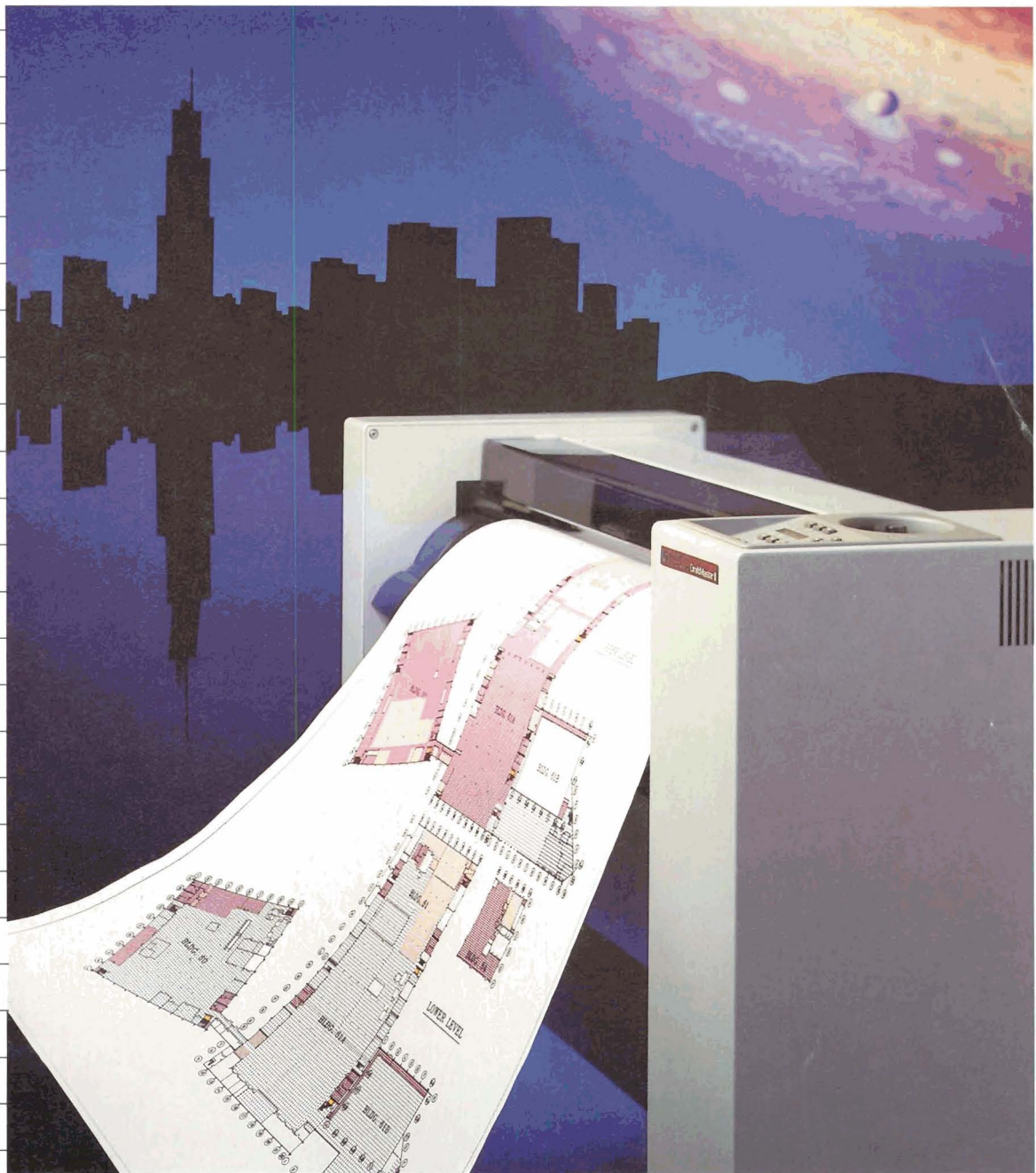


H E W L E T T - P A C K A R D

# HP CHANNELS

Information For Hewlett-Packard's Value-Added Businesses

March 1987



## HP DraftMaster Plotters

New high-performance drafting plotters for CAD professionals

 HEWLETT  
PACKARD

Volume 6, No. 5

Editor  
**Tracy Wester**

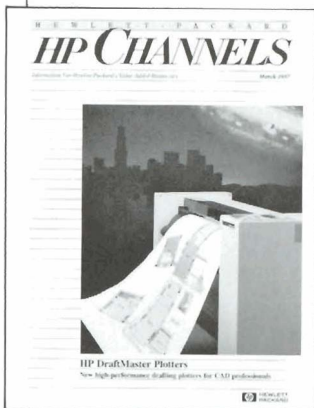
Assistant Editor  
**Darleen Brettes**

*HP Channels* is published monthly for Hewlett-Packard's value-added businesses to provide you with information about HP's products and services to help you be more successful.

For further information on any of the products and services discussed in *HP Channels*, please contact your HP sales rep.

*Note: Not all HP computer products are sold and supported in all countries. Please check with your local HP sales office.*

**On the cover**



The HP DraftMaster drafting plotters are ready to take on your toughest, most demanding plotter customer. With their exceptional performance, superior line quality, and solid reliability, each of these top-of-the-line plotters offers a potent combination of valuable features. See article on page 16.

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

If you work for a company that is a value-added business for Hewlett-Packard and want to receive your own copy of *HP Channels*, call Hewlett-Packard and have your sales rep send your name to Tracy Wester.

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

**For research and education purposes only.**

# HP Peripherals: Major Technologies for a Variety of Users

By Richard E. Belluzzo, Peripherals Group Marketing Manager

**At HP, peripherals always have played a major role in our customer mix. Devices such as printers, plotters, tape drives, and disc drives are integral components of any computer or instrumentation system.**

In designing and marketing HP peripherals, we have a simple goal, but it has far-reaching implications and challenges. We're striving to provide a broad range of cost-effective, state-of-the-art peripheral products to compete in a worldwide marketplace.

Taking apart this goal gives us the key elements of our strategy.

■ **A broad range** – HP offers a wide variety of workstation and system printers, including the industry-standard HP LaserJet printer family and popular HP ThinkJet printer; a full offering of plotters, both for business graphics, such as the HP ColorPro, and for design graphics, featuring the new HP DraftMaster; along with a multitude of personal, system, and integrated mass storage devices and tape drives.

## Providing a Broad Selection of Products

HP's peripheral business is subdivided into four main product groups:

- Printers
- Plotters
- Disc Drives
- Tape Drives

Each of these groups are further subdivided into eight product categories:

- Workstation Printers
- System Printers
- Business Graphic Plotters
- Design Graphics Plotters
- Personal Mass Storage
- System Mass Storage
- Integrated Mass Storage
- Tape Drives

■ **State of the art** – We've made a commitment to invest in key technologies and fully explore all of their applications. We're already seeing the results

of our ventures into laser and inkjet technologies for printers. The HP LaserJet Series II brings us a new generation of laser printers. Thermal inkjet technology has played a key role in our personal and system printers. Increasing exploration into thin film technology is providing our customers with significantly lower cost-per-megabyte solutions for data storage.

■ **Worldwide marketplace** – We serve a wide variety of users through a wide variety of channels. HP peripherals provide users with both stand alone and system solutions. This successful integration continues when our OEM users incorporate HP peripherals into their own systems. The resulting systems are usually custom applications that fill highly specialized user needs. These "value-added" systems incorporating HP peripherals are examples of a complementary method through which HP contributes to fulfilling user needs.

To further enhance our commitment to the OEM marketplace, the Peripherals Group recently introduced a new program to further our penetration of large computer manufacturers. One of the key elements is a dedicated sales force, specially trained to work with OEM clients. This sales team draws upon HP's more than 25 years of experience in the OEM marketplace. They receive ongoing communication and training from both the corporate and divisional levels.

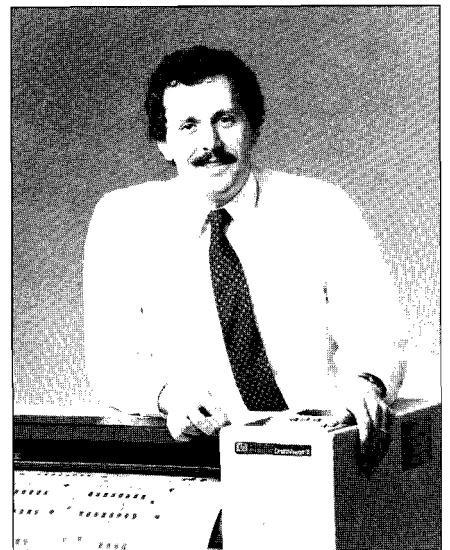
## Maintaining a leadership position

Our peripheral products are leaders in both the marketplace and within the company. Behind this leadership position is a very simple give-and-take philosophy – we're continually trying to give more performance and take down the price.

By offering high-quality, reliable products that are easily serviced, our goal of decreasing the cost of ownership is achieved.

In addition, by building compatibility into all of our peripherals, we're protecting our user's investment and providing a clear growth path as needs expand.

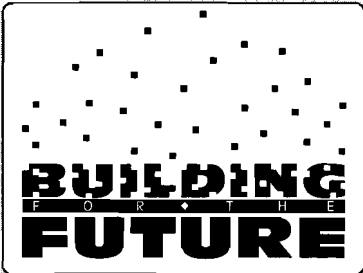
HP's peripheral business continues to grow as new products and services are added. We plan to expand our offerings both horizontally and vertically and reinforce our ability to deliver the best solutions to our users. By targeting specific business segments for both HP and OEM systems, HP will assure the right solutions will be available to users on a timely and cost-effective basis.



*Rick Belluzzo is the marketing manager for Hewlett-Packard's Peripherals Group. Based at HP's San Diego Division, he coordinates worldwide marketing programs for the company's laser, inkjet, and impact printers, business and technical graphics plotters, and data storage products.*



General



**Commercial Software Supplier Conference April 5-7, 1987**

Hewlett-Packard is pleased to present "Building for the Future," the 1987 Commercial Software Supplier Conference, on April 5 to 7 at the Marriott Hotel in Santa Clara, California.

This executive-level conference will present general sessions and workshops that contain information valuable to commercial software suppliers. You'll also have an opportunity to see the latest HP equipment and talk one on one with HP division management at a Product Fair on Monday, April 6.

Commercial software suppliers should return the hotel reservation card included in their invitation by March 19 to take advantage of the special rates offered by the Marriott. For more detailed information, contact your HP sales rep or see the February issue of *HP Channels*.

Come prepared for a fast-paced, informative meeting and learn how we will continue "Building for the Future" together.

General

**HP OFFICE SOFTWARE PRICE CHANGES**

The prices of the following HP office software products will be increased as of March 1, 1987.

Product No.	Description
36572	HP Telex
Opt. 310	
Opt. 315	
Opt. 320	
32120	HP Word
Opt. 310	
Opt. 315	
Opt. 320	
36576	HP Slate
Opt. 310	
Opt. 315	
Opt. 320	
36578	TDP
Opt. 310	
Opt. 315	
Opt. 320	
36561	HP Spell (U.S. Dictionary)
Opt. 310	
Opt. 315	
Opt. 320	
36562	HP Spell (U.S. and English)
Opt. 310	
Opt. 315	
Opt. 320	
36563	HP Spell (Add on U.S. Dictionary)
32119	HP Word Intrinsic

The new prices will apply to U.S. and all localized versions of the products. Contact your HP sales rep for more information.

HP 3000

**INTRODUCING ASYNCHRONOUS SERIAL NETWORK LINK FOR HP 3000 TO HP 3000 COMMUNICATION**

The Asynchronous SERIAL Network Link provides a low-cost, limited-performance link for system-to-system communication. This asynchronous, point-to-point link provides HP 3000 to HP 3000 communication through a modem over a leased line, switched line with manual dial, or auto-dial line. The Asynchronous SERIAL Network Link is compatible with HP's AdvanceNet strategy.

**Product description**

The Asynchronous SERIAL Network Link makes use of an existing controller, the Advanced Terminal Processor (ATP), for its hardware connections. No additional wiring is necessary to install the Asynchronous SERIAL Network Link on systems that already have an ATP in place. It is also possible to use adjacent ATP ports as either Asynchronous Network ports or terminal ports. The Asynchronous SERIAL Network Link, when used for HP 3000 to HP 3000 remote connections, requires the NS3000/V Network Services software (HP 32344A/R) for higher-level services to perform functions such as Network File Transfer, Virtual Terminal, Remote Database Access, Remote File Access, and Remote Process Management.

Asynchronous SERIAL Network Link offers powerful programmatic access to network communications



through the use of Network Interprocess Communications (NetIPC). This fosters development and implementation of distributed applications throughout the network. Node Management is also included in the Asynchronous SERIAL Network Link and provides a friendly user interface for the network management functions of configuration, tracing, and logging.

Asynchronous SERIAL Network Link will run on all current HP 3000 systems with at least 2 Mbytes of memory.

The Asynchronous SERIAL Network Link is based on the seven-layered Open Systems Interconnection (OSI) Reference Model, and includes software corresponding to levels 2 through 4. This product provides the potential for multivendor communications.

#### Ordering Information

Product No.	Description
32003A	Asynchronous SERIAL Network Link for HP 3000 Series
Processor Options	
Opt. 100	For Series 37XE, 39, MICRO 3000, and MICRO 3000XE
Opt. 200	For Series 40 and 42
Opt. 300	For Series 44, 48, and 5X
Opt. 400	For Series 6X and 70

HP 3000

## INTRODUCING NEW WIDE-AREA COMMUNICATIONS LINK FOR HP 3000

Users of wide-area communication networks can now take full advantage of the enhanced capabilities of NS 3000/V Network Services by the introduction of the NS Point-to-Point 3000/V Link product. The NS Point-to-Point 3000/V Link provides for remote communications between HP 3000 MPE/V-based systems through a modem over a leased line, switched manual, or auto-dial line. Offering performance comparable to the DS point-to-point link product, the NS remote link product includes an industry-standard network transport and new features such as store and forward routing, full-duplex modem support, and programming tools for the development of distributed applications.

#### Product description

The NS Point-to-Point 3000/V Link product includes the hardware interface card (INP), network transport and link software, plus a cable for connection to the user's modem. NS Point-to-Point 3000/V Link will run on all current HP 3000 systems from the MICRO 3000 up to the Series 70 running UB-MIT or later versions of MPE V. At least 2 Mbytes of memory are required.

#### Enhanced capabilities

The NS Point-to-Point 3000/V Link offers several improvements over the DS point-to-point link products (30270A/30271A) including an enhanced network-transport layer which follows industry-standard protocols. This provides the potential for multivendor communications assuming protocol compatibility at the link level (layers 1 and 2).

NS Point-to-Point 3000/V Link includes store and forward capabilities. This provides users with flexibility and transparent access to the network. Unlike DS point-to-point, users no

longer need to know the network map or through which systems connections must be established to reach the desired final system destination. Gateway capabilities are also provided for transparent communications between wide-area and local-area networks (internetting).

In addition, the NS Point-to-Point 3000/V Link supports a higher-performance and industry-standard link layer communications protocol (LAP-B) which increases throughput by the use of full duplex transmission.

NS Point-to-Point 3000/V Link offers powerful programmatic access to network communications through the use of Network Interprocess Communication (NetIPC). This fosters the development and implementation of distributed applications throughout the network.

In addition to the additional functionality of the link, users will now have access to the enhanced capabilities of NS 3000/V Network Services. Users will save time and increase productivity by the ability to establish both temporary and multiple sessions on a system. Entire groups of files can now be transferred with one command rather than only one file at a time. Programmers developing distributed applications will gain added flexibility through the use of Remote Process Management (RPM) and NetIPC; features not previously available on DS Network Services.

The NS Point-to-Point 3000/V Link product will appear on the March I HP Price List with shipments scheduled for May on UB-Delta-3. A new option is available where users can purchase additional interface cards for configuring multiple links on systems on which

NS Point-to-Point 3000/V is already installed.

## Ordering information

Product No.	Description
30284A	NS Point-to-Point 3000/V Link for MICRO 3000, MICRO 3000XE and Series 37
Hardware options	
1—	Software and hardware
8—	INP for second-N link on system
Cable options	
—10	Connection to synchronous modem
—20	Connection to V.35 network
—25	Connection to auto-call modem
Software options	
D50	Upgrade from DS 3000 point-to-point
D90	Software only
30285A	NS Point-to-Point 3000/V Link for Series 39-70
Hardware options	
3—	Software and hardware, Series 39, 40, 42, 52
4—	Software and hardware, Series 44, 48, 58-70
7—	INP for second-N link; Series 39, 40, 42, 52
8—	INP for second-N link; Series 44, 48, 58-70
Cable options	
—10	Connection to synchronous modem
—20	Connection to V.35 network
—25	Connection to auto-call modem
Software options	
D50	Upgrade from DS 3000 point-to-point
D90	Software only

HP 3000

## MIGRATION FROM DS POINT-TO-POINT LINKS

All of the DS Network Services features are included as a subset of NS 3000/V Network Services which permits users to run any of the DS link products under NS Services. However, to be able to take advantage of the new features and capabilities of NS 3000/V Network Services, users will need to upgrade to the NS links products as well. Programs previously written to run under DS Services will run with little modification under NS 3000/V Network Services.

Due to architectural differences (NS follows OSI industry standards whereas DS does not), DS nodes and NS nodes cannot be communicated directly with one another, though DS and NS can coexist on a node. Working with an HP Datacom Specialist or Network Consultant, an NS migration plan can be developed to ensure minimal disruption to users' networks.

As an incentive to users to migrate their networks to HP's network architecture of the future, users with DS point-to-point links currently under support contract can order a free upgrade to NS Point-to-Point 3000/V Link from March 1 until July 31, 1987. Users need only purchase an upgrade to NS 3000/V Network Services (PIN 32344A/R Option 311 or 321). Contact your HP sales rep for more information.

HP 3000

## HP MICRO 3000 UPDATE

Orders for the new MICRO 3000 have been outstanding. To maintain this momentum, we've added several enhancements.

Based upon your feedback, we've added additional flexibility in our factory-integrated systems and added the larger printers to the list of supported peripherals. This will allow more users to take advantage of our new preconfigured, integrated systems and receive the benefits of bundled pricing. Specifically, two options to the HP 32535F full-sized system have been added: Option 009 and Option 511. Additionally, we are announcing support for HP 2566B, 2567B, and 2680A printers.

The new HP 32535F Option 009 allows users to substitute the cartridge tape autochanger (HP 35401A) for the cartridge tape drive (HP 9144A). This means unattended backup, 130 Mbytes of disc storage, and an HP MICRO 3000 SPU, all in a single office-compatible cabinet. Unattended backup of 130 Mbytes is a solution that many users will find indispensable. The new HP 32535F Option 511 substitutes 2 Mbytes of main memory for the 4 Mbytes of main memory that comes standard with the HP 32535F. This new configuration meets the needs of users who require more disc space, yet don't

need the additional performance from the increased memory at this time. Users can order product number 30535A for the 2-Mbytes to 4-Mbytes memory upgrade if higher performance is required later.

The HP MICRO 3000 now supports a wider variety of printers. The large impact printers, the HP 2566B (900 lpm) and 2567B (1200 lpm), and the HP 2680A 45 ppm laser printer have been added to the supported peripherals list. The support of these three larger printers will allow the HP MICRO 3000 to function as a print server for HP or other vendors' systems. Remember, the HP MICRO 3000 has performance similar to a Series 42, and when coupled with the low cost of the new, high-capacity, small footprint disc drives, makes an ideal inexpensive engine for these large printers.

The following table summarizes the new product structure for the HP MICRO 3000 system. When ordering the autochanger substitution (HP 32535F Option 009), an additional disc drive option (Option 007 or 008) cannot be ordered (due to lack of room in the cabinet). Of course, additional disc drives can be ordered from the appropriate manufacturing divisions.

Product No.	Description
32535A	MICRO 3000 standalone SPU with 2 Mbytes
Opt. 015	200-240 VAC System Operation
Opt. 051	DUS on magnetic tape media
Opt. 510	4 Mbyte memory upgrade
32535E	MICRO 3000 entry-level system. Includes HP 32535A with 2-Mbyte main memory and system cabinet, HP 7957A disc drive, 9144A tape drive, 2392A console with cable, ATP/M terminal controller.
Opt. 001	Add-on ATP/M with Opt. 125
Opt. 007	Add-on HP 7957A disc drive (81 Mbytes)
Opt. 008	Add-on HP 7958A disc drive (130 Mbytes)
Opt. 015	200-240 VAC System Operation
32535F	MICRO 3000 full-size system. Includes HP 32535A with 40-Mbyte main memory and system cabinet, HP 7958A disc drive, 9144A tape drive, 2392A console with cable, ATP/M terminal controller.
Opt. 001	Add-on ATP/M with Opt. 125
Opt. 007	Add-on HP 7957A disc drive (81 Mbytes)
Opt. 008	Add-on HP 7958A disc drive (130 Mbytes)
Opt. 009	Substitute cartridge tape autochanger (HP 35401A) for cartridge tape drive (HP 9144A)
Opt. 015	200-240 VAC System Operation
Opt. 511	Substitute 2-Mbyte main memory for 4-Mbyte main memory

HP 3000

## WHAT'S NEW IN HP 3000 GRAPHICS PRODUCTS

The new versions of HP Draw (A.04.00), HP EasyChart (A.04.00), DSG/3000 (A.05.00), HP Map (A.02.00), and HP Graphics Curator13000 (A.02.00) support new devices, include a few new features, and incorporate many bug fixes.

### New devices

The new devices supported by HP Draw, HP EasyChart, DSG/3000, HP Map, and HP Graphics Curator13000 are:

HP 2393A and 2397A terminals – 512 × 390 resolution; includes support for the 46060A mouse and 4608718 tablets in HP Draw and HP Map.

- HP 7440A ColorPro plotter; HP 7570A, HP 7595A, HP 7596A drafting plotters.

HP 7510 film recorder.

HP 2563B, 2564B, 2566B, and 2567B graphics line printers – 70 × 72 dpi resolution.

- Note that HP-HIL input devices are **not** supported on the HP 150/Touch-screen PC.

### New features

- Plotting to HP 7550A plotter as a sharable (spooled) device.

Use of INFO string to specify the output priority for printer output.

Use of session name on banner page and job card for printer output (except for HP Map).

- New palettes, HARDWARE, for use with HP 7510 film recorder, and GALLERY, for compatibility with Graphics Gallery color palette.

*continued on next page*



- New INFO string option in HP Easy-Chart to suppress the display of Main Menu chart icons.

Area charts (stacked line charts) in DSG/3000, and the ability to draw Y-axis labels on either side of the chart.

New intrinsic, GMULTICHART, in DSG/3000 to programmatically plot multiple charts to the same figure in a figure file.

- Conversion directly from HP Draw drawings to Gallery picture files in HP Graphics Curator/3000.

- New utility, LISTFIGS.PUB.SYS, to browse figure files and optionally create HP Graphics Curator/3000 USE files.

### Summary

This latest release is mainly to support new devices. We have also added a few new features that were heavily requested by users, and we incorporated many bug fixes into this release.

This has been a long-awaited release by many of our HP 3000 graphics users and is available on the UB-Delta-2 MIT.

HP 3000

## REMARKETED

## HP 3000 MEMORY

## PRICE REDUCTION

Remarketed HP 3000 memory prices have been reduced consistent with price reductions of new memory announced in the February issue of HP Channels, page 8. The products affected are listed here:

Product No.	Description
30142AR	1-Mbyte memory module for Series 6X, 70
30161AR	1-Mbyte memory module for Series 39, 4X, 5X
30165AR*	4-Mbyte memory module for Series 6X, 70
30173AR	2-Mbyte memory module for Series 42XP, 5X

\*Limited availability, please call your sales rep.

Note: Users purchasing the Series 58R bundle (PIN 34202AR) can still purchase an additional 1 Mbyte of memory (Option 501).

### Memory return credit reduction

In line with the above memory price reduction, please note that return credits will also be reduced. Since the reduction will not be in effect until April 1, 1987, users may use this advance notice to upgrade their memory today and take advantage of the higher return credits.

Product No.	Description
30142AN	Return credit for Series 6X, 70 1-Mbyte memory module
30161AN	Return credit for 1-Mbyte memory for Series 39, 4X
30173AN	Return credit for 2-Mbyte memory for Series 42XP, 5X

Call your HP sales rep for more information.

## Technical Computers

General

# MANUFACTURING SOLUTIONS CATALOG

## - SECOND EDITION

### NOW AVAILABLE

Announcing the latest HP Manufacturing Solutions Catalog from HP's Industrial Applications Center. This is our second issue since we began providing this *free* catalog to our customers, value-added business partners, and HP sales force. The Manufacturing Solutions Catalog lists over 500 manufacturing packages running on all HP computers, including PCs.

Not only can you find all manufacturing software from HP and HP's software suppliers, but now, as an addition to the second edition, you will also find manufacturing software from OEMs and VARs. And we have incorporated many new features to the second edition. We have improved the readability, added six rugged products from HP, and designed a new six-color cover with three-hole punching.

This is an ideal tool to help your customers identify and purchase the manufacturing solutions they need. Free copies of this catalog for your customers can be ordered through your local HP sales office by requesting P/N 5954-6777.

Note: Most of the companies listed in the catalog are located in the U.S.

The next issue of the catalog is scheduled for November, 1987. If you wish to add, modify, or delete an entry, please submit an HP Value Added Data Kit (PIN 5953-2223) before September 15, 1987. Data kits are available from your local HP sales office.

HP Precision Architecture/HP-UX

## **HP 9000 SERIES 800 HP-UX REAL-TIME TUTORIAL**

Hewlett-Packard's new Precision Architecture (HP-PA) technical computer line not only offers UNIX™ operating system SVID compatibility, but also true real-time capability. By adding a new functionality and performance tuning, HP has enabled HP-PA HP-UX systems to support demanding real-time applications.

HP has written a tutorial on HP-UX's real-time features (the first in the market). This manual has something for everyone:

- For those new to real-time, the introductory chapter defines what a real-time system is, presents several examples of real-time applications, and overviews the real-time features of HP-UX on the Series 800.

For real-time programmers (both RTE and HP-UX), the remaining 10 chapters explain in detail how to use HP-UX system calls in real-time programs. The topics covered include privilege groups, priority scheduling, memory locking, shared memory, semaphores, reliable signals, pipes, messages, system asynchronous I/O, and disc I/O.

- For HP 1000 users, an appendix compares the real-time features of RTE and HP-UX.

The *Series 800 HP-UX Real-Time Programming Manual* is available through HP's Direct Marketing Division.

### **Ordering information**

Product No.	Description
92453-64014	Real-Time Programming Manual Binder Kit (includes binder, spine, and manual)
92453-90003	Series 800 HP-UX Real-Time Programming Manual

UNIX is a trademark of AT&T Bell Laboratories.

HP 1000

## **MIGRATION EVALUATION KIT AVAILABLE FOR HP 1000 USERS**

HP 1000 users who are migrating to the HP-UX Precision Architecture (HP-PA), or who would like to find out more about migration for the future, will be interested in the Migration Evaluation Kit (PIN 92561A). The Migration Evaluation Kit allows E, F, and A-Series users to evaluate the effort required to migrate their applications. It includes:

Information on how HP 1000 users can develop code that will be easily migrated to the HP-PA.

- Software for evaluating the hardware dependencies of HP 1000 applications – the Migration Analysis Utility (MAU). MAU flags the HP 1000 system and subsystem calls and indicates their level of emulation on HP-PA. Calls that are fully emulated will not require any modification. Partial emulation indicates that particular usages of the call will require modification. Calls that are not emulated are hardware dependent and will need to be rewritten to take advantage of HP-UX.

Utilities for transporting source and data files to the HP-PA. The utilities needed for transforming IMAGE11000 files into HP IMAGE format are also included.

- A number of manuals on the differences between the HP 1000 and HP-PA subsystems including FORTRAN, IMAGE-ALLBASE, and the manuals for PORT/HP-UX. We will add manuals on DGL and Pascal in the future as they become available.

Contact your HP sales rep for more information about the Migration Evaluation Kit.

HP 9000

## **NEW AFFORDABLE HP 9000 SERIES 300 SYSTEM: THE MODEL 330**

Hewlett-Packard has announced the newest member of the HP 9000 Series 300 product line. The competitively priced Model 330 is destined to make the Series 300 even more successful.

The Model 330 becomes the new mid-range system for the Series 300, augmenting the flagship Model 350 systems with attractively priced configurations targeted for the engineer's desk. The Model 330 offers essentially the same performance as the Model 320, but at a reduced price.

The new Model 330 offers many benefits to the cost-conscious workstation user:

- Benchmarks performed with equal to or better performance than low cost 16.67 MHz 68020 systems from Sun, Apollo, or DEC.

Low-cost structure allows aggressive pricing to compete against DEC, Sun, Apollo.

- Computational power equal to or better than the Model 320.

- Strict object code compatibility with the Model 320, 350, and 310.

Functionality of a Model 320U in one small box.

- Supports the Series 2001300 DIO interface cards, including the DOS Coprocessor Interface card.

- Supports all the Series 300 peripherals.

*continued on next page*

Continues to offer the outstanding reliability associated with HP Series 300 products.

Excellent reliability allows us to offer the lowest service contract prices in the industry.

### The Model 330 system

The Model 330 is packaged like a Model 350. The main difference is that the Model 330 has the main memory on the CPU board (instead of on a separate RAM board), and provides the following features in a basic four-slot SPU box:

- 16.67 MHz 68020 with 16.67 MHz 68881.
- 4 Mbytes on-board RAM, 32 bits wide.
- LAN, HP-IB, RS-232, HP-HIL, 2-channel DMA interfaces.
- Two system slots for Series 300 video interface board, two-slot DIO backplane, or four-slot DIO backplane adapters.
- Optional high-speed disc interface (requires no slot).

A comparably equipped Model 310 system would cost \$11,845 if everything could fit into the basic SPU box, which it won't. Performance of the Model 310 is about one-third to one-fourth of the Model 330 system. The ideal niche for the Model 310 is that of an entry-level system, without all the trappings included in the Model 330 such as 4 Mbytes of RAM, LAN, and DMA interfaces.

The Model 330's system architecture has been enhanced and simplified. For example, the on-board RAM is 32 bits

wide and operates synchronously with the CPU (enhancing performance), and the Model 320's cache has been eliminated (reducing cost). A separate 32-bit I/O bus (DIO-II) is identical to that of the Model 350, and is compatible with DIO interface cards and bus protocols.

The Model 330's built-in HP-IB has been improved so that it works ideally with the DMA controller to provide optimum performance with the new medium-priced discs like the HP 7957A and 7958A. The high speed disc interface becomes optional, contrary to the case for the Model 320 where it was necessary for acceptable disc performance.

The following table compares the Model 330 to the Model 320 system it replaces:

	Model 330	Model 320U
Standard RAM	4 Mbytes	4 Mbytes
Maximum RAM	8 Mbytes	7.5 Mbytes
Performance relative to VAX 111780:	1.8 - 2.3	1.8 - 2.0
Whetstones	860K B1D/sec	740K B1D/sec
Linpacks (Double Precision)	86/sec	72/sec

### Workstation configurations

Two Model 330 workstations are available that are equivalents of the Model 320 bundles, and are priced more aggressively with respect to systems from our competitors:

Workstation	Description
Model 330M	Model 330 SPU plus high-resolution 17" display, keyboard, mouse, AXE, NS-ARPA LAN software, ID module
Model 330C	Model 330 SPU plus 6-plane color high-resolution 16" display, keyboard, mouse, AXE, NS-ARPA software, ID module

### Measurement automation configurations

Two Model 330 systems are available that are high performance equivalents of the Model 310 bundles:

System	Description
Model 330MMA	330 SPU with 2-slot DIO backplane and high-speed disc interface, plus medium-resolution 12" display, keyboard, and BASIC 5.0
Model 330CMA	330 SPU with 2-slot DIO backplane and high-speed disc interface, plus medium-resolution 12" color display, keyboard, and BASIC 5.0

### Model 330 accessories

Additional products available for the Model 330 are the same as those for the newly introduced Model 350 with the exception of the maximum RAM supported (32 Mbytes for the Model 350, 8 Mbytes for the Model 330).

A special mass storage promotion from HP makes it possible to configure very price-competitive workstation systems based on the Models 330M and 330C.

### Model 330 upgrades

Information will be forthcoming on the status of upgrades for the Model 330. We are investigating a Model 310-to-Model 330 upgrade program and a Model 330-to-Model 350 upgrade program.

### Purchase agreements

The Model 330 systems are on the same product exhibits as are the Model 350 systems: A1, A1(V), (end-user "B" and OEM "A" schedules). Rental companies can purchase Model 330 systems on the A-50 and A-R02(V) product exhibits.

Product No.	Description	Functional units	
		A-1	A-50
98562A	Model 330 SPU	0.75	1.50
98582M	Model 330M Workstation	0.75	1.50
98583L	Model 330C Workstation	1.00	2.00
98580M	Model 330 Monochrome MA System	0.50	1.00
98581M	Model 330 Color MA System	0.50	1.00

## 82320A X WINDOW SYSTEM FOR HP 9000 SERIES 300 COMPUTERS

On March 1, the 82320A X Window System will be available for the HP 9000 Series 300 family of computers. X is a windowing system developed at the Massachusetts Institute of Technology (MIT) that is rapidly becoming the industry standard windowing system for workstations running the UNIX™ I operating system. It will be offered as a separate product for the Series 300. The HP Windows/9000 (Windex) system will continue to be offered as part of the AXE HP-UX system.

### What is X?

X is a windowing system that was developed as part of a research project whose goal was better understanding of large-scale networks of heterogeneous workstations. Because of this, X is now available for a broad range of hardware that includes HP, DEC, Apollo, Data General, IBM RT, and Sony workstations, with more on the way. It offers high windowing performance with little window overhead. It also offers configurability, the ability to alter the way the system looks and feels to the user so that customization for the user is very easy to manage.

But the most important thing that X offers is standardization. On January 15, a group of 11 major computer vendors that consisted of Adobe Systems, Apollo Computer, Applix (the Alis people), Dana Computer, Data General, DEC, HP, MASSCOMP, Siemens AG, Sony, and Stellar Computer jointly held a press conference in Cambridge, Massachusetts, and announced their support for the X system. This means that X will rapidly be adopted by most software vendors, and that X will become a required item in most sales situations where windows are necessary.

### Tools

In addition to X, the 82320A X Window System also includes a set of high-level user interface development tools that we call the "Xr" library, or "Xrlib." What these tools allow you to do is easily create very sophisticated user interfaces for application programs. The Xrlib allows for the creation of a number of different "field editors" or gadgets like scroll bars, text editors, raster editors, title bars, static text, and more. In addition, groups of these gadgets can be combined as a single entity called a panel. Cascading pop-up menus like the ones used by HP's Logic Design Operation's Logic Design System can be easily created. Xrlib is a very powerful set of development tools that is a significant addition to the X system.

### Hardware/software requirements

The 82320A product requires a Series 300 system running HP-UX 5.2 or later. The display must be of the "Topcat" style (9854X) and can be either low or high resolution monochrome or color. If the system is going to be networked to other computers, the 50952B NS-ARPA Services/300 software is also required. The system must also have a mouse.

### Product summary

Product No.	Description
82320A	X Window System (and X-ray tools)
opt. 045	3%-inch disc
opt. 022	1/4-inch cartridge tape
82320R	Right to make one copy
opt. 100	Deletemanuals

UNIX is a trademark of AT&T Bell Laboratories.

## TRAINING NOW AVAILABLE ON HP AI DEVELOPMENT SYSTEM

Training classes are now available to help users maximize the benefits of the HP AI (Artificial Intelligence) Development System. The training will help users understand symbolic, logic, and object-oriented programming technologies, including how they can be integrated with other languages, applications and programming facilities available on HP-UX engineering workstations.

Through the classes, users will also gain programming experience with NMODE, the system's advanced software development environment, so they can immediately realize the productivity benefits it offers.

The following classes are available:

Course number	Title	Length (days)	Dates
HP 97035	NMODE Programming Class. Designed for the experienced LISP programmer, this three-day class focuses on HP's extensions to Common LISP - such as object-oriented programming - and on productive use of the NMODE programming environment. Recommended prerequisite is experience with both LISP programming and the HP-UX operating system.	3	March 10 to 12, May 12 to 14, June 7 to 9, September 9 to 11, October 27 to 29
HP 97036A	NMODE LISP PROW Programming Class This is a 10-day class for programmers who have had little experience with LISP. Using a mixed lecture/lab format, the class covers HP Common LISP (with its object-oriented programming extensions), HP PROLOG, and the NMODE programming environment. Recommended prerequisites are a general programming background and experience with the HP-UX operating system.	10	March 30 to April 10, August 3 to 14, November 30 to December 11

Contact your HP sales rep for registration information.

## Personal Computers

Desktop

### HP VECTRA PC CONVENIENCE POWER CORD AVAILABLE

The HP Vectra PC convenience power cord (PIN 8120-1575) connects the monitor power to the convenience outlet on an HP Vectra PC. This convenience power cord is listed in two Vectra PC manuals: *Setting up Vectra* and *Connecting Peripherals to Vectra*.

The cable can reduce the outlet requirements for an HP Vectra PC. It can be used with the following HP-supplied monitors:

Monitor	Input	Type	Name
3573JA/B	Analog	Monochrome	Monochrome Monitor
3574IA/B	Analog	Color	Color Monitor
35731D	Digital	Monochrome	Monochrome Plus Display
357438	Digital	Color	Enhanced Graphics Display

Please note that the 35743A has an attached power cord and cannot be connected with the convenience power cord.

Contact your HP sales rep to order the cable.

Desktop

### HP VECTRA OFFICE UPDATE

HP Vectra Office, Hewlett-Packard's integrated office workstation, was introduced in September 1986, for the U.S. and non-European markets. In its first few months it has proved attractive not only to existing HP users but also to new users for whom HP Vectra Office is often their introduction to HP's scalable Personal Productivity Center (PPC) strategy. The success of HP Vectra Office demonstrates clear user endorsement of HP's strategy of a PC approach to office automation, and its advantages of flexibility, consistent response time, and leverage of existing PC investment.

Remember, HP Vectra Office includes an HP Vectra 3000 PC with AdvanceLink for terminal emulation. It comes fully preassembled for user convenience, and includes all the basic applications needed for personal productivity. Together they form a solution that is easy to order – at the same time offering users substantial savings from individual list prices. The December issue of Seybold's *Office Systems Report* states, “. . . HP leads the pack in PC integration . . .”

If you need further information on HP Vectra Office, contact your HP sales rep.

Desktop

### CONDOR 3 FOR THE HP TOUCHSCREEN/150 PC OBSOLETE

CONDOR 3 for the HP Touchscreen PC (PIN 45416A) was removed from the HP Price List effective February 1, 1987. It is being removed because Condor Computer Corporation has agreed to distribute the product for the HP Touchscreen PC.

Users who wish to use CONDOR 3 should direct orders to Condor Computer Corporation, 1490 Eisenhower Place, Ann Arbor, Michigan 48104. The phone number is 313-971-8880. By ordering direct from Condor, users will receive the latest version of CONDOR 3 (version 2.11.11) which offers a menu-driven implementation, self-teaching on-line help, and more than 20 new features. Various upgrade kits are available from Condor for HP Touchscreen PC users.

#### Touchscreen products available from Condor Computer Corporation

Description
Upgrade CONDOR 1 to CONDOR 3 Release 2.11.11
Upgrade CONDOR 2 to CONDOR 3 Release 2.11.11
Upgrade CONDOR 3, Any release to Release 2.11.11
New CONDOR 3 purchases, Release 2.11.11

Special prices for the products in the previous table are available from Condor until March 31, 1987. Be sure to specify that you need HP Touchscreen PC versions of the product when ordering from Condor.

Please be aware that there is an inconsistency between the new MS-DOS 3.2 operating system on the HP Touchscreen PC and the version of CONDOR 3 sold by HP (version 2.11.08) that prevents this version of CONDOR from operating. Users with MS-DOS 3.2 should order the latest version of CONDOR 3 (version 2.11.11) from Condor Computer Corporation or order the upgrade kit from Condor.

There are several other options for users wishing to have sophisticated data management software for the HP Touchscreen PC. HP continues to actively sell and support the products listed below.

**Touchscreen data management products from HP**

Product No.	Description
45563A	R:Base™ 50001150
45421A	Executive Card Manager
45441D	Executive Card Manager/ Templates
45468D	dBase II®

*CONDOR™ is a U.S. trademark of Condor Computer Corporation.*

*R:Base™ 5000 is a U.S. trademark of Microrim®, Inc.*

*dBase II® is a U.S. registered trademark of Ashton-Tate*

Desktop

**UPGRADING FROM  
R:BASE 4000 TO  
R:BASE 5000 FOR HP  
TOUCHSCREEN/150  
PC USERS**

Users of R:Base™ 4000 on the HP Touchscreen/150 PC who wish to upgrade to R:Base 5000 can order an upgrade kit (PIN 45563-63002) from Direct Marketing Division (DMK). The kit contains a complete new R:Base 5000 product. U.S. customers need to return their original disc to DMK, and international customers need to return their original disc to their sales office, in order to qualify for the reduced price.

*R:Base™ is a U.S. trademark of Microrim®, Inc.*

Desktop

**ANNOUNCING  
HP WORD/PC**

Hewlett-Packard is pleased to announce the release of HP WordIPC, the latest addition to the HP Word family. HP Word/PC is a new version of HP Word/150 and now runs stand alone on both HP Vectra and Touchscreen personal computers. Its enhanced features provide the next step for HP Word/3000 users who want to migrate to HP's newest machines, the Vectra PC or the HP 3000 Series 900.

Like its predecessor, HP WordIPC shares the same familiar interface as HP Word/3000. It is fully keystroke compatible, maximizing customer investment by saving on retraining costs. Many more HP Word/3000 features are now available in HP Word/PC, such as the ability to integrate text and

graphics, plus local mail-merge capabilities. In addition, full document interchange is offered between HP WordIPC documents and HP Word files on the HP 3000.

For more information about HP Word/PC, contact your HP sales rep.

Desktop

**UPGRADE AVAILABLE  
FOR HP WORD/150  
USERS**

From March 1, 1987, a special upgrade program will be in place enabling HP Word/150 users to upgrade to HP Word/PC for the HP Touchscreen PC. Order from the Direct Marketing Division (DMK) quoting the following details.

**Ordering information**

Product No.	Description
27505-60006	HP Word/150 upgrade to HP Word/PC (U.S. version)
27505-60007	HP Word/150 upgrade to HP WordIPC (U.K. version)

Contact your HP sales rep for pricing information.

To order, contact  
Hewlett-Packard Direct Marketing  
Division (DMK)  
Attn: Software Administrator  
P.O. Box 60008  
Sunnyvale, CA 94086

When ordering, users should send their name and address, the HP Word/150 master discs, and payment.



Desktop

## MAJOR PRICE DECREASE FOR HP MESSAGE TO ADVANCEMAIL UPGRADE

Hewlett-Packard has good news for HP Message users who want to move to AdvanceMail. Effective this quarter, the price of the HP Message to AdvanceMail upgrade kit has been significantly reduced. Now HP Message users can take advantage of AdvanceMail's greater capabilities for a minimal investment.

Ordering details for the upgrade kit are as follows. Order through the Direct Marketing Division (DMK).

Product No.	Description
27534-63007	Upgrade from HP Message to AdvanceMail for the HP Touchscreen PC
27535-65009	Upgrade from HP Message to AdvanceMail for the HP Vectra PC and IBM PC

*Note: HP Message works with versions A.03.01 and B.00.00 of HP DeskManager. AdvanceMail works with version B.00.00 only.*

For more information on AdvanceMail or the HP Message to AdvanceMail upgrade kit, please contact your HP sales rep.

Desktop

## PC MAGAZINE SELECTS GRAPHICS GALLERY AS NUMBER 1

The December 23, 1986, issue of *PC Magazine* selected Graphics Gallery/Vectra as the editor's choice.

"The combination of Charting Gallery with Drawing Gallery definitely makes it a state-of-the-art, easy-to-use product . . . the program encourages productivity. The Gallery Collection has the best all-around mix of capabilities."

*PC Magazine's* software article for this issue was titled "Making An Impact with Graphics." In this article, six PC business graphics packages were evaluated and compared: Freelance, Harvard Presentation Graphics<sup>a</sup>, Decision Graphics<sup>a</sup>, Graphwriter<sup>®</sup>, Perspective (which tied with us for first), and The Gallery Collection.

### What makes The Gallery Collection number 1

The review of The Gallery Collection highlighted our text and graphics integration. "The Gallery Collection directly interfaces with Hewlett-Packard's Executive MemoMaker, a nifty office word processor. Through this interface you can pop a graph you make with The Gallery Collection right into your next letter or report."

Our user interface was mentioned as "the real beauty of the package. Using the required mouse means that creating a beautiful custom chart takes only a few minutes."

The quality of the Gallery Portfolios was brought out as better than those of Freelance and Harvard Presentation Graphics, the other drawing packages included in the comparison. "The quality of this package's library of illustrations is, in general, better than that of other programs. The stack of lumber is among the more than 1,000 images offered in the portfolios."

A sample drawing was created with each drawing package, using the Gallery Portfolio symbols as the standard by which the other packages' symbol offerings were measured. And The Gallery Collection came out on top.

*PC Magazine* believes that "the power and ease of use of The Gallery Collection will amaze you."

*Graphwriter<sup>®</sup> is a U.S. registered trademark of Graphics Communications*

*Harvard Presentation Graphics<sup>™</sup> is a U.S. trademark of Software Publishing Corporation*

*Decision Graphics<sup>a</sup>. is a U.S. registered trademark of Samna Corp*

*Perspective from Three D Graphics*

*Freelance from Lotus Development Corporation*

## Peripherals

Mass Storage

### **HP 354014 Now SUPPORTED ON THE SRM**

The HP 35401A (cartridge auto-changer tape drive) is now supported on the SRM (Shared Resource Management). The autochanger is particularly well suited to this network as it can perform unattended backup while the system remains on line to users. Also, the implementation of the selective backup/restore feature on SRM allows the auto-changer to store and restore selected files on a particular cartridge. The backup operation can span up to eight cartridges (536 Mbytes) without requiring operator intervention. The recently announced package of an HP 35401A and an HP 7936 or 7937 disc drive in the same cabinet provides an excellent total mass storage solution for the SRM. If you would like any further information about this solution, please contact your HP sales rep. And remember, there is still a trade-in credit until May 1987, for those users wishing to upgrade from an HP 9144A to an HP 35401A.

Mass Storage

### **HP 7936/37 DISC DRIVE CONSIDERATIONS IN THE OFFICE ENVIRONMENT**

The introduction of the HP 7936/7937 disc drive has been received with lots of questions about use of the drive in an office environment. These questions have been raised for good reason – the HP 7936/7937 drives have a small footprint, low power requirements, and low heat output. In addition, they meet office requirements for electromagnetic compatibility and safety. Yet, the drives are not rated as an office product. Why?

Acoustic emission or the sound power level of the HP 7936/7937 disc drives is the major concern. At 6.8 bells, the HP 7936/7937 is still higher than the 5.0 bells recommended for office products. For comparison purposes, the noise is approximately the same as the HP 7914 products. This means that users would not want to sit next to a drive in the office; however, they may still choose to use it in an environment where the disc drives and system are separated from users by use of partitions or panels which buffer the noise level.

Some users may also be concerned with electromagnetic discharge. Although it is possible to generate a 39 kV charge from walking across a carpet and exceed the 15 kV maximum specified for the drive, this is an unusual occurrence. It is unlikely that such a discharge would affect the HP 7936/7937, since it is not used in an intensive operator interaction environment. If this risk is a concern, the problem can be addressed through use of an antistatic mat with a ground wire attached to the cabinet.

In summary, although the disc drives are not designed to be used as a personal computer device in an office environment, they may be used in a departmental computing environment as long as the noise level has been addressed at the user site.

Networks

### **FIVE NEW NETWORKING SOLUTIONS**

HP announces a new network-marketing program that defines five new computer-network solutions to fit the organizational structure of a large manufacturing company with functional areas that match smaller company organizations. Four of the five solutions address the specific business needs of a company's sales/service, business office, manufacturing, and engineering facilities. The fifth is a companywide solution that addresses the integration of the other four areas through a private wide-area network (WAN) based on the international X.25 standard.

This new approach is aimed at bridging the gap between technology and business needs.

#### **Companywide network**

The companywide network solution is designed for efficient data communications throughout an entire organization – headquarters, business and sales/service offices, engineering, and manufacturing sites.

Based on the international X.25 standard and coexistence with IBM systems, the network provides multivendor communications among the various computer systems and user workstations located anywhere in the company.



## Regional sales/service network

The regional sales/service network is designed to provide sales people with instant access to information, such as product pricing and delivery schedules located in the regional-office and data-processing systems.

To provide optimized network cost/performance choices of dial up, leased, point-to-point, and X.25, public and private networking alternatives are available. This solution is complemented by HP's sales-and-service productivity network applications and the HP Portable Plus laptop computer.

## Business-office network

The Business-office network is designed to increase productivity of people working in marketing, sales, and administrative-office areas. It provides access to information, no matter which system has it within a company.

An IEEE 802.3 LAN, using standard telephone wiring, links PCs into workgroups and into departmental systems so office personnel can communicate and share peripheral and storage devices.

From a coaxial 802.3 LAN backbone, multiple HP systems can communicate with each other and with multivendor systems, such as IBM systems using IBM's distributed office-support system (DISOSS).

## Computer-Integrated Manufacturing network

The Computer Integrated Manufacturing (CIM) network is designed to increase manufacturing product quality and flexibility. It links multivendor machinery, programmable controllers, workcell controllers, and plant systems on the manufacturing floor.

It provides these connections by using industry-standard protocols such as the Manufacturing Automation Protocol (MAP) and IEEE 802.4, in addition to de facto standards such as IBM SNA.

## Engineering network

The engineering network is designed to decrease the time engineers spend designing and redesigning products.

It provides high-speed information transfer between clustered workstations with UNIX<sup>B</sup> operating systems, and those without UNIX operating systems, including HP, Digital Equipment Corporation, Sun Microsystems, or IBM, using industry-standard protocols such as IEEE 802.3 and ARPA/Berkeley network services.

Providing further multivendor communications, HP has said it will be implementing the emerging de facto standard, Network File System™, Revision 3, for distributed file sharing among technical systems.

### Networks

## HP ANNOUNCES 13 NEW NETWORKING PRODUCTS

HP announces 13 new network products which along with existing HP products, make up the five network solutions mentioned in the previous article. These 13 new products are:

1) **HP X.25 private packet network** – consists of a family of switching nodes and a sophisticated network-management system. It can carry a company's entire data communications between HP and multivendor systems and networks. By sharing a single communications line, the network helps reduce monthly communications line costs by as much as 50 percent depending on company requirements.

2) **HP 2334A Plus X.25 multiplexer** – provides a performance improvement of typically 25 percent, increased reliability, and faster configuration as compared to the previous HP 2334A model.

3) **Distributed Network Design System**, from Connections Telecommunications, Inc. – helps generate the most cost-efficient X.25 network implementation from the HP Vectra PC or IBM PC.

4) **Multipoint Network Design System**, from Connections Telecommunications, Inc. – helps generate optimized terminal-to-computer connections from HP Vectra PC or IBM PC.

5) **HP 18264A statistics-software package for the HP 4952A protocol analyzer** – makes link troubleshooting on X.25 and SNA networks easy.

6) **HP 18300A X.25 network-performance analyzer** – enables the data center manager to detect network-performance degradation before users are aware of it. It operates with the HP 4953A protocol analyzer with Option 001 extended memory.

7) **HP SiteWire** – a set of multivendor communications guidelines that now provide planning, design, and implementation support for wiring manufacturing and engineering buildings, as well as business offices.

8) **Net/One® Buffered Repeater** from Ungermann-Bass, Inc. – provides a high-speed connection of HP work-area subnetworks to a facility-wide broadband network.

9) **HP Network Services for the DEC VAX computer system** – provides further HP-to-DEC computer communications in manufacturing, engineering, and office environments.

10) **HP Network Planning and Design service** – assists users in understanding their network requirements, and planning and designing the communications network. This service is appropriate for

users who need a formal network strategy or those with large, complex, or geographically dispersed network needs.

11) **HP Network Prepare** – helps users plan for the integration of the new or expanded network into their business operations. It provides a schedule of major implementation activities and recommendations for network staffing, training, and procedures.

12) **HP Network Startup** – coordinates network-installation activities, and provides configuration and verification that the network is fully operational.

13) **HP NetAssure** – a contractual maintenance agreement that provides problem isolation, call management in association with other selected vendors, and a network newsletter.

#### Networks

## A NEW MULTIVENDOR WIDE-AREA NETWORK SOLUTION FROM HP

The HP Companywide Network Solution, one of the five HP AdvanceNet network solutions, provides the wide-area networking users need. Its different components allow users to connect their various sites throughout their companies – manufacturing, engineering sites, business offices, and headquarters.

In each network solution, the datacom products have been organized into logical groups, called modules, listed below for the companywide network solution.

The heart of the companywide network solution is the backbone network module, based on the HP X.25 private packet network. Connecting HP computers and workstations to the backbone, or simply to each other, is provided by the companywide access module. For communications to the corporate IBM mainframes, users can use the SNA access module.

The major benefits of the HP Companywide Network Solution that will prove most important to users are listed here:

Multivendor connectivity, because it is based on the X.25 international standard.

Optimized cost/performance with its wide range of modular alternatives.

- Powerful network services for HP-to-HP and HP-to-IBM communications.

Extensive network management with the new X.25 network control system.

Read more about this new and unique wide-area networking solution from HP in the following documents:

- HP AdvanceNet Companywide Network Solution Brochure (P/N 5954-9003)

- HP AdvanceNet Companywide Network Specification Guide (P/N 5954-9016)

#### Networks

## HP 2334A PLUS – PRICE CHANGES

The price of the HP 2334A Plus will be increased slightly on the April 1 HP Price List. This price readjustment reflects the improved performance and functionality of the new HP 2334A Plus.

Orders at the old prices will be honored at HP 30 days after the effective date of increase (until April 30).

Product No.	Description
HP 2334A Plus	HP 2334A Plus – X.25 Multiplexer
Opt. 123	Four modem connect ports
HP 40261A	Additional four modem connect ports

Remember, the new HP 2334A Plus introduced on January 1, 1987, brings you several important enhancements over the HP 2334A:

- Higher performance
- Faster configuration
- Improved reliability
- More applications supported

For more information on the HP 2334A Plus, please refer to the December, 1986, issue of **HP Channels**, page 23.

Plotters

**PLOTTER PERFORMANCE REACHES NEW HEIGHTS WITH HP'S NEW DRAFTMASTER PLOTTER DUO**



Offering higher throughput, greater reliability, and easier operation at 23 to 30 percent less cost, the HP DraftMaster I and II drafting plotters replace HP's stalwart HP 758X drafting plotter series.

Representing a new generation of drafting plotter technology, the single-sheet HP DraftMaster I and roll-feed DraftMaster II plotters are joined by the PC-CAD HP DraftPro drafting plotter (introduced in August 1986), to comprise HP's family of eight-pen drafting plotters.

Providing a 50 percent increase in throughput, the new HP DraftMaster plotters have two-thirds fewer mechanical parts than the earlier HP 758X

Series, for greater reliability. Plus, the HP DraftMaster plotter's 758X software emulation mode allows users to use any existing 758X software today with no loss in performance.

A revolutionary new adjustable eight-pen carousel accepts all supported pen types: drafting (both disposable and refillable), fiber-tip, and roller-ball pens. Optimal pen speed and force are set automatically. Both HP DraftMaster plotter models handle A- through E-size vellum, bond, and polyester film media, as well as transparency film and glossy paper.

For speedy plotting, the HP DraftMaster plotter's diagonal acceleration of up to 5.7 g (4 g on the axis) is combined with a plotting speed of 24 ips (inches per second). Both HP DraftMaster plotter models come with an RS-232-C, RS-422-A, and HP-IB interface.

The following HP DraftMaster plotter literature is now available.

Lit. No.	Description
5954-7090 (D)	Technical Data Sheet
5954-7092	#10 Brochure
5954-7098	Sample Plot
5954-7114	HP DraftMaster/Vectra PC Set-up instructions
5954-7116	HP DraftMaster/IBM PC or PC-XT Set-up instructions
5954-7115	HP DraftMaster/IBM AT Set-up instructions
5954-7113	HP DraftMaster/Macintosh Set-up instructions

Printers

**ANNOUNCING THE HP LASERJET SERIES II PRINTER**

On March 2, 1987, HP announced the worldwide introduction of the second generation HP LaserJet printer – the HP LaserJet Series II – listed on the March 1 HP Price List.

**Key product features and benefits**

Based on Canon's new 8ppm LBP-SX engine, the HP LaserJet Series II printer has a number of key features:

- *HP LaserJet PLUS compatibility* – on all software packages and fonts, and both cartridge and disc-based soft fonts. The new HP LaserJet Series II printer uses the HP Printer Command Language (PCL) that drives all LaserJet family printers.
- *16 character LCD front control panel* – for easy customization of the printing environment, such as primary font selection, number of copies, and lines per page.
- *Font flexibility* – 2 font cartridge slots, 6 internal fonts, and 23 symbol sets are standard.

- **Improved paper management** – 200-sheet input paper tray, 100-sheet output tray, correct-order output, easy manual feed of odd-sized paper and envelopes (through adjustable paper feed guides), and handling of paper stock up to 35 pounds.

- **Memory expansion** – in addition to the printer's standard 512 Kbytes, three plug-in memory boards are available in 1, 2, or 4 Mbytes. The printer has only one memory expansion slot, so users must carefully choose their needs – 1½, 2%, or 4% Mbytes. The 1 Mbyte memory board allows the user to print 300 × 300 dpi full-page graphics.

- **Extended I/O slot** – allows users to add different capabilities to the LaserJet Series II such as sharing/spooling or HP's Publisher Kit (DDL).

- **Smaller and lighter** – at only 50 pounds, the HP LaserJet Series II printer is 36 percent lighter in weight than the LaserJet and LaserJet PLUS printers.

- **New toner cartridge** – a single-component consumable that prints up to 4,000 pages with denser blacks than the current HP LaserJet family.

- **More reliable** – service contracts are lower in price than the current HP LaserJet printer family. Since the LaserJet Series II printer is modular in design, any components that fail may be replaced. With proper care and routine maintenance, the printer has an indefinite life.

#### Ordering information

Product No.	Description
33440A	LaserJet Series II printer
33443A	1-Mbyte memory board
33444A	2-Mbyte memory board
33445A	4-Mbyte memory board
92295A	Black toner cartridge (EP-S)
92295B	Letter-size paper tray (8" × 11 inch)
92295C	Legal-size paper tray (8" × 14 inch)
92295D	A4-size paper tray (210mm × 297mm)
92295E	Executive-size paper tray (7¼" × 10½ inch)
S657	Product Video

#### New opportunities

When HP introduced the first desktop laser printer in 1984 – the HP LaserJet printer – they set a price/performance standard. With the introduction of the LaserJet Series II printer, HP is again setting the industry standard. With the LaserJet Series II printer priced lower than the original LaserJet printer and offering more features than the LaserJet PLUS printer, HP will stay the leader in the industry.

The lower-priced HP LaserJet Series II printer provides an opportunity to upgrade users with noisy dot matrix and daisy wheel printers. HP now has a solution for the low-end user with the standard 512-Kbyte LaserJet Series II printer and a solution for the more sophisticated user with expandable memory up to 4% Mbytes.

#### LaserJet printer family status

The HP LaserJet Series II printer is a replacement product for the LaserJet and LaserJet PLUS printers. Both of these products will be discontinued September 1, 1987.

The HP LaserJet 500 PLUS printer, with two 250-sheet input paper trays and 250-sheet correct order output tray, will still be available for advanced paper-handling needs. Effective on the March HP Price List, HP has reduced the price of the LaserJet 500 PLUS printer.

For comparison purposes, the following chart highlights some of the key features of the complete desktop LaserJet printer family. For information on the new HP LaserJet 2000 printer, see the article on page 19.

#### HP LaserJet printer family comparison chart

	LaserJet Series II	LaserJet 500 PLUS	LaserJet PLUS	LaserJet
<b>Paper handling</b>				
Input (sheets)	200	500	100	100
Output (sheets)	100	250	20	20
Correct order	Yes	Yes	No	No
Job offset	No	Yes	No	No
<b>Resident memory in Kbytes</b>	512	512	512	128
<b>Additional memory</b>				
1 Mbyte	Yes	No	No	No
2 Mbytes	Yes	Yes	Yes	Yes
4 Mbytes	Yes	No	No	No
<b>Cartridge slots</b>	2	1	1	1
<b>Downloadable fonts</b>	Yes	Yes	Yes	No

For additional information, contact your HP sales rep.

Printers

### **EXTENDED SYSTEMS OFFICE PRINTER SHARING INTERFACE FOR HP LASERJET SERIES II PRINTER**

Extended Systems, a third-party vendor for HP, has introduced a new member of its ShareSpool printer-sharing product family – ESI-2001 – designed specifically for the new HP LaserJet Series II printer. The ESI-2001 provides transparent sharing and spooling for multiple users.

Up to three personal computers (HP Vectra, HP 150 Touchscreen, or any PC with a serial port) may now share the quiet, fast HP LaserJet Series II printer. The cost of the printer is distributed among multiple users without the burden or complexity of LANs, switches, or redundant printers.



The ShareSpool is an effective sales tool. Many companies want to add the fast, high-quality HP LaserJet Series II printer, but hesitate because it is considered too expensive for one computer. With the ESI-2001 ShareSpool, they can purchase the LaserJet Series II printer and lower the printer cost per computer.

Many environments such as corporate departmental work clusters, small businesses, and professional offices have a need for a LaserJet Series II printer and will want to share this valuable resource. With ShareSpool they can now share without the hassle and expense of retraining employees or installing expensive and complex LANs.

At the heart of the ShareSpool is a 256-Kbyte buffer. Data from each of the three computers flows into the buffer and is collected as individual jobs.

All three computers can input data simultaneously at up to 19.2K baud. Activity by any computer will neither stop nor slow the data transmission of the other computers. The print data from a single computer is collected as a single job. A print job will continue to accumulate data until the incoming data stream stops for more than 10 seconds. The next data received from the computer will then be collected into a new, separate job. Memory is assigned to each job on an as-needed basis. An inactive computer does not rob buffer space from the other computers. The number of jobs in the buffer at the same time is limited only by the total memory required to hold them all.

If the buffer should ever fill up completely while data is still being sent, the handshake protocol between the ShareSpool and the computer will ensure that no data will be lost.

ShareSpool requires no additional software on the connected computers and all application software functions properly.

The ShareSpool installs in minutes using the "I/O option slot" of the HP LaserJet Series II. To complete the installation, cables are simply run from up to three serial computer output ports. For easy cable routing and extension, modular jack cabling is used for these connections. Attachment to the computer is made through an RS-232 to mod-jack adapter.

Once installed, ShareSpool can be forgotten. The only change noticed in the users' work cluster is that up to three people now have access to the LaserJet Series II printer that previously was accessible by only a single user.

Users who require many copies of documents can utilize the ShareSpool's multiple-copies capability. Printing up to 255 copies of a document will take no more computer time than printing one copy. By specifying the copies as low priority, users in the ShareSpool cluster will not have to wait for all the copies to finish before they get their single-copy output.

The ESI-2001 ShareSpool is based on a proven design that has resulted in excellent reliability. A two-year warranty with a 30-day money-back guarantee is provided with all ShareSpool products.

Extended Systems has an on-line technical and sales support team that is available from 6:00 a.m. to 6:00 p.m. Mountain Standard Time. Users can take advantage of this free service by calling 208-322-7163.

The ShareSpool for the HP LaserJet Series II is immediately available and retails for \$495 (U.S. list). Fifty-foot cables with RS-232 mod-jack adapters are available in packages of 1, 2, or 3 and are priced at \$60, \$115, and \$160.

For additional information, non-U.S. prices, or literature, contact Steve Bolen at Extended Systems, 208-322-7163, or write to: Extended Systems, P.O. Box 4937, Boise, Idaho 83711.

Regional sales offices are located in Fremont, California, phone 415-659-7916; and Farmington, Connecticut, phone 203-677-2728.

*Printers*

### **NEW FONT CARTRIDGE PRICING**

On March 2, 1987, coinciding with the introduction of the HP LaserJet Series II printer, the prices for font cartridges were reduced with only three exceptions. See notation at end of article.

These price reductions complement the lower price of the HP LaserJet Series II printer, providing even lower cost of ownership. Since the HP LaserJet Series II printer has two font cartridge slots, it is ideal for the multiuser environment where different fonts are needed. Existing LaserJet family printer owners can take advantage of the lower prices to add additional fonts to their library.

Below is a list of all available font cartridges:

Product No.	Cartridge
92286A	Courier 1
922868	TMS Proportional 1*
92286C	International 1
92286D	Prestige Elite
92286E	Letter Gothic
92286F	TMS Proportional 2
92286G	Legal Elite
92286H	Legal Courier
92286J	Math Elite
92286K	Math TMS
92286L	Courier (Portrait and Landscape)
92286M	Prestige Elite (Portrait and Landscape)
92286N	Letter Gothic (Portrait and Landscape)
92286P	TMSRMN (Portrait and Landscape)
92286Q	Memo 1
92286R	Presentations 1**
92286T	Tax
92286U	Forms (Portrait)
92286V	Forms (Landscape)
92286W	3-of-9IOCR-A (Bar Code)
92286X	EANIUPCIOCR-B (Bar Code)
92286Y	PC Courier 1
92286Z	Microsoft 1*

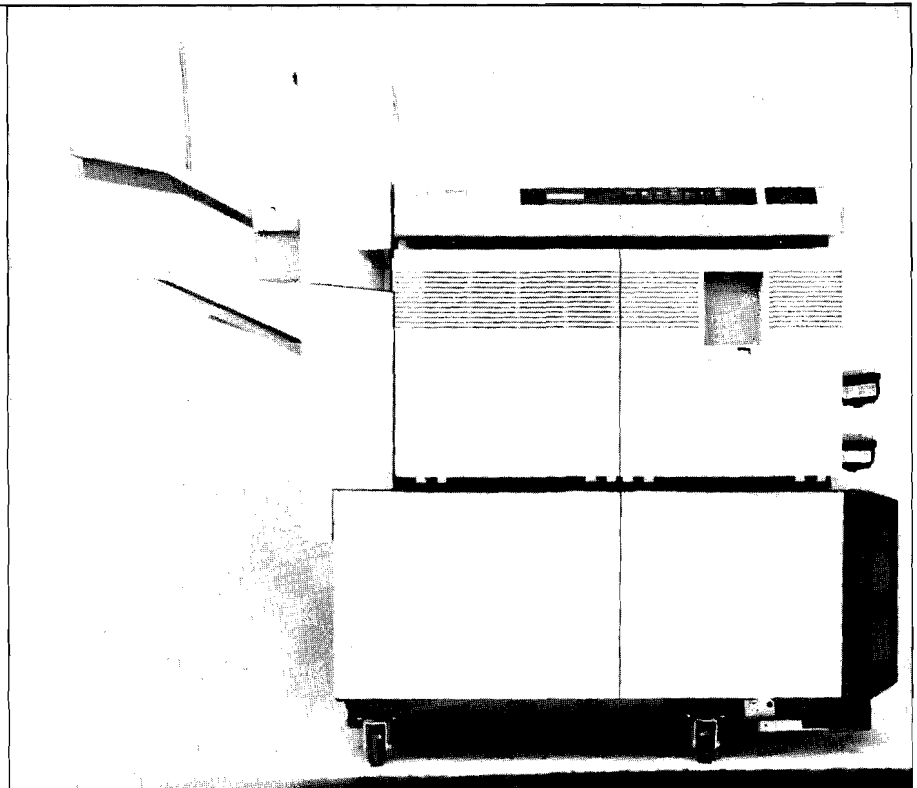
\*The price of the HP 922868, TMS Proportional 1, has been increased to encourage users to purchase the higher quality "F" or "Z" cartridges.

\*\*The prices of two font cartridges, the HP 92286Z - Microsoft 1 and the HP 92286R - Presentations, remain the same due to their relative newness.

For more information, contact your local sales response center.

Printers

## INTRODUCING THE HP LASERJET 2000 PRINTER



The HP LaserJet 2000 printer is the first HP LaserJet-compatible, high-volume laser printer specifically targeted to multi-user environments.

On March 2 (March HP Price List), Hewlett-Packard introduced three models of the HP LaserJet 2000 printer – the top-of-the-line member of the LaserJet family of printers. At introduction, the LaserJet 2000 printer will be available worldwide.

This new printer has the same capabilities as the HP LaserJet PLUS printer with the addition of increased print speed, a higher monthly usage rating, 34 resident fonts, and more paper handling features. HP 3000 support is planned for the LaserJet 2000 later this year.

### Features

- Fully compatible with HP LaserJet PLUS and LaserJet Series II printers
- Prints up to 20 pages per minute (2 pages per sheet for duplex)
- Full-page 300 dpi graphics on letter-size paper
- Optional third 2000 letter/A4 sheet input paper deck
- Optional duplex for two-sided printing (no field upgrade)
- 34 resident fonts
  - Automatic font rotation
- 70,000-page maximum monthly usage
- \$.01 cost per page (consumables only)

The HP LaserJet 2000 printer offers a growth upgrade path for LaserJet printer users who need higher speed, greater paper handling, heavier usage, and lower operating costs than their current multiple LaserJet printer solution. This printer is perfect for PC Networks and minicomputers like HP, DEC, and Data General.

- 20-pages per minute means shorter job turnaround time for large documents or mass mailings.
- Two 250-sheet input trays and a 1,500-sheet, correct-order output stacker are standard with all LaserJet 2000 printer models (A, D, and P).

Additional 250-sheet cassette trays can be purchased for each model to support legal, executive, Ledger, A4, and A3 paper sizes.

### Font support

The HP LaserJet 2000 printer offers 34 internal (ROM resident) fonts in various typefaces, orientations, point sizes, and symbol sets. The internal font offering will cover print needs ranging from simple line printer to simple document publishing. In addition, the LaserJet 2000 printer has three LaserJet printer font cartridge slots and supports all LaserJet printer downloadable soft fonts.

### HP LaserJet family compatibility

The HP LaserJet 2000 printer is fully compatible with the LaserJet, LaserJet PLUS, and LaserJet Series 11 printers. Any software that supports LaserJet printers will drive the LaserJet 2000 printer. The top ISV software packages found on DEC VAX and Data General MV minicomputers – such as MASS-II, Saturn, and WordPerfect – will support the LaserJet 2000 printer. This minicomputer ISV support opens the target market beyond the PC networks and into the top minicomputer installed bases.

### Heavy duty and inexpensive to operate

The HP LaserJet 2000 printer has a maximum page-per-month usage of 70,000 images. This is equal to six LaserJet printers. The LaserJet 2000 printer has a consumables cost per page of less than one cent compared with three to four cents per page on desktop laser printers. Combine these facts with the high speed and high-capacity input bin and you can see that the LaserJet 2000 printer is a perfect fit within PC network or minicomputer environments requiring a departmental printer.

### Ordering information

Product No.	Description
<i>Printer products (Models A, D, and P)</i>	
2684A	LaserJet 2000 printer with pedestal
26841	LaserJet 2000 printer with duplex and paper deck
2684P	LaserJet 2000 printer with pedestal and paper deck
<i>Paper deck upgrade kit</i>	
26842A	2,000-sheet paper deck (115VAC)
26842AB	2,000-sheet paper deck (220/240VAC)
<i>Interface accessories</i>	
26843A	RS-232IRS-422 interface
26843B	Centronics interface
26843C	Dataproducts short-line interface
26843D	Dataproducts long-line interface
<i>Memory expansion accessory</i>	
26845A	1-Mbyte memory expansion (printer supports up to four)
<i>Accessory products supplied by DMKIDMO</i>	
92282A	Toner (14,000-page life)
92282P	Toner disposal boxes (quantity four)
92282B	Letter-paper tray
92282C	Legal-paper tray
92282D	Ledger-paper tray
922828	Executive-paper tray
92282F	A4-paper tray
92282G	A3-paper tray
<i>Accessory products supplied by CPC/PCE</i>	
R44-0230-000CN	EP Drum (500,000-page life)

The LaserJet 2000 printer is also supplied in international power variations using the appropriate product number alpha suffix. Please refer to the HP Price List for details.

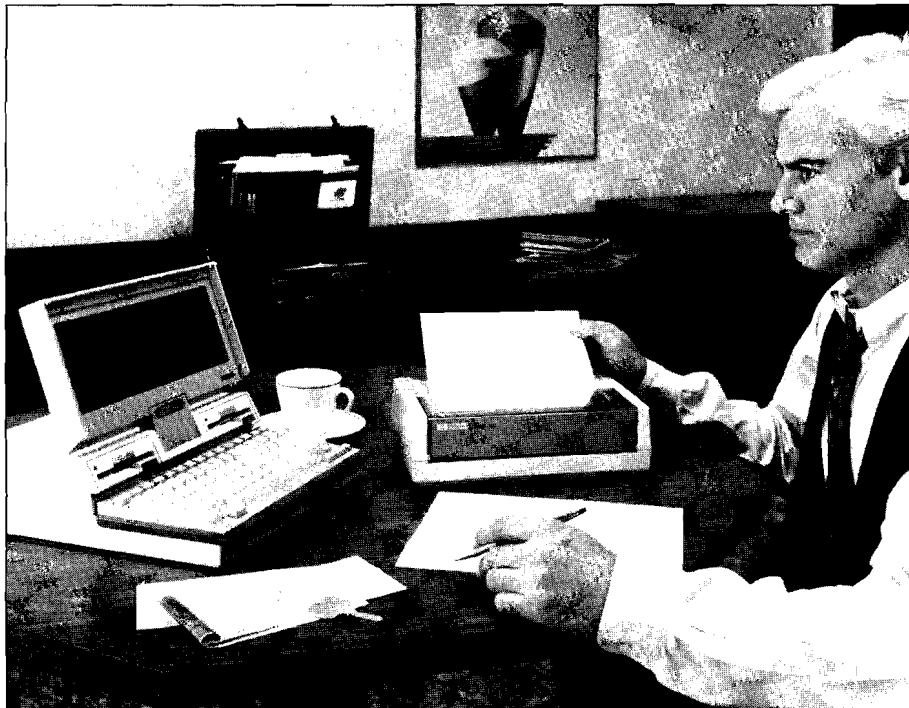
### HP LaserJet 2000 supporting literature

Lit. No.	Description
5954-7331	Data sheet
5954-8932D	Brochure (domestic)
5954-8932F	Brochure (foreign)
5954-8951	Configuring the HP LaserJet 2000 printer to the Data General MV minicomputer
5954-8952	Configuring the HP LaserJet 2000 printer to the DEC VAX minicomputer
5954-8953	HP LaserJet 2000 printer paper specifications guide

For more information, contact your local Sales Response Center.

Printers

## NEW BATTERY-POWERED CENTRONICS PARALLEL VERSION OF THE HP THINKJET PRINTER



First it was the HP ThinkJet printer – the surprisingly compact, 150cps printer that brought peace to the world of PC printing.

Now there is a new version: a battery-powered HP ThinkJet Printer with a Centronics/Parallel interface. It opens the doors for users whose businesses take them out of the office and on the road.

The Centronics/Parallel interface allows the new HP ThinkJet Portable Printer to be compatible with the IBM Convertible and compatibles, Toshiba's 1100+ and 3100, the Gridcase 2 and Plus models, Zenith's 171 and 181, as well as NEC's Multispeed.

The new battery-powered HP ThinkJet printer employs inkjet technology to provide users with a quiet, compact alternative to typical dot-matrix printers.

Its light weight, ruggedness, and extra long-life battery (prints up to 200 full pages per charge) also make the HP ThinkJet Printer the perfect solution for users with portable printing needs.

### Battery-powered Centronics/Parallel interface HP ThinkJet printer

Product No.	Description
2225P	U.S. version
2225PB	European version
2225PE	Spanish version
2225PK	Non-European version
2225PU	U.K. version

Printers

## ENHANCED HP 2225C THINKJET PRINTER FOR BATTERY APPLICATIONS

The enhanced version of the HP 2225C ThinkJet printer, announced December 1, 1986, is a prime candidate for battery and battery backed-up systems. The enhanced HP 2225C printer features an external 9 volt, 1.5 amp AC power supply, but will accept a wide variety of AC or DC input voltages.

### Applications

- **Battery backed-up medical systems:** nursing stations and patient monitoring stations.
- **Mobile systems:** truck-based route accounting systems for parts delivery, snack food delivery, etc.
- **Retnote data collection:** storage-battery based remote data gathering facilities for site characterization of wind speed, solar gain, etc.
- **Use of an existing power supply:** powering the printer from voltages available in your host computer.

The power supply connector on the HP 2225C is a standard 5mm barrel (coaxial power) type connector. DC inputs should be in the range of 9 to 15 volts positive center, capable of supplying 2.0 amps peak and 1 amp maximum average current (i.e., an automobile cigarette-lighter output). The printer requires less than 100 milliamperes when not printing. AC inputs should be in the range of 8 to 12 volts, 1.5 amps.

### Printers

## HP QUIETJET PLUS PRINTERS IN THE PC-CAD MARKET

A university in northern Montana decided to build a new computer lab for the engineering school. This lab would be the primary training ground for engineering students learning to use computer-aided design tools. After various vendors' products were examined, the department chose to use Hewlett-Packard's Vectra personal computers, plotters, and the QuietJet Plus printers.

Students using the AutoCAD™ software use the QuietJet Plus printers as draft graphics printout devices and then they plot the final drawings with an HP plotter. QuietJet Plus printers are used for drafts because:

The QuietJet printers cost less than the plotters.

The quiet operation of QuietJet printers does not disturb the class.

- The line resolution is good for checking line placement.
- The QuietJet printers use less space than the plotters.

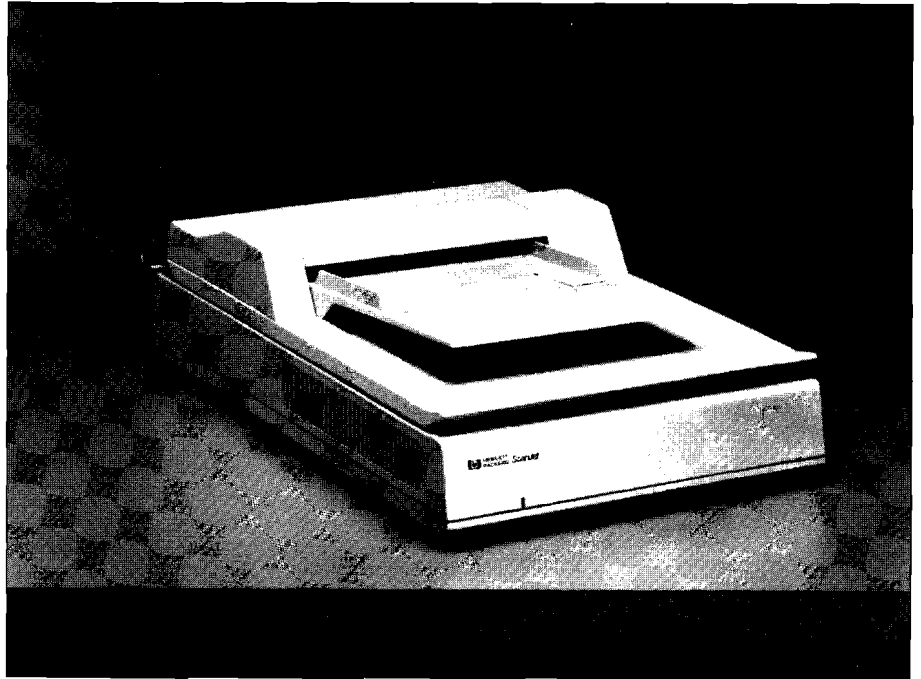
The wide carriage of the QuietJet Plus allows for the use of either A or B size paper.

PC-CAD is one of today's hot markets for personal peripherals. Don't forget the quiet, quality printing of the QuietJet and QuietJet Plus printers as draft graphics devices.

*AutoCAD is a U.S. trademark of Autodesk, Inc.*

### Scanners

## NEW HP SCANJET DESKTOP SCANNER EXPANDS HP'S DESKTOP-PUBLISHING OFFERING



*The HP ScanJet scanner enables PC users to scan printed images and text electronically for use in desktop publishing applications.*

March 2, 1987, marks the day that Hewlett-Packard introduced its first desktop scanner, the HP ScanJet.

The new product is a flatbed desktop scanner that enables personal-computer users to electronically scan images and text from a broad range of original documents. These scanned images can be stored in industry-standard file formats, via Scanning Gallery software, and then imported for use in several available desktop-publishing applications.

### Features and benefits

**Advanced document handling** – The HP ScanJet scanner's flatbed design allows users to scan images from a broad range of original documents, including books, magazines, photographs, and odd-shaped items. Users will also have the option to order a 20-page document feeder for scanning multiple-page documents automatically.

▪ **Built-in image enhancement** – With the help of Scanning Gallery software (included with the HP ScanJet scanner) users can exactly match the size of the desired image to the available space in the document they are working on. Images can be reduced to as little as 13 percent or enlarged up to 200 percent before they are stored in the user's system disc. Portions of images can also be cropped for use in various applications.

▪ **User-selectable resolution** – The new HP ScanJet scanner enables users to select various resolutions ranging from 38 to 300 dots-per-inch (dpi), allowing them to create a perfect resolution match between the HP ScanJet scanner and the device they will be printing out on. Users can easily scan at 300 dpi for high quality outputs on their HP LaserJet printer.

▪ *Three different image data types* –

The HP ScanJet scanner offers users the ability to choose between three different image data types: binary; dithering; and 4-bit grayscale. Having this freedom of choice enables users to better match the HP ScanJet scanner's capabilities to their particular application, resulting in the maximum quality output.

*Extensive software support* – The HP Scanning Gallery software is offered in two different versions for operation in both the MS<sup>B</sup>-DOS and MS Windows<sup>B</sup> environments. Images can be stored in industry-standard file formats such as TIFF, PC Paintbrush, and MS Paint. These images can then be imported to a wide range of application packages such as Pagemaker<sup>®</sup> by Aldus, or Z-Soft's Publisher Paintbrush<sup>B</sup>.

▪ *High-power interface card* – The HP ScanJet desktop scanner features a bidirectional Centronics interface card with on-board hardware that enables data to be moved quickly from the scanner to the computer for processing and storage. A full-page image scanned at 300 dpi, for example, can be scanned and stored in just 20 seconds. The card will work with the HP Vectra PC, IBM PCIXTIAT, and compatibles.

**Ordering information**

Product No.	Description
9190A	HP ScanJet desktop scanner
88290A	HP ScanJet interface kit
88190A	Automatic document feeder

**Marketing support**

The new HP ScanJet scanner will be featured, along with the new HP LaserJet Series II printer, at the Corporate Electronic Publishing Show in Chicago, Illinois, on March 2, as well as several other trade shows and conferences including Seybold, Computer Graphics '87, and June Comdex.

Sales literature can be ordered through your HP sales rep using the following information:

Lit. No.	Description
5953-6881	HP ScanJet Technical Data Sheet
5953-6882	HP ScanJet Set-up Guide
5953-6883	HP ScanJet Software Support Matrix
5953-6888	HP ScanJet Flyer

The new HP ScanJet desktop scanner rounds out Hewlett-Packard's desktop publishing offering, allowing users to integrate high-quality images into documents ranging from interoffice memos to extensive business reports. For additional information, contact your HP sales rep.

*MS<sup>B</sup>-DOS, MS Windows<sup>B</sup>, and MS Paint<sup>®</sup> are U.S. registered trademarks of Microsoft Corporation.*

*Pagemaker<sup>®</sup> is a U.S. registered trademark of Aldus Corporation.*

*Publisher Paintbrush<sup>®</sup> and PC Paintbrush<sup>™</sup> are U.S. registered trademarks of Z-Soft.*

*Scanners*

**SCANNING GALLERY**

**FOR THE NEW**

**HP SCANJET**

**DESKTOP SCANNER**

Every HP ScanJet scanner includes an added bonus – Scanning Gallery software. Not only does Scanning Gallery provide a convenient user interface for scanning, it also has powerful features to create the professional-quality graphics you have come to expect from all of the Graphics Gallery software products. And Scanning Gallery is a true Windows application, for better integration with software running under Windows.

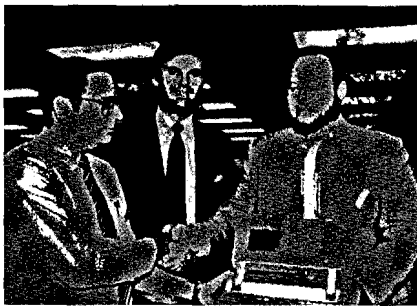
**Grayscale for higher quality**

The HP ScanJet scanner and Scanning Gallery offer an important benefit not found in any other leading scanners: photographs and other images with shades of gray can be scaled after they have been scanned into the computer. Other scanners either don't permit scaling of images at all, or give ugly-looking results when a photograph is scaled.

How does this work? Scanning Gallery gives you the option to scan true shades of gray (storing a separate intensity level for each pixel), not just a black-or-white "dithered" image. This true grayscale image can then be scaled without losing the vital intensity information. Software that attempts to scale a "dithered" image will cause the image to darken and disappear if it is made smaller, or to turn into big jagged blocks if it is made larger. Scanning Gallery will even convert your resized grayscale image into a dithered image for use with Desktop Publishing (DTP) software that requires dithered images.

*continued on next page*





Scaled as a "dithered" image



Scaled as a "grayscale" image

HP is now offering a comprehensive solution for graphics in desktop publishing: Scanning Gallery and the HP ScanJet desktop scanner for images, Charting Gallery for business charts, and Drawing Gallery for illustrations.

*Terminals*

***OBSOLESCENCE OF  
HP 35721 MONITOR  
ANNOUNCED***

On March 1, 1987, the 35721A/B/C Monitor and 35722A Tilt/Swivel will be removed from the HP Price List.

The 35721A/B/C is a 14-inch, 25Khz monochrome monitor that was designed especially for use with the HP Series 200 Model 217 (9817) technical computer. The 35721 has also been used with the HP 260 small business computer, the HP 2393 graphics terminal, and is currently sold only with the HP 9920 technical workstation. The 35721 will be replaced by the 35731A/B monitor, which is currently available at a significantly lower price. The 35731A/B is a 12-inch, 25Khz monochrome monitor, which includes integrated tilt/swivel and is plug compatible with the 35721.

Final orders must be placed by March 31, 1987. The products will have a 10-year support life.

*Terminals*

***TERMINAL CABLES IN  
SUPPORT LIFE***

Beginning March 1, 1987, cables used to support the HP 262X terminals in a multipoint configuration will no longer be supplied by Direct Marketing Division (DMK). At that time, these cable products will be transferred to Corporate Parts Center (CPC) and begin a five-year support life.

Specific product numbers that will be transferred include 13242Q, 13242R, and 13242T. Users may order the cables from CPC using the product numbers listed at right below:

Original PIN	Order PIN
13242Q	13242-60017
13242R	13242-60016
13242T	13242-60014

Contact your HP sales rep for more information.

## Supplies

### Supplies

#### 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) 762 32 00
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) 69 288 390
Greece	(01) 6726090
Italy	(02) 9236 9437 (02) 9236 9478 (02) 9236 9585
Japan	
Sagamihara	0427 59 1311
Osaka	06 304 6021
Middle East	
Athens	(01) 6828811
Norway	(02) 171180
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: Cross industry - Software development tools

**Abstract:** ARTESSA/3000 is a powerful Application Generator, designed to deliver real productivity gains to the HP 3000 user committed to COBOL and structured programming methodologies. ARTESSA is a true fourth-generation language featuring a high-function man-machine interface, through which the analyst can specify the design of the entire database and the functions to be delivered by the application. ARTESSA then builds complete COBOL source and object libraries and the necessary JCL. Maintenance of generated applications is fast and precise. The end-user can be involved in an interactive design/review approach by use of the prototyping facilities.

ARTESSA supports MPE files, KSAM, IMAGE, and VPLUS/3000. It interfaces to DICTIONARY/3000 and POWERHOUSE. Facilities include integral data dictionary, integral HELP support to Analyst and end-user, automatic documentation creation, prototyping, JSP COBOL, and invocation points for non-ARTESSA routines.

**Company Name:** RAET Software Products

**Address:** P.O. Box 4077  
6803-EB Arnhem  
The Netherlands

**Phone:** (+31 85) 246-218

**Contact Person:** Geoff Davies or Hans van der Leeuw

**Type of Distributor Wanted:** HP 3000 Systems House

**Geographic Coverage:** Worldwide

#### Industry: Civil Engineering - water resources

**Abstract:** HydroCAD is a computer-aided design program for analyzing the hydrology and hydraulics of stormwater runoff. It allows the construction of a complete model for any watershed and drainage system. This model can then be used to predict flooding or other occurrences, and to determine the effects of proposed development.

The market for stormwater analysis tools is expanding rapidly as more state and local agencies require these studies for all new construction and development. There is also a growing recognition of the need to evaluate existing drainage systems that may be inadequate. HydroCAD is designed to meet these needs by incorporating the latest engineering techniques into an interactive modeling system.

HydroCAD runs under the BASIC operating system on most HP 9000 Series 200 and 300 computers.

**Company Name:** Applied Microcomputer Systems

**Address:** Page Hill Road  
Chocorua, NH 03817  
U.S.A.

**Phone:** 603-323-8666

**Contact Person:** Peter Smart

**Type of Distributor Wanted:** Open

**Geographic Coverage:** Worldwide

#### Industry: Cross industry

**Abstract:** TEXTPLUS is a general-purpose word processing system for the HP 3000 user. It is user friendly, runs on all block-mode terminals and supports many printers. TEXTPLUS can access IMAGE-files to merge data and text without intermediary steps. Functions include a "you see what you get" editor, formatting with automatic hyphenation, report printing with headings, footings, table of contents, subject index, and printing of correspondences with form overlay, mailmerge, audit files, etc.

Linguistic modules are available for 10 European languages and include automatic hyphenation, string handling, and spell check. Program messages are available for 6 languages.

TEXTPLUS has powerful functions for in-house publishing with the HP LaserJet. TEXTPLUS stores texts in a database. With an additional package called THESAURUS, quick information retrieval (by keywords) is possible in large document databases.

**Company Name:** Boll und Partner Software GmbH

**Address:** Kreuzstr. 25  
6052 Mühlheim am Main  
Federal Republic of Germany

**Phone:** (Germany) - 6108 - 71580

**Contact Person:** Franz-Josef Boll

**Type of Distributor Wanted:** Open

**Geographic Coverage:** Europe outside Germany, America

#### Industry: Marine, specifically sailmaking

**Abstract:** SailMaker™ is an easy-to-use, computer-aided sail design system extensively used in the U.K./Europe and throughout Australia/New Zealand and by the KZ 3, 5, and 7 boats in the America's Cup races at Fremantle.

It is a comprehensive, powerful, easy-to-operate sail design system that not only assists in the design, but also in assembly and manufacture. The program allows the designer to shape and fair the sail to a precision not previously possible, simplifying the mechanics of the design process, and providing significant cost savings. The system can be used in combination with plotters (the HP 7586B drafting plotter).

The system on its own is priced for the small to medium loft, whereas the large European lofts are purchasing it with an eye to further plotter hardware development.

**Company Name:** Sails Science Ltd.

**Address:** 41 Jervois Road, Ponsonby  
P.O. Box 47-234, Auckland 2  
New Zealand

**Phone:** (64) (9) 788-693

**GMT:** +13 Summertime

**Telex:** NZ60235

**FAX:** 390081

**Contact Person:** Guus de Koster

**Type of Distributor Wanted:** Open

**Geographic Coverage:** U.S.A./Canada

**Industry:** *Manufacturing, process control, laboratory automation*

**Abstract:** DH-1000 is a high-resolution data historian designed to capture, save, and restore histories (1 minute to 7 years) of regularly acquired process data, alarm-generated messages, and laboratory data all within the same historical database. It is available only for HP 1000 A-Series computers. Advanced techniques are used to speed data retrieval and to compress data, therefore, dramatically reducing the disk space required for storage by two orders of magnitude. Historical data can quickly be retrieved for display in graphical formats or passed to user programs for report generation, SAS analysis, or custom processing.

Interface to any real time database is accomplished via a short user-written function program. Interfaces have been written and are available to support its use with distributed control systems like the Honeywell TDC 3000, Fisher Controls DCS, and most popular PLCs (Allen-Bradley, Modicon, etc.).

The historian can put an easily accessed historical database at the disposal of an AI program running in a LISP processor and thereby support a real time Expert System control application. Compatible output files can be transmitted to an IBM PC or mainframe running the SAS package.

**Company Name:** Process Automation Corporation

**Address:** P.O. Box 3149  
Princeton, NJ 08543-3149  
U.S.A

**Phone:** 201-359-1011  
609-921-2110

**Contact Person:** Lewis A. Drake

**Type of Distributor Wanted:** Open

**Geographic Coverage:** Worldwide

**Industry:** *Cross industry*

**Abstract:** Job Control System/3000 provides instantaneous answers to questions that are critical to the successful management of any HP 3000 installation. The reported information can be used for such purposes as:

- Researching execution history for any job or session
- Investigating the system security violations
- Identifying the system 'hogs'
- Charging the user departments for the computer resources
- Determining the usage of terminals and printers
- Justifying the hardware upgrades based on the historical data

JCS/3000 features enhanced :SHOWJOB and :SHOWOUT commands, which greatly improve job control and spool file handling.

JCS/3000 is fully integrated with DOCUMENTATION13000 and uses its extensive program documentation to cross-reference jobs with the programs they execute.

**Company Name:** Diamond Optimum Systems, Inc

**Address:** 5837 Wilkinson Avenue  
North Hollywood, CA 91607  
U.S.A

**Phone:** 818-980-5854

**Contact Person:** Igor Yasnogorodsky

**Type of Distributor Wanted:** Open

**Geographic Coverage:** Worldwide

**Industry:** *Cross industry – database management*

**Abstract:** SQL+ is a relational database language, based on IBM's Structured Query Language, designed for technical data management on the HP 9000 Series 2001300 BASIC workstation. SQL is the same language used by many of the most popular RDBMs including HP's ALLBASE.

The language enables you to create, fill, and manipulate databases from any BASIC program. Users will realize significant improvement in storage and retrieval times along with greater flexibility in database design and manipulation. The system has been tailored to handle numerical and computational-intensive data while providing the best performance available. Many user-definable options allow further optimization for each specific application.

SQL+ can be incorporated easily in any BASIC programs, allowing the programs to share data without requiring predefined pointers and dictionaries. New applications can be incorporated in minutes to share existing information, improve data integrity, and reduce disc storage requirements. Any number of tables can be joined to allow any amount of data to be searched, sorted, and formatted for use within the program or sent to the CRT, printer, or plotter.

**Company Name:** Advanced MicroSolutions

**Address:** 1100 Alma Street, Suite 207  
Menlo Park, CA 94025  
U.S.A

**Phone:** 415-325-7694

**Contact Person:** Greg Lawson

**Type of Distributor Wanted:** Reps, distributors, and VARs

**Geographic Coverage:** Worldwide

*The following listing appeared in the January and February issues of HP Channels without a phone or Telex number. The listing below includes this information*

**Industry:** *Cross industry – sales leads tracking/marketing information*

**Abstract:** FASTRACK/3000 is an on-line sales leads tracking and marketing information system. It provides menu-driven, transactional access to a comprehensive leads database with complete information about each lead, multiple contact persons, product lines, follow-up schedules, in-depth follow-up history, comments, sources, sales quota, and forecasting data. The system has extensive update, inquiry, and reporting capabilities to give sales and marketing professionals accurate, timely information. It's easy to use: has on-line HELP, full data dictionary, natural language for ad-hoc inquiry, and a fourth-generation language transaction development facility. Can be used by telemarketing and/or field sales reps. Batch report writer is optional.

**Company Name:** Los Altos Software

**Address:** 289 South San Antonio Road  
Suite 203  
Los Altos, CA 94022  
U.S.A.

**Phone:** 415-941-6030  
**TELEX:** 278-559

**Contact Person:** Susan Galante

**Type of Distributor Wanted:** Open

**Geographic Coverage:** Worldwide

The following four listings appeared in the December issue of HP Channels but were inadvertently left out of the January issue.

**Industry:** Manufacturing/Distribution

**Abstract:** Abacus Data Systems has announced its Comprehensive Reseller Assistance Program to market its Manufacturing/Wholesale Distribution management system to HP 3000 computer users.

The Abacus DM/3000 is designed for manufacturing and wholesale distributors. It includes modules for sales order and quotation processing, inventory control, purchasing, sales analysis, bill of material processor, physical inventory system, and general accounting applications. The system supports multiple companies and multiple warehouses. Running on all models of HP 3000 computers, the software is designed with an IMAGE database system to provide data integrity protection and easy report writing capability.

**Company Name:** Abacus Data Systems, Inc.

**Address:** 3166 Des Plaines Avenue, Suite 32  
Des Plaines, Illinois 60018  
USA

**Phone:** 312-298-8780

**Contact Person:** Eddie Li

**Type of Distributor Wanted:** HP 3000 Series

**Geographic Coverage:** Worldwide

**Industry:** Cross industry – any market or sales department

**Abstract:** SMS/3000 is a comprehensive versatile, and easy-to-use sales management system designed for HP 3000 users. SMS/3000 is a prospecting system which manages leads from the point of identification through sales closure. Flexible reporting allows continual monitoring of sales efforts. Equally adaptable to direct sales or telemarketing environments, SMS/3000 allows each company to adapt their unique characteristics in the market place to provide technological identification of market trends, opportunities, or problem areas within the sales department.

**Industry:** Cross industry

**Abstract:** Lasersoft/3000 is a menu driven application which allows designing of forms and merging of data from existing applications onto forms, using an HP 3000. Multiple documents can be stored with up to 28 different typefaces and sizes, allowing line drawing, boxes, and shadings plus the insertion of logo, signature, and graphics files. Related support services such as logos, signatures, fonts, and forms design are offered by Business Systems International.

**Company Name:** Business Systems International, Inc

**Address:** 20942 Osborne Street  
Canoga Park, CA 91304  
USA

**Phone:** 818-998-7227

**Telex:** 5101004239

**Contact Person:** William Akel or Nita White

**Type of Distributor Wanted:** Open

**Geographic Coverage:** Worldwide

**Industry:** Any type of Organization

**Abstract:** "Our Own SOP" is an electronic management manual which contains Standard Operating Procedures (SOP) from several different businesses. Organizes the internal efficiency of running large or small multinational or domestic business or other type of organization. These SOPs implement and simplify numerous management principles. Many office procedures are standardized for practical application. Using this sophisticated productivity tool greatly raises managerial standards and reduces all executive and employee costly time demands.

Easily adapted with any "WordStar" reading word processing program to suit the organization's requirements and produce a unique, customized SOP Management Manual without designing and writing one from scratch. Not copy protected, the Licensing Agreement allows copies within one organization's legal entity, additional copy discounts for the purchaser's more than 50% owned subsidiaries are available.

Necessary requirements: Hewlett-Packard 150 with double-sided disc drive, HP Portable 100, Portable PLUS or VECTRA, IBM or IBM compatibles. No special memory required. Text processor program able to read or convert WordStar by MICROPRO INTERNATIONAL. A good printer.

Optional: Hewlett-Packard's EXECUTIVE CARD MANAGER (ECM) & 1-2-3 from Lotus Development Corporation, Rel. 1A.

**Company Name:** CENTRAL RESOURCES CORPORATION,  
COMPUTREX Division

**Address:** P.O. Box 96  
Point Lookout, NY 11569-0096  
USA

**Phone:** 516-431-2718

**Contact Person:** Leonard Linton

**Type of Distributor Wanted:** Open

**Geographic Coverage:** United States

**Industry:** Cross industry – videotex software and emulators for HP 1000/13000 and PCs

**Abstract:** Multiway videotex products containing terminal emulators for HP 150 and some other PCs, X.25-based, decentralized access network and Videotex host software for HP 1000 and HP 3000 computers.

The software is state of the art. Multi-lingual user interface (English, Swedish, Finnish etc.) enables instant change of the communication language. New languages are incorporated into the software by editing a proper message file. The context-sensitive, online help messages are also updated by just editing them. The software (except emulators) support multiple presentation standards (CEPT, PRESENTEL, ANTIOPE, NAPLPS) as well as online conversions between them (with some natural limitations that are in the standards).

The Videotex host software contains keyword search facility, electronic mail, and order entry facility. It has also several types of gateways and calendar-based reservation facility in addition to those features normally found in videotex host software. The videotex host software is currently used in travel industry information and reservation systems, nationwide public videotex systems, banking systems, in-house order entry systems, etc.

Hardware required:

- Emulator products: HP 150 (or some other PCs)
- Videotex host software product: HP 1000/13000 with 2-Mbyte memory minimum and dedicated terminal concentrator
- Access network: dedicated access points and HP 1000 (used as network management center)

**Company Name:** VTT Technology Inc

**Address:** Lehtisaarentie 2 A  
SF-00340 HELSINKI  
Finland

**Phone:** 358 - 0 - 484483

**Contact Person:** Mr. Matti Hallivuori

**Type of Distributor Wanted:** OEM/System integrator

**Geographic Coverage:** Open

## Software Packages Wanted

*Type of Packages Needed:* Vertical market/niche applications for the HP 3000

*Services Provided:* Low-end VAR with offices in Long Island and New York City is actively seeking vertical market software packages to promote, sell, and support in the Metropolitan New York City area.

Excellent reputation and rapport with HP sales force. Company is currently a referenced reseller for MCBA, selling to the wholesale/distribution marketplace.

*Needed by:* Perfect Software Solutions, Inc

*Address:* 151 Herricks Road  
Garden City Park, NY 11040  
U.S.A

*Phone:* 516-741-1210

*Contact:* Paul Sita

*Geographic Coverage:* Metropolitan New York City area

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  
U.S.A.

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.



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H E W L E T T - P A C K A R D

# *HP CHANNELS*

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