5954-0339) from your HP sales rep.

*The HP Touchscreen PC requires 45914A (HP-HIL Interface), or 45915A (HP-HIL Interface + 384 Kbytes of RAM). HP Touchscreen II PC has HP-HIL Interface built-in.

**Also, any application written to use the features of Microsoft Windows will support the HP Graphics Tablet and other HP-HIL input devices when used with the HP versions of Microsoft Windows.
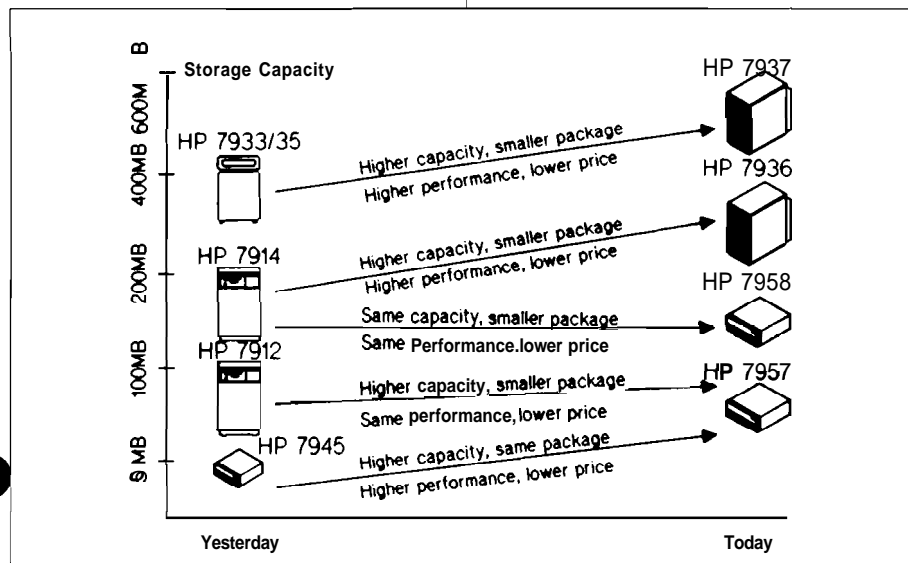
Mass Storage

NEW LINE OF DISC DRIVES FOR HP COMPUTERS

HP has announced a new line of disc drives for HP computers. The HP 7936137 and HP 7957158 disc drives represent two new mass storage families, offering significant advantages to users.

The new 307-Mbyte HP 7936 and 571-Mbyte HP 7937 disc drives offer excellent solutions for mid-range to large systems. The new 81-Mbyte HP 7957 and 130-Mbyte HP 7958 offer excellent solutions for engineering workstations and small multiuser systems.

The diagram here shows the positioning of the new products. The following articles should give you a taste of what the new products offer. Please contact your HP sale rep for further information on the new products.

| | |
| Yesterday | Today |

Mass Storage

INTRODUCING THE HP 7936 AND 7937 DISC DRIVES

The new 307-Mbyte HP 7936 and 571-Mbyte 7937 disc drives are HP's new mass storage solutions for mid-range to large systems. State-of-the-art Winchester technology and HP-developed thin film media have been used in the drive to offer significant advantages to users

Excellent floorspace utilization

The modular design of the HP 7936137 disc drives allows two drives to be stacked in a cabinet similar to that of the HP 3000 Series 37. At 348 Mbytes per square foot, the HP 7937 allows four times better floorspace utilization than the HP 7933. The result is that users can expand their systems without expanding their data center.

Low price

The HP 7936 and 7937 prices more than a 50 percent reduction in cost per megabyte when compared with the old pricing of the 7933135 disc drives. The result is a very competitive disc offering, which adds greatly to the competitiveness of our systems.

Drive	Capacity
HP 7936H	307 Mbytes
HP 7936XP	307 Mbytes
HP 7937H	571 Mbytes
HP 7937XP	571 Mbytes

High performance

Low controller overhead combined with quick seeks and low latency provide up to 25 percent higher I/O rates. The internal burst data transfer rate is a robust 2.35 Mbytes per second. Controller cache is also available for an additional performance boost.

Excellent reliability

Thin film media, an advanced servo system, and state-of-the-art VLSI are all incorporated into these disc drives, providing excellent reliability. And exceptional reliability means low maintenance costs. On a dollars-per-megabyte basis, the HP 7937 SMMC represents more than a 60 percent reduction in service costs when compared to the HP 7933 SMMC.

Low power/air conditioning requirements

The new drives use less than one third the power and generate less than one third the heat of an HP 7933. The result is that much less power is consumed and less air conditioning is required, further lowering the cost of ownership.

Summary

The HP 7936137 disc drives represent a true breakthrough in mass storage solutions for HP systems, offering higher capacity, smaller form factor, lower price, and excellent reliability and performance.

Mass Storage

INTRODUCING THE HP 7957 AND 7958 DISC DRIVES

The HP 7957 and 7958 are HP's new mass storage solutions for engineering workstations and small multiuser systems. By combining the capacity and performance of the HP 791X disc family, the compact size of the 7945, and industry-leading low prices, these new discs offer significant advantages to users.

Increased capacity

The new 81-Mbyte HP 7957 and the 130-Mbyte HP 7958 5¼-inch Winchester disc drives are a fraction of the physical size of the 65-Mbyte HP 7912 and the 132-Mbyte HP 7914 disc drives. Using the same box as the HP 7945, the new drives will easily fit into a variety of cabinetry or on a desktop.

High performance

The HP 7957 and 7958 have the performance necessary to get the most out of HP's small multiuser systems and engineering workstations. Across the whole range of operating environments, the performance of the HP 7957 and 7958 will be essentially identical to the HP 7914. When compared to the HP 794X products, users could see 20 to 50 percent higher disc performance.

The HP 7957 and 7958 prices set new standards for mid-range mass storage subsystems. These prices represent more than a 40 percent reduction in cost per megabyte from the HP 791X and 794X families of disc products. The low price of the HP 7957 will help in configuring competitive entry-level systems bids.

Low maintenance prices

Savings with the new HP 7957 and 7958 discs don't stop with low list prices. Monthly maintenance prices are among the industry leaders.

Ideal office product

The HP 7957 and 7958 are ideal for office applications where quiet operation and compact size are a necessity. These new discs operate at 52 dB(A) sound power level, barely noticeable in an office environment. The compact size of the new drives is ideal for desktop use. Or, entire mid-range systems (SPU, disc, and tape) can be configured in one space-saving design plus cabinet.

Mass Storage

NEW HP 7936/37 AND 7957/58 ORDERING AND AVAILABILITY

As of November 1, HP will be adding the HP 7936H, 7936XP, 7937H, 7937XP, 7957A, and 7958A to the HP Price List. The availability on these products is:

Disc drive	Availability
HP 7957A and 7958A	8-10 weeks
HP 7936H and 7937H	12 weeks
HP 7936XP and 7937XP	16 weeks (minimum)

When ordering the HP 7936/7937 product family, keep in mind that the cabinet (HP 19511A) must be ordered separately. This cabinet will hold two HP 7936/7937 drives.

Here is some additional ordering information for the HP 793X products:

Product	Opt.	Description
HP 7936H	**	307-Mbyte HP-IB fixed disc drive
HP 7936XP	**	307-Mbyte HP-IB fixed disc drive with controller cache
HP 7937H	**	571-Mbyte HP-IB fixed disc drive
HP 7937XP	**	571-Mbyte HP-IB fixed disc drive with controller cache
HP 19511A		Two drive cabinet for HP 7936/7937 disc drives
HP 19512A		Mounting kit for 19-inch EIA cabinet

**Option choices for HP 7936/7937

Note: The standard power for HP 7936/7937 is 60 Hz and 90 - 132-volt, which differs from HP 7933/7935 standard power of 60 Hz and 208 volt.

Std – 60 Hz, for 0-132 volt operation		(No extra charge)
017 – 60 Hz. for 180-264 volt operation		"
015 – 50 Hz, for 90-132 volt operation		"
015/017 – 50 Hz, for 180-264 volt operation		

Here is some additional ordering information for the HP 795X products:

Product No.	Opt.	Description
HP 7957A		81-Mbyte fixed disc drive in a small desktop package. Includes HP-IB controller and a 1-meter HP-IB cable.
	015	Voltage selector switch is set for 230 V operation for non-U.S. shipments.
	550	Deletes the 1-meter HP-IB cable
HP 7958A		130-Mbyte fixed disc drive in a small desktop package. Includes HP-IB controller and 1-meter HP-IB cable
	015	Voltage selector switch is set for 230 V operation for non-U S shipments
	550	Deletes the 1-meter HP-IB cable
HP 19500B		Rackmount kit for mounting HP 7957A and HP 7958A disc drives in a 19-inch rack enclosure.

System Support of HP 7936137 and 7957/58 Disc Drives

The new discs from HP are supported on a broad range of systems. Please refer to the following matrices for more detailed support information.

H P system	HP 7936137	HP 7936/37XP
HP 2501260	No	No
HP 3000 - MPE-V (T-Delta-6 and UB) (No private or Foreign Volume support on T-Delta-6)	Yes	Yes
HP 3000 MPE - XL	Yes	Planned*
HP 9000		
Series 200 HP-UX 5.1, BASIC 4.0, Pascal 3.1	No	No
Series 300 HP-UX 5.15	Yes	No
Series 300 BASIC 4.0 and Pascal 3.1	No	No
Series 500 HP-UX 5.05	Yes	No
Series 800	Yes	TBD
SRM 3.0	Yes	TBD
HP 1000		
A-Series RTE-A 4.1	Yes	TBD
WF-Series	Contact your sales rep	
HP 64000 HP-UX	No	No

**Version to be developed.*

H P system	HP 7957158
HP 2501260 - B.08	Yes
HP 3000 - UB Delta 1	Yes
HP 3000 MPE - XL	No
HP 9000	
Series 200 HFUX Rev. 5.1, BASIC 4.0, Pascal 3.1	Yes
Series 300 HP-UX Rev. 5.15, BASIC 4.0, Pascal 3.1	Yes
Series 500 HP-UX Rev. 5.05	Yes
HP 1000 800	TBD
SRM 3.0	Yes
A-Series RTE-A 4.1	Yes
WF-Series	Contact your sales rep
HP 64000 HP-UX	Yes

HP 7936/37 Performance

The new HP 7936137 disc drives provide a significant performance improvement in comparison to the existing line of high-capacity disc drives offered by HP. Some of the factors that contribute to this performance increase are the reduction in seek, latency, and controller overhead as well as a faster data transfer rate. As a reference, the following table provides a comparison of the HP 7936137 performance specifications in relation to the HP 7933135.

Performance	HP 7936/37H	HP 7933/35H
Average controller overhead time	<1.0 ms	3.5 ms
Average seek time	20.5 ms	24.0 ms
Average rotational delay	8.3 ms	11.1 ms
Average time to transfer 1 Kbyte	1.0 ms	1.0 ms
Total average transaction time	30.8 ms	39.6 ms
Disc performance index	32.5*	25.3*

Refers to fundamental disc performance.

Additionally, the HP 7936137s offer an increased data buffer size, which allows them to handle larger transfers more efficiently. The HP 7936137s also provide a more effective method of processing write operations. As with any other disc drives, the impact the HP 7936137s have on system performance will be dependent on the exact configuration of the system as well as the application. If the same number of megabytes are replaced with HP 7937s (three HP 7933s for two HP 7937s), there is a possibility that system performance improvements will not be realized. Reducing the number of spindles on a system increases the contention for each drive. This is especially true of systems that have a dedicated system disc. In these instances, there is a greater potential for performance benefits if a disc remains dedicated for the system. A more significant performance improvement is likely to be experienced when a one-for-one spindle swap occurs.

Announcing Upgrade Paths to the HP 7936 and 7937 Disc Drives

Effective November 1, 1986, through February 28, 1987, an upgrade program is offered to installed base users who wish to return their existing disc drives for trade-in credit toward the newly announced HP 7936 and 7937 discs.

Upgrade matrix

From	To	Maximum quantity
HP 7933/35H	HP 7936H or 7937H HP 7936XP or 7937XP	1.5
HP 7933/35XP		1.5
HP 7925M		3
HP 7925S/H		3
HP 7920M		3
HP 7920S/H		3

Notes

▪ The credits are ordered by adding the suffix "N" after the product number, e.g. 7933HN (for both 7933H and 7935H) and 7933XN (for both 7933XP and 7935XP).

▪ HP 791X paths to HP 7936137 discs are not available.

▪ Up to three discs may be returned for every two purchased.

▪ Combined purchase of HP 7936 and 7937 is allowed.

▪ HP 792X and 793X disc return may be combined.

Why upgrade?

Reduction of HP 7936137 purchase price. During the upgrade program period, the initial capital outlay for the new and higher performance 7936137 discs can be substantially lowered with trade-in credits. Refer to the article "Introducing the HP 7936 and 7937

Disc Drives" for other upgrade advantages.

Other upgrade paths

HP 791X and 792X disc upgrades to the HP 7933135 are still valid paths, and will expire on December 31, 1986. Please note that no extension or program renewal will take place after that end date. With the excellent price/performance of the HP 7936137 and the price reduction of the HP 7933135, now is the best time for installed base customers to boost their disc storage at a substantial savings.

Summary of existing upgrade paths:

From	To	Maximum quantity
HP 7925M	HP 7933H or 7935H HP 7933XP or 7935XP	3
HP 7925S/H		3
HP 7920M		3
HP 7920S/H		3
HP 7914ST	HP 7933H or 7935H HP 7933XP or 7935XP	1
HP 7914TD		1
HP 7914P/R		1
HP 7912P/R		1
HP 7911P/R		1

Notes

▪ HP 792X and 791X return credits may be combined.

▪ Both HP 7933 or 7935 disc and HP 7978B tape must be purchased in order to qualify for the HP 7914SN and 7914TN return credits.

For additional information and trade-in credit prices, please contact your HP sales rep.

Mass Storage

ANNOUNCING THE HP 7945/7946A DISC UPGRADE TO THE HP 7958A

Effective November 1, 1986, through April 30, 1987, worldwide users may upgrade their HP 7945A disc and 7946A disc/tape drives to the new high-performance 130-Mbyte HP 7958A 5¼-inch Winchester disc drive.

Upgrade matrix

From	To	Max. qty.	Notes
HP 7945A	HP 7958A	2	
HP 7946A	HP 7958A	1	One HP 7958A disc and 9144A tape must be purchased

Why upgrade?

1) *Higher capacity and more performance* – Depending on the transfer size and the amount of data locality, the HP 7958A offers up to 50 percent higher performance than the HP 7945/46A discs.

2) *Space savings* – Users can now put 130 Mbytes in half the space than 110 Mbytes (two 7945As) used to occupy. This can be important in allowing larger systems to fit in an HP 92211 Series cabinet.

3) *Lower price on the new HP 7958A purchase* – Users who take advantage of the upgrade promotion will get a credit to apply toward the purchase of an HP 7958A or toward the combination purchase of an HP 7958A and an HP 9144A cartridge tape.

How it works

▪ These credits are ordered by adding the suffix "N" after the product number, e.g. 7945AN or 7946AN.

▪ Return credits must be coordinated with the HP 7958A and/or 9144A purchase.

A Notice of Return Packet detailing return instructions will be sent to the HP customer engineer office upon receipt of the credit order.

For additional information, please contact your HP sales rep.

Muss Storage

HP ANNOUNCES NEW 20-MBYTE RUGGED DISC DRIVE

Beginning November 1, 1986, HP will be offering the office environment the same built-in ruggedness and reliability that is required by our industrial users.

The HP 9154B, 20-Mbyte drive, and the HP 9153B, 20-Mbyte drive with 3½-inch microfloppy, have been optimized for the single-user environment. They are both well suited for the automated test-and-measurement market, CAD/CAE systems, as well as for everyday applications such as word processing, business graphics, and spreadsheets.

The key features and benefits of the new 20-Mbyte drives are outlined below:

Reliability and ruggedness

Now users can transport their disc drives with confidence. Its shock and vibration capabilities allow it to be moved as needed without the extreme caution required with other drives.

Write protection

Supported on the HP 9000 Series 200 and 300, the new write protect feature allows the user to prevent unauthorized modification of a chosen section of the hard disc. Now users can have the same protection that they have grown accustomed to with floppy-based systems.

Data protection

HP's initialize protection feature helps the user ensure data integrity and prevents data loss at the flip of a switch.

Increased data throughput

To maximize system performance, HP's advanced disc controller design utilizes VLSI (very-large-scale-integration) technology in conjunction with a full track buffer. Recent benchmark testing has shown performance improvements of 20 to 50 percent over the HP 9133H/9134H 20-Mbyte products.

IBM compatibility

Support for the HP 9154B is provided by the HP Touchscreen II PC as well as the HP Vectra PC and IBM PC/XT/AT. Operation with the HP Vectra PC, IBM, Compaq, AT&T 6300, and Olivetti M-24 computer requires our 88500A disc/tape interface.

Ordering information

The HP 9153B and 9154B are both available for immediate delivery.

P/N	Description
HP 9153B	20-Mbyte Winchester hard disc and 3½-inch microfloppy
HP 9154B	20-Mbyte Winchester hard disc

For additional information on the 20-Mbyte rugged disc drives, please contact your HP sales rep.

Mass Storage

404-MBYTE DISC PACK PRICE REDUCED

Effective November 1, 1986, HP's Direct Marketing Division (DMK) is reducing the price of the 404-Mbyte disc pack (PIN 97935A).

The reduced price coupled with the Disc Memory Division's price reduction on the HP 7935H disc drive and Copycat disc-to-disc backup solution, offers users a significant savings for a removable mass storage system.

Mass Storage

HP 7970E OEM OFFERINGS EXTENDED TWO YEARS

Hewlett-Packard has been a supplier of OEM ½-inch mag tape products for the past 16 years. We have established a strong working relationship with our current OEM users and are committed to satisfying their needs. The HP 7970E OEM product manufacturing has been moved from HP's Boise Division to the Greeley division for this reason.

HP 7970E OEM production plans

Discontinuance plans for the HP 7970E tape products were announced in May of 1985. The discontinuance of the HP 7970 product line was to take place in three phases, beginning with the discontinuance of HP 3000 Series options, followed by Technical options (HP 1000 A-Series and HP 9000 Series), and ending with HP 1000 EIF-Series and OEM options.

We have decided to continue to manufacture the HP 7970E OEM products until November 1, 1988. *However, all orders must be received by us prior to May 1, 1988. We will not accept orders after May 1, 1988.*

Extended support life

Along with extending production of the HP 7970E products for OEM users, we also have extended the HP 7970E support life for an additional two years until October 30, 1998.

What OEM tape products will we continue to offer?

The HP 7970E tape products that we will continue to produce until November 1, 1988, are as follows:

HP 7970E tape drives

Option	Description
Option 002	25 ips motor
Option 004	3 PC extend boards
Option 005	3 I/O connectors
Option 011	Delete HP logo
Option 015	230 volt power
Option 048	48 volt power
Option 151	Master drive with no interface
Option 715	Service documentation

Kits

P/N	Description
13194A	Multi-unit cables
13195A	Write formatter
13196A	PE read test kit
13251A	48 volt upgrade kit
26072A	Parallel to HP-IB conversion kit

OEM specials

Option	Description
Option H21	Siemens 48 volt (contains nos. 151, 004, 005, 011, 048, and 715)
Option H23	Siemens 60 volt (contains nos. 151, 004, 005, 011, 060, and 715)
Option H24	Northern Telecom (contains nos. 048 and 151)

Please contact your HP sales rep for more information.

Networks

NS FOR THE VAX REV. 1.1

Effective November 1, NS for the DEC VAX computer Rev. 1.1 (HP 50950A) permits transfers between DEC VAXs and HP 3000 (UB-MIT), HP 1000 (RTE PCO 4.1) and HP 9000 (NS 5.17 on 300, 5.1 on 500 and 1.0 on 800) computers. The product now operates on MicroVAX systems and supports two new MicroVAX options designating a 5%-inch floppy and TK50 streaming cassette. HP now approves IEEE 802.3 configurations with the DEC DEQNA, DEUNA. and DELUA controllers; yes, NS for the DEC VAX operates with the new DELUA.

VAX users can now access HP 2680 laser printers, send process control data to scheduling and planning programs on HP 3000s, and with some extra programming, link together DEC's All-in-One with HP DeskManager. On the factory floor, HP and DEC supervisory computers may share control information, HP QDM and VAX MRP systems can exchange statistics, and VAX CAD machines may send designs directly to HP 1000s on the shop floor. HP users may use the product as a gateway to access or send files over wide-area DECnet.

Ordering information

Product No.	Media	Systems
50950A		
Opt. 044	5%-inch floppy	MicroVAX
Opt. 200	TK50	MicroVAX
Opt. 300	9 track	(111730 - 85X0)
Opt. 400	9 track	(8600 - 88X0)
50950R		
Opt. 044		
Opt. 200		
Opt. 300		
Opt. 400		

Contact your HP sales rep for more information.

Networks

ZNP RETURN CREDITS

Effective November 1, 1986, return credit offerings have been expanded to include INP and LAN products for HP 3000 Series 37 to Series 70 systems. The existing INP return credit program has been restructured as follows:

▪ The current 30020AN and 30020BN return credits are now discontinued and being replaced with a new ordering method. Since INPs can only be ordered as part of a Link product, which includes software and cables, INP return credits are now ordered through the use of the Link product number, with the addition of an "N" suffix. For example, return credit for an X.25 Link (PIN 32187A) is obtained by ordering PIN 32187AN.

Because trade-in credits are based on the hardware portion of the Link product, and not software, return credit amounts are the same for all Links regardless of their original selling price.

▪ Upgrade paths are no longer limited to the purchase of the LAN/3000 Link products. Return credit eligibility now encompasses the purchase of:

• Another datacom product

• Series 900 datacom product

• Upgrades from HP 3000 Series 37 system

Networks

DS/1000-IV TO NS/1000 UPGRADE PROGRAM

NS/1000 is the most advanced networking product ever created for the HP 1000 A-Series computer family. The ability to benefit from the increased performance by upgrading from DSI1000-IV to NS/1000 has been available since introduction and will end December 1, 1986.

Pmduct No.	Opt.	
91790A/R		DS/1000-IV to NS/1000 upgrade
	602	DS to NS for A600
	702	DS to NS for A700
	892	DS to NS for A900

NS/1000 features

NS/1000 provides the user with the following features:

Network File Transfer (NFT) between HP 1000 A-Series, HP 3000, HP 9000, and VAX/VMS systems connected by IEEE 802.3 links.

▪ NFT and Network Interprocess Communication (Net IPC) between HP 1000 A-Series over LAN/1000 and Router1 1000 (HDLC or X.25) links.

▪ Backward compatible with DS/1000-IV (PIN 91750 AIR):

• Between HP 1000 A-Series over LAN/1000 and Router11000 (HDLC or X.25) links.

• Between HP 1000 A-Series and HP 3000s over BISYNC and X.25 links.

▪ Gateway functionality between LAN/1000 and Router11000 (HDLC or X.25) links.

For a complete description of NS features, please refer to the data sheet. PIN 5954-6330.

Contact your sales rep for more information or for a copy of the datasheet.

OBSOLESCENCE OF ETHERSERIES/150 LAN CABLES

On December 1, 1986, the Ether-Series/150 LAN cable products will be removed from the HP Price List. The following is a list of the product numbers affected.

Product No.	Description
45691A	7-meter cable
45692A	15-meter cable
45693A	30-meter cable
45694A	Cut-to-length cable
45696A	Barrel connector
45697A	BNC "T" connector
45698A	Loopback connector

The EtherSeries/150 LAN interface and software products were removed from the HP Price List on June 1, 1986. HP's Direct Marketing Division (DMK) continued to offer the cables to provide a high level of user support. The sales of these products have dropped significantly and are being obsoleted.

If there are any problems with the obsolescence of these products, please contact your HP sales rep.

OBSOLESCENCE OF SRM MULTIPLEXER LINK CABLES

On December 1, 1986, the SRM cable products will be removed from the HP Price List. These products supported the old multiplexed SRM net-

work. The following is a list of the product numbers affected:

Product No.	Description
97061A	10-meter cable
97061B	25-meter cable
97061C	60-meter cable
97061D	60-meter cable

The interface products were removed from the HP Price List on June 1, 1986. HP's Direct Marketing Division (DMK) continued to offer the cables to provide a high level of user support. The sales of these products have dropped significantly and are being obsoleted.

If there are any problems with the obsolescence of these products, please contact your HP sales rep.

X-Y RECORDER OBSOLESCENCE

On May 1, 1987, the HP 7015B, 7035B, 7045B, and 7046B X-Y recorders will be obsoleted due to continuing market decline and increased competition from lower-cost X-Y recorders. Because there will be no replacement products for these X-Y recorders, we recommend that users plan their final purchases.

HP will continue to support these X-Y recorders and all related supplies for five years after the obsolescence date.

Please contact your HP sales rep if you have any questions concerning the X-Y obsolescence.

Product No.	Description	
HP 7015B	Low-cost, one-pen X-Y recorder	
HP 7035B	General-purpose, one-pen X-Y recorder	
HP 7045B	High-performance, one-pen X-Y recorder	
HP 7046B	High-performance, two-pen X-Y recorder	

TIPS FOR USING THE HP 7550's AUTOMATIC SHEET FEEDER

Have you ever experienced difficulties with the automatic sheetfeed mechanism on the HP 7550A? These difficulties are rarely a problem with the plotter itself. We've identified some of the causes and solutions with paper, loading procedures, and the office environment.

■ *Bent or wrinkled corners.* Turn the stack of paper around so that the bent corner is toward the front of the plotter (away from the clips in the tray) and the straight edge and corners are fed into the mechanism.

Non-level plotter surface. Make certain the plotter is sitting on a flat surface. A table top that is out of flat by only ¼ inch (6.35mm) can cause a distortion of the plotter base that will lead to paper feed problems.

■ *Misoriented feed shaft.* Make certain that the feed shaft is properly aligned before sliding the paper tray into the plotter. Do this by pressing the load/unload button on the front panel while the paper tray is out of the machine and the autofeed mode is activated.

Paper not under the clips. If the paper stack is bowed, it's possible for the paper to hit something inside the machine when the tray is slipped into the instrument. Ensure that while inserting the paper tray, the paper does not get caught and pulled out from under the clips by the plotter.

■ *Paper tray is too full.* It may be that the paper feed motor is binding due to the tray being too full of paper. Try

loading fewer sheets of paper in the tray.

Paper misaligned in tray. Adjust the stack of paper in the tray so that it is centered under the clips, rather than against one side.

Abnormal relative humidity. At low humidity levels, the paper shrinks and the guides in the tray allow the paper to skew as it is fed. At high humidity levels, the paper expands and curls. Letting the paper stabilize to the environment (by fanning the stack and letting it sit exposed for an hour or more) will flatten the stack and improve sheet feed performance.

Printers

A NEW JETSERIES FAMILY MEMBER
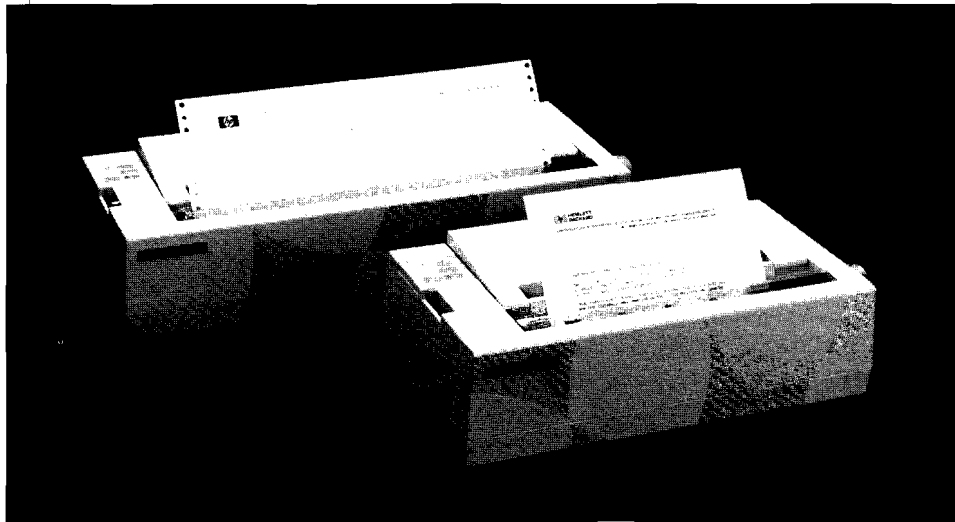
First it was the HP ThinkJet printer – the surprisingly compact, 150-cps printer that brought peace and quiet to the world of PC printing. Then it was the HP QuietJet Plus printer, the wide carriage, NLQ (near letter quality) printer that offered all the features needed for personal printing – without the noise.

And now, for those of you who need a QuietJet printer, but not the wide carriage, there is one more: a new narrow-carriage QuietJet printer.

The new HP QuietJet printer offers all the features of the popular QuietJet Plus printer – NLQ, key-selectable print modes, 192-cps text printing, quality graphics – and less. It's the same

printer in a smaller package, just large enough to handle standard-size paper for those PC users who don't need to print spreadsheets. The advantages are less cost and less space.

The QuietJet printer is designed to work with most major personal computers and portables – HP, IBM, or Apple. And it's supported on most industry-standard software.

Now, more than ever, there's a Hewlett-Packard printer to meet your individual needs. The popular HP PC inkjet printer family now includes a printer for just about everyone and supplies and accessories that are easy to order. Just call HP Direct at 800-538-8787 for 24-hour service.

For business printing and personal convenience printing, whether it's for an HP, and IBM, or an Apple personal

computer, there is a JetSeries Printer from which to choose.

And . . . they're quiet too.

For more detailed information about the HP QuietJet Series Printer, you can receive the following literature by contacting your HP sales rep: The QuietJet Family Brochure (PIN 5954-6979) and the QuietJet Family Data Sheet (PIN 5954-6984).

Printers

HP 256XB PRINTER FAMILY NOW COMPLETE WITH INTRODUCTION OF HP 2563B

The HP 256XB family of printers is now complete with the introduction of the 300 Ipm HP 2563B dot-matrix line printer on the November 1, 1986, HP Price List. The added features offered by the HP 2563B include 12, 13.3, and 15 character-per-inch character set options and high-density raster graphics at 140×144 per inch.

The standard HP 2563B and HP 2564B products have been restructured and are now offered as 55 dBA units complete with quiet cabinet, sound enclosure, and passive paper stacker.

For those users who prefer the 65 dBA unit (the HP 2563B desktop unit or the non-quiet, cabinetized HP 2564B), Option 114 is available. For the HP 2563B, this option deletes the quiet cabinet, the sound enclosure, and the passive stacker. For the HP 2564B, this option deletes the sound enclosure, the passive stacker, and replaces the quiet cabinet with the regular cabinet. Both of these quiet versions share the

same cabinet, sound enclosure, and passive stacker.

Because of the changes in structure, Option 500 (extended capabilities package) is replaced by Option 510, which includes Options 004, 005, 008, and Option 068. This change is for the HP 2563B and HP 2564B only.

Printer	Standard product	Option 114
HP 25638	– 300 LPM Printer Deletes: – Quiet Cabinet – Quiet Cabinet – Sound Enclosure – Sound Enclosure – Passive Stacker – Passive Stacker	
HP 2564B	– 600 LPM Printer Deletes: – Quiet Cabinet – Quiet Cabinet – Sound Enclosure Sound Enclosure – Passive Stacker – Passive Stacker Adds: – Regular Cabinet	

Orderable literature

Product No.	Description
5954-7334	**Dot Matrix Impact Printer Family Brochure**
5954-7326	**Dot Matrix Impact Printer Data Sheet**

The illustrations below show the standard products before and after the restructure.

HP 2563

The HP 2563B non-quietized cabinet is available from HPS Direct Marketing Division (DMK) only. Order P/N 92214P.

The changes to the options offered with these printers are summarized below:

Printer	Option added	Option deleted
HP 2563B	Opt. 114 **Opt. 510**	Opt. 110 Opt. 112 Opt. 115 **Opt. 500**
HP 2564B	Opt. 114 **Opt. 510**	Opt. 110 Opt. 111 Opt. 115 **Opt. 500**

Note: the HP 2563A is scheduled to be discontinued in February, 1987.

Contact your sales rep for more information about the HP 2563B/64B printers or if you would like to order literature.

HP 2564

HP LABEL CARD OPTION FOR HP 256X PRINTERS PROVIDES ENHANCED LABEL PRINTING

Hewlett-Packard is now stepping forward into the label-printing business with the HP 256XB printers. With the industry mandated bar code label requirements such as AIAG and HIBC, label printing is becoming very important.

The HP Label Card option will enhance the HP 256XB family printers. This new option expands the selection of types, sizes, and shapes of characters printed and also generates forms, labels, lines, and boxes.

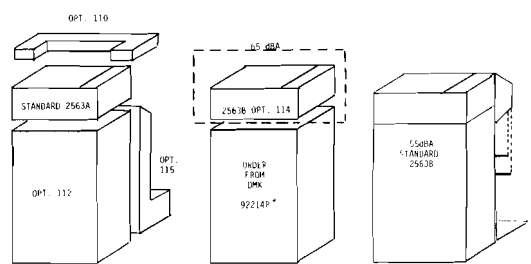The HP Label Card enables printing of the most popular bar codes, listed below, and many of the less common bar codes.

3 of 9	2 of 5	EAN-8
UPC-A and E	**Interleaved 2 of 5**	**EAN-13**

The HP Label Card is easy to use and compatible with QMS™ Magnum™ language.

Additional Label Card printing features which increase printer functionality include variable character height and width; variable character orientation; horizontal or vertical bar codes; lines and boxes; forms generation; label repetition with auto increment and decrement; plot modes, picture modes, and logos; reverse image printer; and shading.
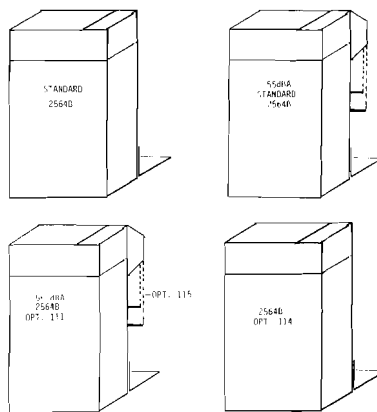
The option can be ordered in two different ways: as an option to a new HP

256XB printer or as an upgrade product to an existing HP 256X printer. If the HP Label Card is ordered as an upgrade to an existing HP 256X printer, it will require the installation of new printer control firmware. The firmware will be included with all upgrade kits except for the HP 2563B (the firmware is a built-in printer feature). One printer option must be specified.

Product
Option 024 – Includes HP Label Card and manuals
Upgrade product – 26062A
Opt. 001 – 2563A includes PCA, firmware, and manuals
Opt. 002 – 2563B includes PCA and manuals
Opt.004 – 2564B includes PCA, firmware, and manuals
Opt. 006 – 2566A includes PCA, firmware, and manuals
Opt. 007 – 2566B includes PCA, firmware, and manuals
Opt. 008 – 2567B includes PCA, firmware, and manuals

Note: The Label Card option cannot be operated in the printers at the same time as the Vector Graphics Card (printer Options 022 and 023).

If you have any questions, contact your HP sales rep.

QMS and Magnum are US registered trademarks of Qualify Micro Systems, Inc

Printers

INTRODUCING THE MICROSOFT CARTRIDGE FOR HP LASERJET PRINTERS

The Microsoft cartridge (PIN 922862) is the newest font cartridge available for the Hewlett-Packard Laser-Jet family printers and promises to be one of the best. It is on the HP price list as of November 1.

Why is it called the Microsoft cartridge? Because it is fully supported by the Microsoft Word and Windows packages (characters match Windows screen fonts) and it provides the fonts that many word processing users have been waiting for. Those users that cannot use soft fonts (owners of the standard Laser-Jet printer) can still get high-quality kerned fonts. This cartridge also contains a better variety of type sizes and styles than the "B" or "F" cartridges – without upgrading to a LaserJet PLUS. The cartridge also contains the compressed line printer font for use with landscape spreadsheets.

The fonts contained in this cartridge are:

TmsRmn and Helv (portrait and landscape)	Medium – 8, 10, and 12 point Bold – 10, 12, and 14 point Italic – 10 and 12 point
Lineprinter (landscape)	8.5 point, 16.66 pitch

The symbol sets supported by this cartridge are ASCII and 7-bit ECMA, with Roman-8 and 8-bit ECMA planned for early 1987.

Printers

HP LASERJET "TAX" CARTRIDGE PRICE REDUCTION

On October 1, 1986, the prices of the HP 92286T font cartridge and the HP 92286TT TEMPEST version were reduced.

These cartridges are used and supported by third parties for developing software for the income tax market.

Terminals

VOLUME DISCOUNT ON REMARKETED HP 2624BR TERMINALS

Effective September 1, 1986 through February 28, 1987, users will receive a quantity price break when ordering six or more remarketed HP 2624BR terminals. This limited-time offer is in response to requests for a low-cost alternative to fight against used equipment dealers and terminal manufacturers.

The HP 2624BR price will be reduced when terminals are ordered in multiple quantities.

Remarketed US modem cables (PIN 13222NR) are also available.

Terms and conditions

1. No additional HP purchase agreement discounts apply to the promotion.

2. Functional unit credits are applicable.

3. Product comes with Hewlett-Packard's standard 90-day warranty.

4. Offer is good while supplies last.

DMK direct order phone numbers

DMK **Fast** Phones – the **easy,** direct way for you to order supplies.
accessories, media, furniture, and software from Direct Marketing
Division.

Location	Telephone Number
Australia	(03) 895-2645
	(03) 895-2615
	(03) 895-2815
	(03) 895-2861
Austria	(0222) 2500-615
	(0222) 2500-616
Belgium/Luxembourg	(02) 761 31 11
Canada	
Toronto Local	416-671-8383
Ontario	1-800-387-3417
Quebec	1-800-387-3417
British Columbia	112-800-387-3154
Other Provinces	1-800-387-3154
Denmark	(02) 816640, ext. 258
Finland	(90) 887 2361
France	(1) 69 28 32 64
Greece	(01) 6726090
Italy	(02) 9236 9702
Japan	
Sagamihara	0427 59 1311
Osaka	06 304 6021
Middle East	
Athens	(01) 6828811
Norway	(02) 24 60 90
South Africa	
Johannesburg	(011) 8025111
Cape Town	(021) 537954
Spain	(91) 6374013
	(91) 6370011
Sweden	(08) 7502400
Switzerland	(057) 31 22 53
	(057) 31 22 54
	(057) 31 22 59
The Netherlands	(020) 547 6606
United Kingdom	(0734) 697201
united **States**	800-538-8787
West Germany	(0130) 3322

SOFTWARE PACKAGES AVAILABLE AND WANTED

If you have a software package available for cross-licensing, or are looking for a package to cross-license, this section will help you. Your entry will appear for two months; the most recent additions are shaded. To list your company in the Cross-Licensing Classifieds (at no charge), see the address at the end of this section.

Software Packages Available

Industry: *Jobshop Manufacturing*

Abstract: JOBSHOP/3000 is a cost-efficient software solution for small to mid-sized jobshops. It provides comprehensive cost analysis and standard financial functions including payroll. JOBSHOP/3000 is a fully integrated system using an HP 3000 IMAGE database. Most user interaction is through an inquiry mode. It effectively monitors and documents job performance by costs to date, estimate variance, schedule variance, and percent complete. Distributed data collection includes labor distribution from the shop floor, updating job cost in real-time. JOBSHOP/3000 solves the problem of providing an acceptable solution of job cost analysis for the true jobshop. MCBA interface is available.

Company Name: Votaw Data Systems

Address: 13000 Lakeland Road
Santa Fe Springs, CA 90670
USA

Phone: 213-944-0676

Contact Person: Norm Querido

Type of Distributor Wanted: OEMs, dealers, distributors

Geographic Coverage: USA

Industry: *Cross industry – Software development tools*

Abstract: QCOMM/1000 is an easy-to-use, program-to-program message communication subsystem for use on HP 1000 computers. In addition, with DS/1000 it facilitates transparent program-to-program communication over DS/1000 networks.

Features include:
- Guaranteed message delivery on F1F0 basis per message queue. Message queueing with full flow control.
- Handling of as many message queues as there are class numbers on the system.
- Blocking of messages for optimal throughput.
- Trace facility and dynamic viewport into queue usage.
- Multiple message queues per program.
- Variable message lengths.

Company Name: Bothma, Searle & Wilk CC

Address: P. O. Box 365
Halfway House
1685
Republic of South Africa

Phone: (27) (11) 805-1843

Telex: (SA) 4-26824

Contact Person: Neville Searle or Roland Wilk

Type of Distributor Wanted: HP 1000 OEM

Geographic Coverage: Worldwide

Industry: *Cross-industry*

Abstract: Dataport/HAN is looking for a sales-service organization in France, Spain, and Italy to expand their activities throughout Europe. Dataport/HAN sells solutions on HP 9000 Series 300 workstations for mechanical, electrotechnical, and architectural applications. The CAD 200 program-family sells very successfully in Germany, Austria, and Switzerland. Since 1984, Dataport/HAN has installed more than 300 systems in these countries. More than 2,000 systems have been installed worldwide.

Company Name: Dataport GmbH

Address: Kaiserstrasse 19
Eingang Neuhausgasse 16
D-6360 Friedberg
West Germany

Phone: (06031) 6 10 21-5

Telex: 4 184971 nd d

Contact Person: J. Brinkerhoff

Geographic Coverage: France, Spain, Italy

Industry: *Manufacturing*

Abstract: MDSS (Manufacturing Decision Support System) is an online, full-function manufacturing software product package in four separate modules: Material Management, Shop Floor Control, Order Processing, and Financial Reports.

MDSS is well suited to discrete manufacturing with support for make-to-order, make-to-stock, and selective repetitive manufacturing facilities ranging from $5 million and up. MDSS is written in structured, ANSI COBOL to run on the HP 3000 series, and is professionally documented using standard HP software products. It has built-in, online "Help" screens for ease-of-use.

Company Name: Manufacturing Decision Support Systems, Inc.

Address: 300 East Ohio Building
1717 East 9th Street
Cleveland, OH 44114
USA

Phone: 216-861-8100

Contact Person: John A. Leibert, V.P

Type of Distributor Wanted: Open

Geographic Coverage: United States, including Puerto Rico

Industry: *Cross industry - Office Automation*

Abstract: AUTHOR 3000 is powerful, character-oriented AUTHOR word processing software to be run on the HP 3000. This full-featured word processing package combines full-screen editing and user friendliness with system efficiency and high performance. AUTHOR 3000 is the first product in a full line of office automation products.

Features in AUTHOR 300 include:
- Electronic filing of all documents, using Drawer, Folder, Document hierarchy.
- Incorporation of function key orientation and full screen editor.
- Introduction of COMAR'S 65,000 + word spelling dictionary, and a personalized user-specified dictionary.
- Comprehensive step-by-step on-line help screens.
- Full mail list function supporting mass mailings.
- System's management function for system access control.
- Complete update of the User Reference Manual.
- Low-cost type-ahead hardware solution for terminal buffering.

Company Name: COMAR, Inc.

Address: 9320 S.W. Barbur Blvd., Suite 140
Portland, OR 97219-5419
USA

Phone: 503-293-2885

Contact Person: Glenn Manley

Type of Distributor Wanted: Open

Geographic Coverage: Worldwide

Industry: *Cross industry – utility software*

Abstract: **The LARC Laser Package** is a formatter for the Hewlett-Packard LaserJet PLUS laser printer. It is a stored command formatter similar in command structure to TDP/3000. The package handles full page formatting, multi-column output, and utilizes all the features of the LaserJet PLUS to approximate a typeset appearance in the final document.

The package runs on the HP 3000 (any model). The LaserJet PLUS can be connected directly to the HP 3000 or can be driven through the second port on an HP 262x type terminal (or PC emulation).

Company Name: LARC Computing Inc.

Address: 339 South San Antonio Road
Los Altos. CA 94022
USA

Phone: 415-941-9310

Conracr Person: Martin Gorfinkel

Type of Distributor Wanted: One able to provide some support on the HP 3000 for users.

Geographic Coverage: Worldwide

Industry: *Cross industry*

Abstract: DOCUMENTATION/3000 automatically documents existing programs written in any language available on HP 3000 computers. The system scans through the source files and extracts such valuable information as: IMAGE databases and sets used by the program, VPLUS/3000 forms files and forms, MPE and KSAM files, data elements, CALLs, COPYLIBs, $INCLUDE files, etc.

DOCUMENTATION/3000 stores the information in its own IMAGE database and simplifies the conventional process of writing specifications for new programs.

Company Name: Diamond Optimum Systems, Inc

Address: 5837 Wilkinson Avenue
North Hollywood, CA 91607
USA

Phone: 818-980-5854

Conracr Person: Igor Yasnogorodsky

Type of Distributor Wanted: Open

Geographic Coverage: Worldwide

Software Packages Wanted

Type of Packages Needed: Comprehensive commercial and/or financial software applications.

Services Provided: Marketing firm in Toronto, Canada will represent and promote software products and services in Canadian marketplace for US and Canadian-based software companies.

Needed by: Becker Schock and Associates

Address: 10 Noel Ave.
Toronto, Ontario
Canada
M4G IB3

Phone: 416-421-331 l

Conracr Person: Bob Becker

Geographic Coverage: Canada

You can list your company in the **Cross-Licensing Classifieds** (either Software Packages Available or Software Packages Wanted) by sending the information in the format used here to:

Hewlett-Packard Company
Value Added Solutions Marketing
Attn: Marilyn Rauchle
10520 Ridgeview Court
Building 49C
Cupertino, CA **95014**
USA

Entries will run for two months. The most recent additions are shaded. Be sure to send the information in at least one month before you wish it to appear.

FOSTER, JAN
AUSTRALIA
SYDNEY -- 9062

(55)

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