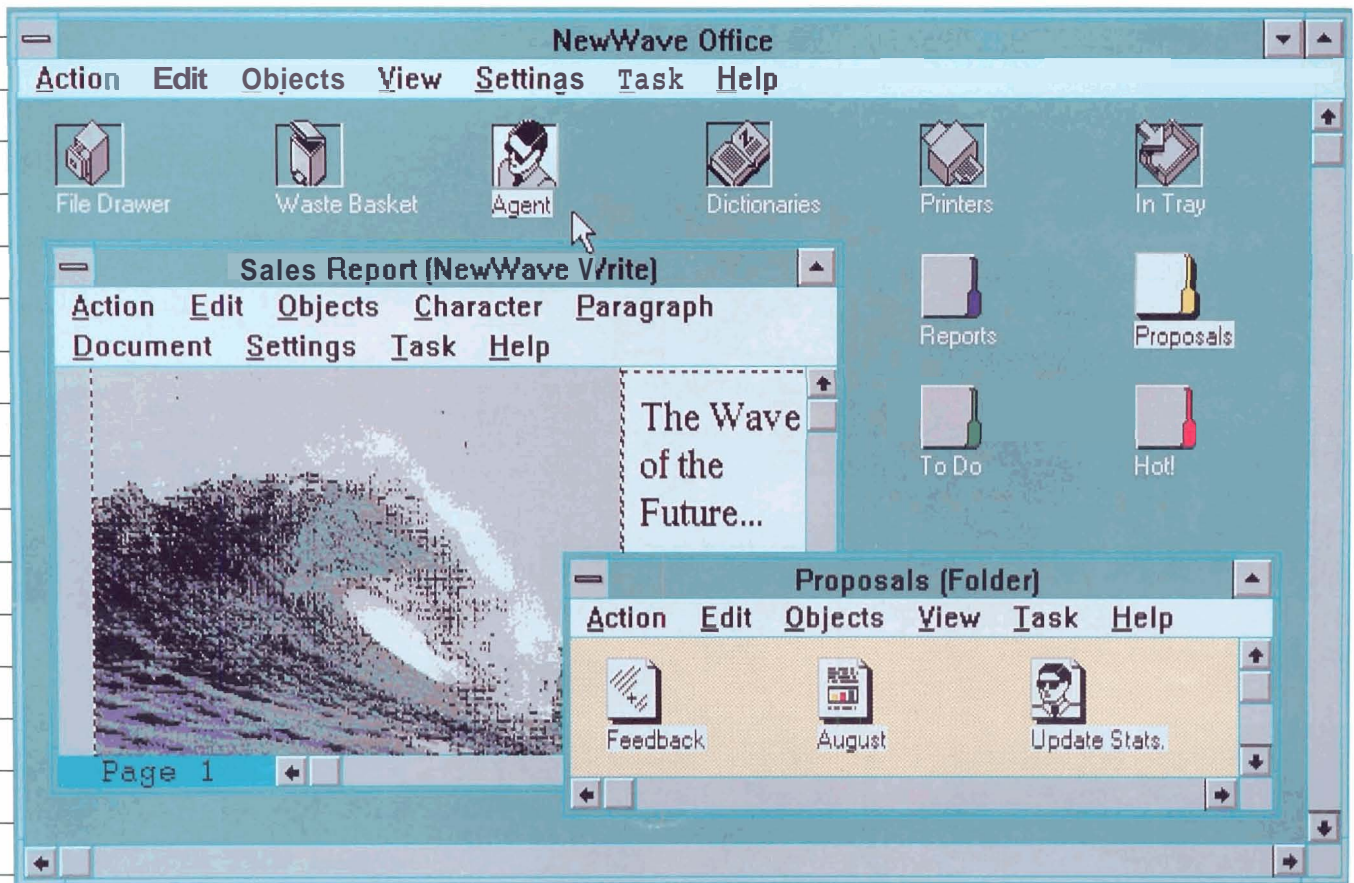


HP CHANNELS

Information For Hewlett-Packard's Value-Added Businesses

October 1990



**Introducing HP NewWave 3.0
above and beyond Windows 3.0**

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HP CHANNELS

Volume 10, No. 12

Editor

Tracy Wester

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.

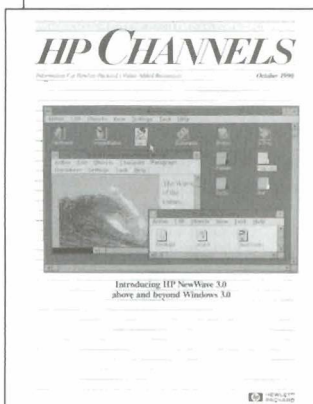
For further information on any of the products and services discussed in HP Channels, please contact your HP sales rep.

See back cover for subscription information.

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

Hewlett-Packard does not warrant the accuracy of the information provided in HP Channels and shall not be liable for any use made of the information contained herein. Information provided in HP Channels is subject to change without notice.

On the cover



HP NewWave 3.0 is an extension to the Microsoft Windows graphical user interface. It includes the following enhancements: usability, instant integration, task automation, and group productivity. See articles beginning on page 14.

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October 1990

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HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

Upcoming seminars for HP VABs

The HP Executive Training Series features regular seminars for HP value-added businesses. If you wish to receive a program guide or have questions, call Chip Pettibone at Hewlett-Packard, 408-447-4175.

Prepayment discount

There's still time to enroll in seminars scheduled for the last quarter of 1990. Space is limited, so sign up now. If you register early and your check arrives at least two weeks before the class begins, you will get a \$50 discount. *Note: This discount is now available for the Strategic Selling course.*

Registration

Call the appropriate registration contact listed here for the seminars you wish to attend to tentatively reserve your space. Registration is complete and space guaranteed when your check is received by the registration contact. Make checks payable to "Hewlett-Packard Co."

A schedule of upcoming Executive Training Series classes is a regular feature of this section in *HP Channels*. The two remaining classes for 1990 are listed below. There will be no further courses until 1991.

Hewlett-Packard reserves the right to cancel seminars or change prices, dates, and locations.

Date	Location	Fee*	Contact	Phone
Strategic Marketing Planning				
Oct. 9-10	Houston, Tex.	\$495	Sandra LaCorte	713-776-4423
Marketing Communications				
Oct. 9-10	Fullerton, Calif.	250	Geri Squires	714-472-3050

**U.S. list prices*

Announcing ChanneLink: the HP VAB sales tool mailing program

Sales and product information for HP value-added businesses



Building 461V
19091 Pruneridge Avenue
Cupertino, California 95014

ChanneLink

Available in the US. and Canada only

In order to enhance the visibility of the Value-Added Channels Group's HP sales and product information mailing program to VABs, we recently gave it a formal name — ChanneLink. The new name is indicative of the VAC mailer's function, which is to link our channel partners to Hewlett-Packard with timely and valuable product and sales information on a monthly basis.

The objective of the VAC mailing program is to provide a valuable source of HP information for our VABs' sales reps, eliminating the need for HP reps to provide this service to the VABs and saving time for everyone involved. Higher visibility for the ChanneLink mailer will help increase awareness of this valuable mailing program. Also, it will be easier for the VABs and their HP reps to track who is actually receiving ChanneLink and to make the necessary adjustments to the VALID database to keep our VAB mailing list current.

All three versions of the current VAB mailing program were combined under the ChanneLink label in September. These versions include the previously unnamed mailers that have gone out to MPE and HP 9000 Series 800 multi-user VABs, as well as the workstation mailer currently known as "Momentum for VABs."

If you have any questions regarding this mailing service or how you and any of your employees are currently coded in the VAB database, please have your HP representative put you in touch with the appropriate person in the HP Value-Added Channels Group in Cupertino, California.

HP hosts VABs at INTEREX breakfast meeting



More than 150 representatives from 85 HP value-added businesses (VABs) attended a breakfast meeting held in the Sheraton Boston Hotel during the recent INTEREX Conference. The breakfast meeting was hosted by the HP Value-Added Channels (VAC) Group.

Bill Copeland, HP VAC Manager, opened the meeting with a welcome message that reinforced HP's commitment to its VABs. Bill explained that HP VABs now account for over 50% of HP's nonservice revenues.

Bill then introduced the VABs to Wim Roelandts, HP Vice President and General Manager of the Computer Systems Group, who was the featured guest speaker. Wim's talk was entitled, "HP's Commitment to Open Standards: What Does This Mean to VABs?"

Wim acknowledged the importance for VABs to invest in a strategic systems direction that encompasses evolving computer standards and technologies while providing investment protection. He emphasized that HP not only understands this important need, but is firmly committed to providing the basis for integrating applications and ensuring investment protection by way of the application development environment that is planned for HP's NewWave Computing Architecture.

Wim believes HP is in a unique position to bring interoperability and portability to its customers that includes all systems, not just standard operating systems such as UNIX systems or proprietary ones such as IBM's SAA. In conclusion, Wim stated that one of HP's goals is to lead in commercial functionality while providing the benefits of open systems.

After the presentation, there was a brief question-and-answer session concluding the meeting. Both Wim and Bill, as well as other attending HP VAC members, spent time visiting with VAB representatives and answering questions on a more personal level.

The VAC Group would like to thank all the VAB representatives who attended the breakfast meeting. It was a pleasure to get together with you in Boston. Based on your positive feedback, we expect to continue this type of event at future conferences.



The Total Solution — second edition

For the U.K. only

Following the success of the first edition of the value-added business binder entitled "The Total Solution," the UK Value-Added Business Programme announces the availability of the second edition. All of our VAB partners currently registered with us should have already received their update packs.

These update packs include revised versions of the Configuration Guides, Literature Lists, and Price Lists, as well as some new features that have been added as a result of the feedback received on the binder. These features include Competitor Reviews, Business Planning Worksheets, Strategy and Product Presentation Slides and Scripts, HP Customer Support Service Information, and a guide to Public Relations at HP.

If you have a VAB binder and have not yet received your update pack, it probably means that you have not registered your binder with us. To do this, please return your registration form (located at the front of the binder) to Cathryn Whiteside, Hewlett-Packard Ltd., King Street Lane, Winnersh, Wokingham, Berkshire RG11 5AR, 52285. Contact your HP representative if you have never received a VAB Binder and would like one.

We hope that the second edition of the binder will prove useful, and that it has further helped to satisfy your information requirements. However, if you have any additional comments or suggestions, please let us know as we are continually trying to improve the standard of the binder in order to meet your needs. The third update is planned for release in November.

For more information, call "The Total Solution" Production Team, either Cathryn Whiteside or Darielle Fischer, at 0344 361448.

Multuser Systems

General

Information Access SQL/XL update

The NewWave Office Information Access product offering has been expanded to give users the ability to access relational databases. The Information Access SQL software for MPE XL (PIN B1717A) systems enables PC users to retrieve data from HP ALLBASEISQL and Oracle relational databases and output the data to PC applications of their choice.

Additionally, the PC component of Information Access is supported as an "advanced encapsulated" application within the NewWave environment. Encapsulation enables the full-screen Information Access to be represented as an icon and have the NewWave Agent execute Information Access command files. With Microsoft® Windows 2.1 or 3.0 features, Information Access can utilize the capabilities of context switching.

Today, the Information Access SQL product is available for user ordering with product shipments to coincide with the MPE XL Release 2.2. From a single PC, MPE XL users can access relational databases (HP ALLBASEISQL and Oracle) using the new Information Access SQL software, or access non-relational databases (HP TurboIMAGE and MPE files) using the original Information Access software.

For more detailed information, contact your HP representative to get a copy of the HP 3000 Open Systems II Field Training Manual (PIN 5952-3237).

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

General

Electronic mail integration with IBM

HP SNA Distribution Services/XL (HP SNADSIXL, PIN 32006A) provides electronic mail exchange between HP DeskManager and IBM DISOSS. It enables both HP DeskManager users and IBM DISOSS users to send and receive messages, PC files, and DCA documents to one another with no need for training. HP SNADSIXL is targeted towards the following markets:

- New IBM accounts that may be interested in HP for the first time because of **NewWave Office**.
- Users who need to link together multiple electronic mail systems in an SNA network.

Users who are committed to SAA and **OfficeVision**

- Users who were previously unable to upgrade to MPE XL without a DISOSS connectivity product on MPE XL.

Features and benefits

- **Improves corporate communication** — integrates HP into an IBM SNA electronic mail network. It provides transparent, easy exchange of messages and PC files.
- **Reduces the cost to implement multivendor electronic mail** — no additional or expensive software is required on the IBM host, and fewer IBM host resources (CPU, DASD) are used than competitor products.

Reduces administrative support costs — only one software copy is required in an HP DeskManager sub-network, that means only one node to configure and support. Also, a complete support tool set is provided.

- Improves performance over HP OfficeConnect to DISOSS (MPE V).

HP product-line positioning

HP SNADSIXL implements IBM's SNA Distribution Services, a strategic component of Systems Application Architecture (SAA). HP SNADSIXL is positioned within the HP-to-IBM connectivity product group as the SAA-compliant connectivity product for electronic mail distribution. It offers an excellent migration path to MPE XL for current HP OfficeConnect to DISOSS (MPE V) users.

X.400 is HP's primary strategy for multivendor electronic mail connectivity. HP SNADSIXL is for those users who demand that our MPE XL systems fit into their SNA networks.

Ordering information

HP SNADSIXL requires the purchase and installation of HP DeskManager (PIN 36570A), HP Convert/DCA/XL (PIN 27509A), and an SNA Link: either SNA/SDLC Link/XL (PIN 30291A) or SNA/X.25 Link/XL (PIN 30298A).

Product No.	Description
32006A	HP SNA Distribution Services/XL
<i>Processor options</i>	
Opt. 310	For HP 3000 Series 922LX, 920
Opt. 315	For HP 3000 Series 922RX
Opt. 320	For HP 3000 Series 925LX, 925,922,932
Opt. 330	For HP 3000 Series 935
Opt. 335	For HP 3000 Series 949
Opt. 340	For HP 3000 Series 950,955, 960
Opt. 350	For HP 3000 Series 980
<i>Migration credit options for HP OfficeConnect to DISOSS (MPE V) to HP SNADSIXL</i>	
Opt. OGI	Credit for OfficeConnect to DISOSS and LU 6.2 Base
Opt. OG2	Credit for OfficeConnect to DISOSS and LU 6.2 Base
Opt. OG3	Credit for OfficeConnect to DISOSS and LU 6.2 Base

A migration credit option must be ordered with a Processor Option on the same software order. Only one migration credit option is permitted per HP SNADS/XL processor option.

Upgrade credits are also available for upgrades to higher processors. Please refer to the HP Price List. Contact your HP representative for more information.

General

User License Program

The HP Corporate Site License Program has been restructured as the User License Program. Now both direct and dealer channel users can purchase PC office software standard package (disks and manuals) and user licenses (allows copying standard package disks onto one PC), and manuals. For some products, direct channel users can buy a manual per user license, or user license upgrades.

User licenses do not include disks or manuals, so they will be priced below the standard package. Direct channel users may qualify for volume discounts on VEU Exhibit A-1000, VAR A-1001, or Education Exhibit AE09 (refer to the exhibits for specific discounts).

Product No.	Description
D1704B	Standard package (disks and manual)
D1706B	User license (recommend minimum order of 25)
D1731A	User license upgrade from NewWave 1.0 (PIN D1706A)
D2500A	NewWave Access standard package
D2501A	NewWave Access user license (recommend minimum order of 10)
D2500-90002	NewWave Access Manual (available from HP DIRECT)
68333B	AdvanceLink DOS standard package
68333J	AdvanceLink DOS user license (recommend minimum order of 25)
68333K	AdvanceLink DOS manual
D2432B	AdvanceLink DOS user license upgrade

Manuals are non-discountable. Customers purchasing dealer channel products can get comparable prices.

HP NewWave 3.0 and AdvanceLink DOS were introduced September 1 as part of the User License Program, and NewWave Access was added October 1.

Other products in the current Corporate Site License Program will migrate to the new User License Program by November 1, 1990. The Corporate Site License Program Exhibit B-1072 will be discontinued at that time. Contact your HP representative for more information.

General

HP Word/Vectra Danish product discontinuance

For Europe only

The HP Word/Vectra Danish product (PIN 27536AY) was discontinued effective October 1. There is no replacement currently available.

HP Word/Vectra provides HP Word 3000 functionality on the HP Vectra PC family. Additional features include Spell Check, Automatic Hyphenation, "where am I?" key, and the ability to set page numbers. Contact your HP representative for more information.

General

HP ListKeeper localized products discontinued October 1

For Europe only

The HP ListKeeper localized products (Norwegian, PIN 32132AN; Finnish, PIN 32132AX; Swedish, PIN 32132AS; German, PIN 32132AD; French, PIN 32132AF; Italian, PIN 32132AZ) were discontinued effective October 1, 1990. No replacement is currently available.

HP ListKeeper is a powerful, yet easy-to-use tool that enables a wide range of users to manage their own information in simple lists. Contact your HP representative for more information.

General

HP Telex localized products discontinued October 1

For Europe only

The HP Telex localized products (Italian, PIN 36572AZ; Danish, PIN 36572AY; Finnish, PIN 36572AX; and Dutch, P/N 36572AH) were discontinued effective October 1, 1990. No replacement is currently available.

HP Telex is a stand-alone HP 3000-based software product that allows telex messages to be sent through the telex network. HP Telex can also be accessed from within HP DeskManager. Contact your HP representative for more information.

General

HP File Library localized products discontinued October 1

For Europe only

The HP File/Library localized products (German, PIN 27520AD; Spanish, PIN 27520AE; French, P/N 27520AF; Dutch, PIN 27520AH; Japanese, P/N 27520AJ; Norwegian, PIN 27520AN; Swedish, PIN 27520AS; Finnish, PIN 27520AX; Danish, PIN 27520AY; Italian, PIN 27520AZ) were discontinued effective October 1, 1990. No replacement is currently available.

HP File/Library enables a work group or an entire team to centrally store information so that the right people can have fast and easy access to the information they need with no data lost or duplicated. Contact your HP representative for more information.

HP 3000/MPE

HP 3000 Series 920 and 922RX server option price decrease

Effective November 1, 1990, the credits for server versions (Option 100) of the HP 3000 Series 920 (PIN A1702A) and Series 922RX (PIN A1046A) will increase. Now users can purchase the server versions of these popular integrated systems, including VPLUS/Windows and a NewWave Office product with System Services, for the same low entry price as the system version. If you have questions, contact your HP representative.

HP 3000/MPE

Price increase for HP MICRO 3000RX port upgrade

Effective October 1, 1990, the price of the HP MICRO 3000RX port upgrade (PIN 30528A) was increased. The upgrade provides a system with 24 ports and 4 Mbytes of memory. If you have any questions, contact your HP representative.

HP 3000/MPE

Price change on HP 250 and 260 return credits to HP MICRO 3000RX

HP 250 and 260 users can upgrade to the HP MICRO 3000RX (PIN 32543AH). Effective October 1, the return credits offered on these systems when upgrading to the HP MICRO 3000RX have been reduced. Contact your HP representative for more information.

Ordering information

Product No.	Description
32543AH	HP MICRO 3000RX
Opt. 709	Upgrade HP 250 to HP MICRO 3000RX
Opt. 710	Upgrade HP 260 to HP MICRO 3000RX

HP 3000/MPE

HP 3000 Series 920 now on educational discount schedule

Effective September 1, the new HP 3000 Series 920 (PIN A1702A) was placed on the Educational Exhibit AE12 under column 2. This means that educational institution users can now save 25% (U.S. list) on an HP 3000 Series 920, a substantial savings on this already aggressively priced PA-RISC system.

The benefits of PA-RISC provide the HP 3000 Series 920 with 3 to 4 times the performance of a Series 37 and 1.9 to 2.3 times that of a Series 39 and 40. With its low price and PA-RISC performance, the HP 3000 Series 920 provides a competitive solution both as a new system and an upgrade.

Contact your HP representative for more information.

HP 3000/MPE

HP 3000 Series 925LX discontinuance

The HP 3000 Series 925LX (PIN A1032A) and upgrade (PIN A1032AH) will be discontinued November 1, 1990. The Series 925LX enjoyed strong order rates in 1988 and 1989, when it was the entry point into the HP 3000 PA-RISC product line. The Series 922LX overlaps the performance of the Series 925LX at a better price, essentially replacing the Series 925LX. The Series 925LX and upgrade will be supported until November 1, 1995.

Contact your HP representative for more information.

HP 3000/MPE

HP 3000 Series 920 price lowered

Effective October 1, the price of the HP 3000 Series 920 (PIN A1702A) was lowered.

This price reduction makes the Series 920 competitively priced against the recently announced IBM AS1400 C04 and C06.

Series 920 differentiators

- **Superior growth path** — The Series 920 offers a smooth growth path with board swap upgrades to triple the performance. Since the C04 and C06 come in a new AS1400 package, IBM customers must exchange systems when upgrading to a higher performing system.
- **Unattended backup** — The Series 920 offers unattended backup of a single DDS cassette, IBM requires 22 1/2-inch cartridges.
- **More performance at a comparable price** — With TurboIMAGE, the Series 920 provides up to 50% more performance than the AS/400 C06 for a comparable price.

Contact your HP representative for more information.

New HP 1000 A-Series A990 processor — update

Hewlett-Packard recently introduced a new processor in the HP 1000 real-time product line — the A-Series Model A990 (see July issue of HP Channels). Following 24 years of supplying solutions using real-time computers, HP is reinforcing its commitments to protect user investment and to provide product compatibility.

Real-time computers are used in a variety of applications including high-speed automatic testing, factory automation, orbiting satellite control, and lab automation, as well as machine and process control.

HP's new high-end, single-board processor, the HP 1000 A-Series Model A990, provides more than twice the CPU performance of the present, four-board, Model A900. The new model offers users more compact size, faster processing, and lower cost packaging for real-time applications than competitive systems. It is available both in new systems and as a plug-compatible upgrade for all existing A-Series Models.

"After 24 years of HP 1000 computer production, demand for real-time systems remains very strong," said Bruce S. Campbell, general manager of HP's Data Systems Operations. "Real-time computer customers have found that general-purpose minicomputers are unable to achieve the same results as the real-time computers, therefore making the HP 1000 an essential product in many industries around the world today."

Users of real-time computers rely on high-speed data acquisition and capabilities, as well as abundant memory capacity for more accurate and efficient testing and control functions. As with other A-Series systems, the Model A990 can help increase profitability by controlling production-line defects, delivery times, and material and labor costs.

For example, the HP 1000 is used to detect defects or abnormalities in a wide variety of areas, including the manufacturing of compact discs and in automobile electrical systems, air conditioners, and stereo equipment. Industry users range from automotive, telecommunications, and aerospace/defense, to discrete and process manufacturing.

The HP 1000 A-Series is designed for real-time applications with a fast, predictable and guaranteed response time. Extensive input/output (I/O) capabilities give the Model A990 the ability to process an enormous amount of information at one time, without losing any data. Its open architecture allows it to easily work in multivendor environments.

The Model A990 is fully compatible with other A-Series computers, and is field upgradable. Users have four configuration options ranging from a 14- or 20-slot cardcage box to a 14- or 20-slot cardcage system. A 14-slot cardcage is a good choice for medium-size applications because of its compactness and versatility. It can be used atop a table, desk, or workbench. A 20-slot cardcage offers the greatest capacity for memory and I/O cards.

System upgrades of the new processor for Model A900 users and those with Models A400/A600+/A700 computers also will be available.

"We are committed to preserving the value of our customers' investments and providing exceptional price and performance," said Campbell. "HP plans to manufacture the HP 1000 product line until at least the year 2000 and support it until 2010."

HP 1000 Model A990 processor characteristics

To guarantee increased manufacturability and produce a product with a high degree of reliability, the Model A990

employs today's engineering and manufacturing techniques to create an optimized design along with the latest application-specific integrated circuits (ASIC). It also combines the latest surface-mount-technology (SMT) processes with other modern manufacturing methods to create a more compact system.

Expansion path and incentive program

The HP 1000 A-Series Model A990 provides an expansion path for users who want to upgrade their A-Series computers, along with an incentive program providing two upgrade options for exchanged processors and early purchasing of current Model A900 processors. Any user exchanging a current Model A900 four-board processor set will receive a credit toward the price of an upgrade. Users taking shipment of current Model A900s, since May 1, 1990, and prior to the availability of the Model A990, will receive an additional credit toward the upgrade price.

Ordering information

Product No.	Description
2939A	HP 1000 Model A990 14-slot box
2959A	HP 1000 Model A990 20-slot box
2989A	HP 1000 Model A990 14-slot system
2999A	HP 1000 Model A990 20-slot system

When upgrading an A-Series system, credits will depend on the license and returned processor or system.

When purchasing a Model A990 system, users will receive a central-processing unit card, an interface to the system disk, the operating system with virtual code and diagnostics, site-prep consultation, and a 90-day, on-site warranty along with qualifications for FCC and environmental testing. The Model A990 box consists of the central-processing unit in a fully powered cardcage with software and hardware sold separately. Contact your HP representative for more information.

HP 9000/HP-UX

Announcing HP Interface Architect for HP 9000 systems

The HP Interface Architect is an interactive software tool that significantly reduces user interface development time. It is targeted towards users of HP 9000 Series 300, 400, and 800 systems, and developers creating X11 applications with Motif user interfaces.

Features and benefits

Motif components such as buttons, scroll bars, and menus can be visually selected and positioned. Complex tasks such as the layout and editing of menus and the addition of graphical front ends to existing terminal-based applications can now be done with ease. Because creation and modification are done interactively, code maintenance time is reduced.

The built-in C interpreter allows the behavior to be tested and modified at any time during development. C source code is generated with the press of a button. Automatic generation provides high-quality code, free of potentially costly Motif coding errors.

HP Interface Architect assists in developing platform-independent code, allowing the generation of applications based on C and Motif standards. Appealing Motif-compliant applications can be developed for delivery on multiple platforms.

Contact your HP representative for more information.

Ordering information

Product No.	Description
B1163A	HP Interface Architect for HP 9000 Series 300 and 400
Opt. QAN	1-seat License-to-Use
Opt. QAD	5-seat License-to-Use
Opt. QA9	10-seat License-to-Use
Opt. QAG	25-seat License-to-Use
B1164A	Media and manuals for B1163A
Opt. AAO	Software on 1/4-inch tape cartridge
B1165A	HP Interface Architect for HP 9000 Series 800
Opt. QAN	1-seat License-to-Use
Opt. QAD	5-seat License-to-Use
Opt. QA9	10-seat License-to-Use
Opt. QAG	25-seat License-to-Use
B1166A	Media and manuals for B1165A
Opt. AAO	Software on 1/2-inch tape cartridge
Opt. AA1	Software on 1/2-inch tape
B1167A	HP Interface Architect Library Source License and media
Opt. AAO	Software on 1/4-inch tape cartridge
B1175A	Additional copies of documentation for B1163A, B1165A

HP 9000/HP-UX

HP 9000 Model 815S offers new disks in bundle

Beginning October 1, the HP 9000 Model 815S includes the 335-Mbyte disk drive (PIN C2200A) in the base configuration (PIN A1071A). This disk replaces the HP 7959B disk drive in the Model 815S. The benefit for users is that they receive an additional 31 Mbytes of disk space and the latest disk technology at no additional cost; the price of the Model 815S remains unchanged. The HP 9000 Model 815S is targeted towards VABs and end-users in hospitality, manufacturing, distribution, state

and local government, and education markets. It is sized for office work-groups, departments, and small companies.

The 670-Mbyte disk (PIN C2203A) will be offered as an upgrade option to the C2200A. The C2203A disk upgrade can be purchased using Option 009 and replaces the HP 7963B disk upgrade.

Please note that the C2203A upgrade price is higher than the former upgrade price to the HP 7963B because the new upgrade contains an additional 335 Mbytes of disk capacity (670 Mbytes total). The former upgrade to the HP 7963B included only the expansion capability and not the extra disk capacity which had to be purchased separately.

Contact your HP representative for more information.

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General

introducing the HP Optical Storage Server

The HP Optical Storage Server (PIN C2455A) is a system reference solution bundle that enables 22 Gbytes of online storage in a technical workstation network. It includes the HP Series 6000 Model 660S mass storage system, HP 6300 Model 20GB/A optical storage library, and HP 9000 Model 345MH running the Optical Storage Manager. The software effectively extends the high-speed disks' capacity with optical storage.

The HP Optical Storage Server is targeted towards large to medium networks of technical workstations for EE/ME CAD engineers, software developers, and scientific imaging, as well as technical management. The Optical Storage Server is designed for networked UNIX system workstations that use NFS and ARPA/Berkeley Services over 802.3 networks. HP 9000 Series 300,400, and 800 workstations operating HP-UX 7.0 or greater have been qualified, as have Sun workstations running SUNOS 4.0 or greater.

Features and benefits

- **22 Gbytes online** — Gigabytes of data online over the network results in productivity increases for the engineering or scientific users as well as administrators. It's as though the high-speed disks have unlimited free space; they never fill up as inactive files are shuttled to optical storage.
- **Familiar UNIX system-like commands** — Migrate, demigrate, mls, and mlocate are all workstation clients need to use in managing their files stored on the HP Optical Storage Server. Through the use of these four simple commands, they are able to manage their own files and decide whether their files need to be kept available and visible on the high-speed disks or stored in optical storage and hidden from their normal working environment.
- **Secure storage environment** — The Optical Storage Manager (PIN C2450A) software includes redundancies, detection and recovery routines, and logging to ensure that files are not lost or misplaced when they are stored in HP's optical library. These software features, when combined with the robust design of the optical library and the reliability and life of optical media, provide one of the most innovative and secure storage solutions today.
- **Flexibility** — With the control possible through the four client commands, every client's server environment can be managed and configured as the client workstation wants it. Clients can set it up such that their files are automatically moved to optical. Clients can explicitly select files to be moved to optical storage or kept on the high-speed disks exclusive of the system administrator's automatic searches. With the expanded storage space available, clients can maintain their own online backup or archive directories. System administrators can create the rules for finding files that they deem appropriate for optical storage. The software only utilizes the number of optical media that the system administrator feels is necessary. This can free up the autochanger to be utilized in any other direct access application that the administrator may wish to support.
- **Standards** — The standard HP-UX operating system, standard networking protocols and networking hardware, and the HP 9000 CPU, means that investment in the HP Optical Storage Server is protected. The investment in the software can meet the needs of tomorrow as it encompasses new HP peripherals and CPUs. The networking standards of technical workstations also enable connectivity beyond HP-UX workstations. Sun workstations have also been qualified

to work on the HP Optical Storage Server.

HP product-line positioning

The HP Optical Storage Server solution is HP's first entry into a storage server market that combines high-speed disks and optical libraries. The solution is designed to be dedicated for the purpose of storing files for UNIX system workstations. It offers gigabytes of online storage for technical workstation networks where each client wants individual control of their storage on the network.

As a gigabyte storage solution, the entire hardware and software configuration brings the cost of storage to approximately \$4 per megabyte (U.S. list). This compares very favorably with simple disk prices that range from \$5 to \$12 per megabyte without any CPU or data management features.

Ordering information

The HP Optical Storage Server solution should be ordered with the following component products. All must be ordered for configuration. The Optical Storage Manager (PIN C2450A) will be sold and supported only in this special configuration.

Product No.	Description
C2450A	HP Optical Storage Server
9221IR	Design Plus cabinet
9221IS	Rails
9221IT	Filler panel
98563H	HP 9000 Model 345MH
Opt. 011	Deletes HP-IB, adds SCSI interface
Opt. 116	Adds 12 Mbytes memory
C2213A	HP Series 6000 Model 660S mass storage system
Opt. 306	Instant Ignition
Opt. 022	Adds two 660-Mbyte disks
	HP Series 6300 Model 20GB/A optical storage library
Opt. AFJ	Adds two-meter SCSI cable
Opt. 231*	Deletes 31 pieces of optical media

**If you want the media, then do not order with this option.*

Contact your HP representative for more information and for a copy of the product brief, P/N 5952-2988.

General

HP BASIC changes in HP 9000 Series 300 and Model R/332 bundles

With the introduction of BASIC 6.0, hardware bundles based on HP BASIC will be turned and some options added and changed to achieve the most consistency, ordering ease, and completeness. These changes went into effect September 1.

HP BASIC 6.0 introduces a new structure similar to that of HP-UX. The product will now consist of a license-to-use (PIN 98616L), and media and documentation (PIN 98616B). In addition, a Kanji-localized product (PIN 98616BJ) is now available. Changes to the bundles are based on these new products and structure.

Ordering information

■ **HP BASIC 6.0 included in all HP BASIC bundles** — Effective September 1, all Series 300 bundles and all Model R/332 products will now ship with HP BASIC 6.0. All these bundles will include the license to use (PIN 98616B) and media and documentation (PIN 98616L) products.

The media option HP BASIC is shipped in will also change. The modular Series 300 bundles will now ship HP BASIC with Option 045 (double-sided 3½-inch media), instead of Option 044 (single-sided 3½-inch). Option 042, for 5¼-inch media will still be available. The Model R/332 products will continue to ship with Option 045 only.

■ **Addition of Option SWJ** — Option SWJ substitutes Japanese localized BASIC for Standard BASIC. This option replaces PIN 98616B with PIN 98616BJ. All of the above-mentioned bundles now offer Option SWJ. There is no charge for this option.

■ **Option 100 price and structure change** — Existing HP BASICIWS bundles include Option 100 which deletes documentation and credits the user.

Because of the BASIC 6.0 structure change, Option 100 will now delete both the media and documentation (PIN 98616B), leaving only the HP BASIC license-to-use. This new option will credit the user. All bundles, including the Model R/332 products, are affected.

■ **Addition of Option 618 to Model R/332 controllers** — Per field and user requests, Option 618 has been added to all Model R/332 products. Option 618 adds the HP BASIC Compiler.

Listed below are the products affected by the above information. Contact your HP representative for more information.

Product No.	Description
98580B	HP 9000 Model 310MMA HP BASICIWS instrument controller
98581B	HP 9000 Model 310CMA HP BASICIWS instrument controller
98580C	HP 9000 Model 332MMA HP BASICIWS instrument controller
98581C	HP 9000 Model 332CMA HP BASIC/WS instrument controller
98580W	HP 9000 Model 360MMA HP BASICIWS instrument controller
98581W	HP 9000 Model 360CMA HP BASICIWS instrument controller
A1303A	HP 9000 Model R/332 controller with built-in floppy
A1305A	HP 9000 Model R/332 controller with 20-Mbyte hard disk and floppy
A1307A	HP 9000 Model R/332 controller with 40-Mbyte hard disk and floppy

General

HP EGS — status and update

Since its introduction in 1981, more than 3,000 trade seats and 3,000 HP-internal seats of HP Engineering Graphics System (HP EGS) have been installed. Now this successful two-dimensional graphics software product for multidiscipline engineering design is entering new stages of the product lifecycle.

HP EGS HP-UX has been placed in the "functionally stable" category of support. Support for product defects will continue as before, but additional functional enhancements will not be made. However, so the most current workstations can be used, new releases will update HP EGS HP-UX to the latest version. Users may want to continue on support contracts to receive the updates.

The following product numbers and options will be discontinued and removed from the November 1990 HP Price List.

Ordering information

Product No.	Description
74305A/R	HP EGS Pascal
74305AD/AR	HP EGS — German
74305AX/RX	HP EGS — Finnish
74306A/R	Add-on modules
74306AD	Add-on modules — German
74306AX	Add-on modules — Finnish
74307A/R	Hybrid module
74308A/R	High performance
98305A/R	Bundled HP EGS
98305DA/DR	Bundled HP EGS — German
98305AX/RX	Bundled HP EGS — Finnish
98305JA/JR	Bundled HP EGS — Japan
98310A/R	Photoplotter/NC drill utility
98311A/R	IGES translator
98819A	Techwriter

On November 1, 1990, HP EGS Pascal will begin its five-year support life phase of the discontinuance process. Although on-line support will still be available and critical and serious defects will be resolved, users should continue their contracts for local support.

General

**HP 9000 Model 310
price increase**

The price of the HP 9000 Model 310 was increased approximately 15% (\$U.S.) effective October 1, 1990. Contact your HP representative for more information. Below is a list of the affected products:

Product No.	Description
98561A	HP 9000 Model 310 SPU
98580B	HP 9000 Model 310M
985818	HP 9000 Model 310C

HP Apollo 9000

**HP Apollo 9000
Series 400 education**

Users of HP Apollo 9000 Series 400 workstations can take any of HP's standard UNIX system courses. Series 400 users who want system administration training should take one of the following classes:

- "HP-UX System Administration for HP 9000 Series 300/400" (HP 51436C) — for system administrators or network administrators
- "HP-UX System Administration Basics" (HP 50722B) — new course for application users or system operators

To register for any class in the U.S., users should call 800-HPCLASS (800-472-5277). Outside the U.S., users should contact their HP representative or nearest HP Customer Education Center.

Apollo

**Microprocessor
development tools
now available on
Apollo platforms**

Now, developers of embedded microprocessor products can apply the integrated AxCASE tools on new platforms, Apollo 25001350014500 workstations running Domain 10.2.

Cross assemblers/linkers, cross compilers, emulator interfaces, and HP Branch Validator from the HP 64000 family of development tools for 68000, 80186/80C186, and 80188/80C188 applications are now available on Apollo platforms.

Software designers and engineers who presently use Apollo workstations can take advantage of established products in their current design environment. The integrated sets of AxCASE tools support microprocessor-specific software development throughout the whole cycle, from writing code through software testing, software/hardware integration, and implementation.

HP product-line positioning

Individually, each of the AxCASE tools for embedded processor design are effective tools, but the major advantage is that they are all part of an integrated, comprehensive tool set.

Assemblers support the manufacturers' syntaxes and industry-standard output file formats, making it easy to move existing code into the HP development environment. The compilers perform both global and peephole to assure that efficient code is generated.

The HP Branch Validator for AxLS C allows designers to set up and run test suites that generate metrics on execution, or omission, of program branches.

Emulators open a window on code executing on the target processor, with or without the final product hardware. From the initial checks on code segments to the final integration of hardware and software, the emulator offers features such as single-stepping by source line, symbol information in memory and trace displays, and displays of typed data. Emulator interfaces for the Apollo workstations support the HP 64700 series emulators for the 68000 and 80186/C186/188/C188 processors.

continued on next page

Ordering information

Product No.	Description
B1420A	68000 family AxLS C compiler Opt. OAN Single-user license Opt. OAT Multiple-user license
B1421A	Media and manuals Opt. AAO Media on 1/4-inch tape
B1422A	68000 family AxLS assembler/linker Opt. OAN Single-user license Opt. OAT Multiple-user license
B1423A	Media and manuals Opt. AAO Media on 1/2-inch tape
B1450A*	12-MHz 68000 emulator interface (PIN 64742) Opt. AAO Media on 1/2-inch tape
B1451A*	12-MHz 68000 emulator interface (P/N 64743) Opt. AAO Media on 1/2-inch tape
B1426A	8086 family AxLS C compiler Opt. OAN Single-user license Opt. OAT Multiple-user license
B1427A	Media and manuals Opt. AAO Media on 1/2-inch tape
B1428A	8086 family AxLS assembler/linker Opt. OAN Single-user license Opt. OAT Multiple-user license
B1429A	Media and manuals Opt. AAO Media on 1/2-inch tape
B1452A*	80186 emulator interface (PIN 64764A) Opt. AAO Media on 1/2-inch tape
B1453A*	80C186 emulator interface (PIN 64764C/D) Opt. AAO Media on 1/4-inch tape
B1454A*	80188 emulator interface (PIN 64765A) Opt. AAO Media on 1/2-inch tape
B1455A*	80C188 emulator interface (PIN 64765D) Opt. AAO Media on 1/2-inch tape
B1456.4	Operating environment software (PIN 64801) Opt. OAN Single-user license Opt. OAT Multiple-user license
B1457A	Media and manuals Opt. AAO Media on 1/4-in. tape
B1458A	HP Branch Validator for AxLS C Opt. OAN Single-user license Opt. OAD 5-user license Opt. OA9 10-user license
B1459A	Media and manuals Opt. AAO Media on 1/2-inch tape

*Operating Environment Software (P/Ns B1456A/57A) is required for the emulator interface products (P/Ns B1450A/51A/52A/53A/54A/55A).

For more information and for a copy of the data sheet entitled, "Cross development on Apollo workstations" (PIN 5953-2724), contact your HP representative.

Apollo

Knowledge Broker introduces on-line documentation set

The Apollo Manual Subscription Service for Domain/OS (PIN LBD50 BLD) is a set of approximately 30 on-line manuals retrieved and viewed with a combination of a Knowledge Broker (KB) Reader and TPS 4.0 VDM (vendor display module). The documentation set is targeted toward Domain/OS users and prospects who require on-line manuals.

Features and benefits

The first release of the Manual Subscription Service will contain (at least) the following manuals:

- Pascal Reference
- Modula-2 Reference
- C++ Programmer's Guide
- Open Dialogue Reference
- Creating User Interfaces with Open Dialogue
- Programming with GPR
- TML Reference
- Programming with TML
- Network Computing System (NCS) Reference
- Managing NCS Software
- BSD Programmer's Reference
- SysV Programmer's Reference
- Aegis Programmer's Reference
- Getting Started with Domain/OS
- BSD Command Reference
- SysV Command Reference
- Aegis Command Reference
- Display Manager Reference

- Installing Domain/OS Software with RAI
- Managing Aegis System Software
- Domain/PCI Installation and Administration
- Planning Apollo Networks and Internets
- Managing Routing and Domain Internet
- Configuring and Managing TCP/IP
- Manuals expected for January/February release:
- DSEE manual set

The Knowledge Broker Reader and TPS 4.0 VDM used to retrieve and view the Manual Subscription Set are the standard KB modules, and can be used for retrieval and viewing of end-user authored (in TPS 4.0) documentation. The KB Publisher module is required to create the on-line document database.

After purchase of the On-line Documentation Set, a monthly subscription service is available to routinely receive manuals' updates and new on-line manuals on a quarterly basis. For more information, contact your HP representative.

Apollo

CPU upgrade for Apollo Series 10000

The CPU upgrade (PIN A1976A) for Apollo Series 10000 workstations upgrading to the Series 10000TX includes a CPU board upgrade, 36-MHz RISC-based processor, double dhrystone performance, binary code and data compatible with current Series 10000, and credit for return of the old CPU. The upgrade is targeted towards all current Series 10000 users.

- **Upgrade path** — Current Series 10000 users need only to swap CPU boards. All existing hardware and software is compatible with the new CPU.

■ *Software compatibility*— Domain/OS 10.3/SAUI0 required, PSK, all applications will run without modification.

Hardware compatibility — All sub-systems are fully compatible, including all configurations for disk, memory, graphics, and networks.

■ *Installation* — User is required to install O/S and PSK, HP customer service will install CPU and boot prom.

Contact your HP representative for more information.

HP-UX

Language product/option update

Prices for the following compiler products and upgrade products were changed October 1 to be more consistent with HP 9000 Series 3001400 pricing. Through October 31, users can order these products at the current prices. Also during October, return credits for the E/F FORTRAN and Pascal will be removed from the HP Price List for the HP 9000 Series 800 FORTRAN and Pascal products.

For more information, contact your HP representative.

Product No.	Opt.	Description
30674A		Development Pack
30675A		Development Pack
	0C6	Upgrade credit for 30674A
	0C7	Upgrade credit for 92626A
30676A	0C6	Upgrade credit for 30674A
	0C7	Upgrade credit for 92626A
	0C8	Upgrade credit for 30675A
30677A		FORTRAN 77/HP-UX compiler
30678A		FORTRAN 77/HP-UX compiler
	0C6	Upgrade credit for 30677A
	0C7	Upgrade credit for 92627A
30679A	0C6	Upgrade credit for 30677A

Product No.	Opt.	Description
	0C7	Upgrade credit for 92627A
	0C8	Upgrade credit for 30678A
92430A	0C1	Return credit for A600 FORTRAN 77
	0C2	Return credit for A700 FORTRAN 77
	0C3	Return credit for A900 FORTRAN 77
	0C6	Upgrade credit for 30677A
	0C7	Upgrade credit for 92627A
	0C8	Upgrade credit for 30678A
92431A	0C1	Return credit for A600 Pascal
	0C2	Return credit for A700 Pascal
	0C3	Return credit for A900 Pascal
92438A	0C6	Upgrade credit for 30674A
	0C7	Upgrade credit for 92626A
	0C8	Upgrade credit for 30675A
92443A	0C1	Return credit for A600 FORTRAN 77
	0C2	Return credit for A700 FORTRAN 77
	0C3	Return credit for A900 FORTRAN 77
	0C6	Upgrade credit for 30677A
	0C7	Upgrade credit for 92627A
	0C8	Upgrade credit for 30678A
92444A	0C1	Return credit for A600 Pascal
	0C2	Return credit for A700 Pascal
	0C3	Return credit for A900 Pascal
92447A	0C6	Upgrade credit for 30674A
	0C7	Upgrade credit for 92626A
	0C8	Upgrade credit for 30675A
92461A	0C1	Return credit for A600 FORTRAN 77
	0C2	Return credit for A700 FORTRAN 77
	0C3	Return credit for A900 FORTRAN 77
	0C6	Upgrade credit for 30677A
	0C7	Upgrade credit for 92627A
	0C8	Upgrade credit for 30678A
92462A	0C1	Return credit for A600 Pascal
	0C2	Return credit for A700 Pascal
	0C3	Return credit for A900 Pascal

Product No.	Opt.	Description
92465A	0C6	Upgrade credit for 30674A
	0C7	Upgrade credit for 92626A
	0C8	Upgrade credit for 30675A
92626A		Development Pack
	0C6	Upgrade credit for 30674A
92627A		FORTRAN 77/HP-UX compiler
	0C6	Upgrade credit for 30677A
<i>Obsolescence</i>		
92430A	0C0	Return credit for EIF FORTRAN 77
92430A	0C4	Return credit for E/F FORTRAN 4X
92431A	0C0	Return credit for EIF HP Pascal
92443A	0C0	Return credit for EIF FORTRAN 77
92443A	0C4	Return credit for EIF FORTRAN 4X
92444A	0C0	Return credit for EIF HP Pascal
92461A	0C4	Return credit for EIF FORTRAN 4X

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Personal Computers

General

HP NewWave 3.0—above and beyond Windows 3.0



HP NewWave 3.0 (P/Ns D1704B and D1706B) is an easy-to-use, intuitive, graphical software environment that integrates users' PC applications and automates their work. HP NewWave builds on industry-standard MS-DOS[™] and Microsoft[®] Windows. HP NewWave's open architecture makes it possible to combine off-the-shelf applications to build fully integrated networked solutions.

NewWave is a key component of HP's NewWave Computing and NewWave Office strategies. NewWave is the user environment that offers the industry's best solution for integrating PC applications and gives users transparent access into corporate information systems.

Features and benefits

- **Easy to learn and use** — A consistent desktop metaphor that shields users from DOS; computer-based training and on-line help make HP NewWave truly easy to learn and use.
- **Integration** — With its object management technology, HP NewWave allows users to link and combine information such as text, numerical data, and graphics from multiple applications.

- **Task automation** — With the HP NewWave Agent, HP NewWave can automatically record the user's work across applications and perform tasks at any time and date. The NewWave Agent can even prompt for information along the way.
- **Group productivity** — HP NewWave includes Object Storage which lets work groups easily share information across a network.

What's new in this version of HP NewWave?

- **Windows 3.0 support** — HP NewWave 3.0 takes advantage of the improvements to Microsoft Windows, including support for all 286 and 386 modes.
 - **Better memory management** — HP NewWave now requires only 2 Mbytes of extended memory (see the minimum system requirements for more information).
 - **Guided tour** — The new Guided Tour Tutorial gives users an overview of the entire NewWave system.
- Object storage** — With Object Storage, users can share objects with coworkers on a network. Object Storage works with any LAN where a server is considered as another MS-DOS disk drive.

- **HP NewWave Agent** — The HP NewWave Agent allows users to automate the work done across all their software applications. The NewWave Agent can record work as it's performed. The user can then schedule playback at any time and date specified. In addition, HP NewWave Agent tasks can be edited to include new steps, change information, and even interact with the user to prompt for more information.

Questions and answers

How does NewWave compare with Microsoft Windows?

HP NewWave is an extension to the Microsoft Windows Graphical User Interface (GUI). NewWave adds the following enhancements:

- **Usability** — HP NewWave Office Desktop Metaphor shields users from DOS.
- **Instant Integration** — HP NewWave Object Management integrates applications in a single step.
- **Task Automation** — HP NewWave Agent intelligently automates work across all applications.
- **Group Productivity** — Network Object Storage allows groups to easily share information across a network.

Will NewWave 3.0 work with earlier versions of Windows, such as version 2.11?

No. Windows 3.0 has a different memory manager than version 2.11. Since NewWave 3.0 utilizes this new memory manager, it is not backwards compatible with Windows 2.11.

Can existing DOS and Windows applications be used in NewWave?

Yes. Almost all existing DOS and Windows applications can be "bridged" into the NewWave environment. NewWave includes a Bridge Disk and Bridge Builder to encapsulate these applications. While bridges protect your current investment, the full power of HP NewWave is realized with applications written to take full advantage of the NewWave environment.

Minimum system requirements

- PC — HP, IBM, or Compaq 80286- or 80386-based PC or 100% compatible
- **Memory** — 80286 standard, 80386 enhanced mode: 640-Kbyte base, 2 Mbytes extended memory. 80286, 80386 real mode: 640-Kbyte base (256-Kbyte base plus 384-Kbyte back-fill), 3 Mbytes expanded memory (EMS 4.0)

- Floppy disk — 1.2-Mbyte 5¼-inch disk drive, or 720-Kbyte 3½-inch disk drive
- Hard disk — 40-Mbyte hard disk recommended
- Display — Microsoft Windows-supported display (EGA or VGA monitor and card)
- System — MS-DOS 3.2 or higher, MS Windows 3.0
- Input — Microsoft Windows-supported mouse, keyboard
- Output — Optional: Microsoft Windows-supported printers, plotters, etc.

Ordering information

Product No.	Description
DI704B	NewWave 3.0 end user (must order language and media options)
Opt. ABA, AA8	English version, 3%-inch disks
Opt. ABA, AA9	English version, 5¼-inch disks
DI706B, Opt. ABA	English NewWave 3.0 single-user license
DI730B, Opt. ABA	English NewWave technical reference set
DI731A, Opt. ABA	English NewWave 3.0 site license upgrade

(Opt. ABA = US. English, AA8 = 3%-inch disks, AA9 = 5%-inch disks)

Contact your HP representative for more information and for copies of the literature and video listed below.

- NewWave data sheet (PIN 5952-1565)
- NewWave flier (PIN 5952-3231)
- NewWave applications catalog (PIN 5952-1691)
- Above and Beyond Windows 3.0 video (PIN 900161)

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General

Industry leaders back HP NewWave

- **WordPerfect for HP NewWave** — On August 27, 1990, WordPerfect Corporation announced that it will support the HP NewWave environment by making WordPerfect NewWave Aware. WordPerfect extensions for NewWave will include hot-links, visual views, and task automation.

Now developers who want their applications to integrate with WordPerfect and other industry-leading software packages simply have to write a NewWave application. And when customers buy a copy of WordPerfect for Windows, the NewWave capabilities will be in the same box.

WordPerfect plans to demonstrate WordPerfect for NewWave in HP's booth at Fall Comdex.

- **HP NewWave and Novell Networks: making it easy to communicate** — Novell has committed to supporting the HP NewWave environment through a strong marketing and development relationship. Novell is excited about the ease-of-use benefits HP NewWave brings to Novell customers, so throughout the last quarter of 1990, Novell will be promoting NewWave as a window to its LAN capabilities.

Novell is HP's partner in the upcoming LAN Solutions Tour with the theme of HP and Novell working together. On this tour of the top 12 to 15 cities in North America, HP and Novell will be presenting LAN solutions to large groups of Novell and HP customers and dealers. Novell also plans to show NewWave in its booth at Fall Comdex, and as the front-end to its networks in its corporate demo center and in its sales offices.

Novell has already started mailing information to its sales force about the benefits of NewWave, and plans to do follow-up mailings on how Novell can support HP's NewWave Office offering. In addition, HP and Novell are working together to determine how

NetWare can take advantage of NewWave capabilities for maximum benefits to Novell customers.

- **The world's most popular spreadsheet supports HP NewWave** — Over 10 million people in 65 different countries rely on the power and performance of Lotus 1-2-3. Now with HP NewWave support, 1-2-3 release 2.2 users can easily share and integrate spreadsheets with other applications and automate jobs that include 1-2-3, from simple tasks to complex, multiapplication projects.

NewWave enables 1-2-3 users to view their spreadsheets in a window, side-by-side with other application windows. Lotus 1-2-3 spreadsheets can easily be "hotlinked" with NewWave documents and edited directly from within them just by pointing and clicking the mouse. When the user edits the spreadsheet, changes are instantly reflected everywhere the spreadsheet is linked.

Beyond these capabilities, the combination of 1-2-3's macro language, and Lotus Learn, the HP NewWave Agent makes it easy to automate complex, repetitive tasks — with the click of a mouse.

The support of major developers such as WordPerfect, Lotus, and Novell indicates the growing momentum for HP NewWave. There are currently 126 registered NewWave developers. Of these, 26 have announced ship dates for their NewWave applications. Contact your HP representative for more information.

Lotus and 1-2-3 are US. registered trademarks of Lotus Corporation.



General

Graphics Gallery 3.0 takes advantage of HP NewWave 3.0

Graphics Gallery 3.0 (The Gallery Collection, PIN D1711A; Charting Gallery, PIN D1710A; Drawing Gallery, PIN D1709A) is a presentation graphics software with full-featured drawing and charting capabilities. It is targeted toward PC users desiring high-quality business graphics.

NewWave 3.0 provides Graphics Gallery 3.0 users with additional benefits. Graphics Gallery can "hot-link" and "share" data with other NewWave applications. If users share a Drawing Gallery object with other NewWave applications and later change the drawing, any changes are automatically and instantly reflected in all documents. Graphics Gallery objects can be "dragged and dropped" into a NewWave word-processing document for instant integration or onto the printer icon for automatic printing. Gallery objects can be edited from within other documents by double-clicking on the displayed drawing or chart. In addition, Graphics Gallery benefits from the improved memory management under NewWave 3.0.

Contact your HP representative for more information.

Desktop

HP Vectra 386/25 Models 170-3 and 170-5 PC bundles

The Models 170-3 and 170-5 bundles for the HP Vectra 386125 PC, announced in the July issue of *HP Channels*, were on the October 1 HP Price List for Europe, and will be on the November list for the rest of the world.

In addition, users wishing to build up their own configuration from the Model 1 (no hard disk) can do so. Effective October 1, the following three new hard disk drives will be supported as accessories on the HP Vectra 386125 PC:

- 120-Mbyte embedded-AT drive (PIN D1679A)
- 168-Mbyte embedded-AT drive (PIN D1680A)
- 336-Mbyte embedded-AT hard disk pair (PIN D1688A)

See the articles "New 120- and 168-Mbyte hard disk drives" and

"New 336-Mbyte hard disk pair for HP Vectra 386125 PC" in this issue of *HP Channels* for more detailed information.

These three disk subsystems provide the HP Vectra 386125 PC with the best combination of performance and expandability currently found on an HP desktop PC. The HP Vectra 386125 PC now offers all features to make it an excellent choice for high-end office power users, midrange PC-CAD, and entry-level multiuser hosts and LAN servers. The Model 170 bundles are the top-capacity bundles within the HP Vectra 386125 PC family, currently HP's most powerful desktop PC (see July article). They come in either a 3½- or 5¼-inch flexible disk configuration, with a 168-Mbyte embedded-AT controller hard disk drive. This drive offers an average seek time <16-ms, and a transfer rate in the 10-13 Mbits/seconds range.

HP Vectra 386125 PC configurations

Product No.	Description	Hard disk	Disk controller
D2371A	HP Vectra 386125 Model 1-3 PC, 3%-inch flexible disk	none	none
D2360A	HP Vectra 386125 Model 1-5 PC, 5%-inch flexible disk	none	none
D2361A	HP Vectra 386/25 Model 80-3 PC, 3%-inch flexible disk	84 Mbytes	Embedded-AT
D2362A	HP Vectra 386125 Model 170-3 PC, 3%-inch flexible disk	168 Mbytes	Embedded-AT
D2363A	HP Vectra 386/25 Model 80-5 PC, 5¼-inch flexible disk	84 Mbytes	Embedded-AT
D2364A	HP Vectra 386125 Model 170-5 PC, 5¼-inch flexible disk	168 Mbytes	Embedded-AT

Desktop

New 336-Mbyte hard disk pair for HP Vectra 386/25 PC

The new 336-Mbyte hard disk pair (PIN D1688A) is designed specifically for HP Vectra 386125 PC users who need a good-performance, high-capacity mass storage subsystem. This hard disk accessory consists of a pair of 168-Mbyte 3½-inch embedded-AT hard disks mounted on a single drive tray. Like all hard disks for the HP Vectra 386125 PC, the 336-Mbyte hard disk pair connects to the AT-multifunction card included with every system.

From the perspective of the HP Vectra 386125 PC, this product is identical to a dual-drive configuration, except that it occupies only one drive bay. The key advantage is that users can now have a tape backup, CD-ROM, or a second

floppy drive in the HP Vectra 386125 PC for a total of four mass storage accessories — all on three shelves.

These configurations are ideal for PC-CAD users and entry-level LAN servers. Like the 168-Mbyte drive (PIN D1680A), the 336-Mbyte drive pair has an average seek time of <16 milliseconds and a disk transfer rate of 10–13 Mbts/second. Shown below are sample configurations.

Since the 336-Mbyte disk pair is a dual-drive configuration, a "third" hard disk drive on shelf B is not supported due to fundamental AT-compatible BIOS limitations. Contact your HP representative for more information.

Sample configurations

HP Vectra 386/25 PC	High-office	PC-CAD	LAN server
Shelf A	1.44-Mbyte 3½-inch floppy	1.44-Mbyte 3½-inch floppy	1.44-Mbyte 3½-inch floppy
Shelf B	1.2-Mbyte 5¼-inch floppy	CD-ROM	Tape backup
Shelf C	336-Mbyte disk pair	336-Mbyte disk pair	336-Mbyte disk pair

Desktop

HP Vectra PC Accessory Catalog

The revised HP Vectra PC Accessory Catalog (PIN 5952-0772) is a 16-page, 4-color publication that describes the supplies and accessories available for HP Vectra PCs. Featured products range from flexible disks and data cartridges to extended memory, mice, and furniture. Updates include 120-Mbyte data cartridges, NewWave and PrintCache software, and memory products compatible with HP Vectra 286112, 386125, and 486 PCs.

The catalog is included in-box with all HP Vectra PCs. It is targeted toward technical evaluators, functional managers, and end users. If you do not have a copy of the catalog and would like one, contact your HP representative.

Desktop

Cost savings on HP Vectra PCs

Prices of all HP Vectra 486, QS/20, and most of RS/25C PC models have been reduced by as much as 24% (U.S. list). The new prices position HP Vectra PCs very favorably against products from Compaq, IBM, and other vendors. The new prices became effective September 1, 1990.

Product No.	Description
D2220A	HP Vectra 486 Model 1
D2221A	HP Vectra 486 Model 150
D2222A	HP Vectra 486 Model 330
D2223A	HP Vectra 486 Model 670
D2021A	HP Vectra RS/25C Model 10e
D2022A	HP Vectra RS/25C Model 100e
D2024A	HP Vectra RS/25C Model 154e
D2025A	HP Vectra RS/25C Model 304e
D1421B	HP Vectra QS/20 Model 1 PC, 3%-inch flexible disk
D1491B	HP Vectra QS/20 Model 1 PC, 5%-inch flexible disk
D1422B	HP Vectra QSRO Model 46 PC, 5¼-inch flexible disk
D1424B	HP Vectra QS/20 Model 47 PC, 3%-inch flexible disk
D1498B	HP Vectra QS/20 Model 86 PC, 5%-inch flexible disk
D1499B	HP Vectra QS/20 Model 87 PC, 3%-inch flexible disk
D1660A	ESD1 330-Mbyte disk drive
D1661A	ESD1 670-Mbyte disk drive

Over the last two months, Hewlett-Packard has repriced the entire HP Vectra PC product line. For easy reference, below is a complete list of the HP Vectra PC family.

Product No.	Description
D2467A	HP Vectra 286112 Model 1 PC, 3%-inch flexible disk
D2460A	HP Vectra 286112 Model 1 PC, 5¼-inch flexible disk
D2462A	HP Vectra 286112 Model 20 PC, 3%-inch flexible disk
D2461A	HP Vectra 286112 Model 20 PC, 5%-inch flexible disk
D2464A	HP Vectra 286112 Model 40 PC, 3%-inch flexible disk

Product No.	Description
D2463A	HP Vectra 286112 Model 40 PC, 5%-inch flexible disk
D1461B	HP Vectra QS/16S Model 1 PC, 3%-inch flexible disk
D1481B	HP Vectra QS/16S Model 1 PC, 5%-inch flexible disk
D1462B	HP Vectra QS/16S Model 46 PC, 5%-inch flexible disk
D1464B	HP Vectra QS/16S Model 47 PC, 3%-inch flexible disk
D1488B	HP Vectra QS/16S Model 86 PC, 5%-inch flexible disk
D1489B	HP Vectra QS/16S Model 87 PC, 3%-inch flexible disk
D1421B	HP Vectra QS/20 Model 1 PC, 3%-inch flexible disk
D1491B	HP Vectra QS/20 Model 1 PC, 5¼-inch flexible disk
D1422B	HP Vectra QS/20 Model 46 PC, 5%-inch flexible disk
D1424B	HP Vectra QS/20 Model 47 PC, 3%-inch flexible disk
D1498B	HP Vectra QS/20 Model 86 PC, 5%-inch flexible disk
D1499B	HP Vectra QS/20 Model 87 PC, 3%-inch flexible disk
D2360A	HP Vectra 386125 Model 1 PC, 5%-inch flexible disk
D2371A	HP Vectra 386125 Model 1 PC, 3%-inch flexible disk
D2363A	HP Vectra 386125 Model 80 PC, 5%-inch flexible disk
D2361A	HP Vectra 386125 Model 80 PC, 3%-inch flexible disk
D2021A	HP Vectra RS/25C Model 10e PC, 5%-inch flexible disk
D2022A	HP Vectra RS/25C Model 100e PC, 5%-inch flexible disk
D2024A	HP Vectra RS/25C Model 154e PC, 5%-inch flexible disk
D2025A	HP Vectra RS/25C Model 304e PC, 5¼-inch flexible disk
D2220A	HP Vectra 486125 Model 1 PC, 5%-inch flexible disk
D2221A	HP Vectra 486125 Model 150 PC, 5%-inch flexible disk
D2222A	HP Vectra 486125 Model 330 PC, 5%-inch flexible disk
D2223A	HP Vectra 486/25 Model 670 PC, 5%-inch flexible disk

Desktop

HP Vectra ES/12 PC and accessory discontinuance dates change

The discontinuance date for the HP Vectra ES/12 and some of its accessories has been changed from what was communicated in the July 1990, issue of *HP Channels*. The following is a summary of all the updated discontinuance dates for all HP Vectra ES/12 PCs and related accessories.

PC products scheduled for November 1, 1990, discontinuance

Product No.	Description
D1310A	HP Vectra ES/12 Model 10 PC
D1326A	HP Vectra ES/12 Model 26 PC
D1327A	HP Vectra ES/12 Model 27 PC
D1346B	HP Vectra ES/12 Model 46 PC
D1347B	HP Vectra ES/12 Model 47 PC
D1312A	HP Vectra ES/12 Model 26 SPU
D1313A	HP Vectra ES/12 Model 27 SPU
D1314B	HP Vectra ES/12 Model 46 SPU
D1316B	HP Vectra ES/12 Model 47 SPU

Accessories

C1406A	Envoy keyboard (old keyboard layout)
45973A	½-Mbyte extended memory card
45974A	1-Mbyte extended memory card

PC products scheduled for November 1, 1990, discontinuance

Product No.	Description
45945C	HP Vectra ES/12 Model 10 SPU
<i>Accessories</i>	
D1387A	8-MHz 80287 coprocessor for ES and ES/12
D1335AH	HP Vectra ES to ES/12 PC upgrade kit
D1351C	HP Vectra ES and ES/12 PC kit (all language options)

PC product scheduled for January 1, 1990, discontinuance

Product No.	Description
45944A Opt. 001	Expanded memory board for HP Vectra ES and ES/12 PC

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Peripherals

Mass Storage

Introducing HP Series 6400 Model 1300H DDS-format tape subsystem

The HP Series 6400 Model 1300H DDS-format tape subsystem (PIN C1590A) is a new high-capacity solution for 900 Series HP 3000 MPE XL system users. The subsystem comprises between two and four HP Series 6400 Model 1300H DDS-format tape drives in a cabinet complete with accessories. When the tape drives are combined with the new TurboSTOREIXL II software, this product can provide up to 18 Gbytes of unattended backup (dependent on the type of system and type of data to be stored).

A neat and tidy solution

The HP DDS-format tape subsystem is a good solution for data centers. The tape drives are stacked in a single cabinet creating a convenient and space-efficient backup device.

These features, together with high capacity, low cost, compact media, and fast file access of the DDS-format tape drive makes it a good solution for 900 Series HP 3000 MPE XL systems.

High capacity, unattended backup solution with TurboSTORE XL/II

The TurboSTOREIXL II software enables users to store up to 5.4 Gbytes of data on a single DDS-cassette with a data transfer rate potential of over 2 Gbytes per hour.

TurboSTOREIXL II gives users a powerful and flexible data backup solution. It uses software data compression which compresses the data before it is sent to the DDS-format tape drive. The choice of two data compression algorithms gives users the flexibility to choose between high or fast density data compression to limit CPU impact on applications.

By supporting multiple device store and restore, all four DDS-format tape drives can run in parallel. Therefore, data can be streamed to multiple devices at the same time.

For environments that require 24-hour a day system availability, TurboSTOREIXL II has an optional feature of on-line backup.

Easy to order and install

By combining the DDS-format tape drives, cabinet, rackmount kits, filler panels, cabling, and cassettes under one product number, the DDS-format tape subsystem is easy to order. All users need to do is place a separate order for the TurboSTOREIXL II software.

All components of the DDS-format subsystem are user installable.

Product No.	Description
C1590A	Four C1511A DDS-format tape drives with cabinet, accessories, and cables (delete options available)
36387A	Base TurboSTOREIXL II functionality including software data compression multiple device store and restore, support for DDS-format tape drives
36388A	TurboSTORE/XL II functionality as above plus on-line data backup

Note: The DDS-format tape subsystem is not preassembled.

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Contact your HP representative for more information and to get copies of the following literature:

- HP Series 6400 Model I300H/S product brief, PIN 5954-1963
- HP Series 6400 Model I300H DDS-format subsystem, PIN 5954-1966
- TurboSTOREIXL II data sheet, PIN 5952-1038

Mass Storage

Introducing SCSI host adapter for 900 Series HP 3000 MPE XL systems

The SCSI host adapter (PIN 27251A) is HP's industry-standard I/O interface supported on 900 Series HP 3000 MPE XL systems and the only interface supporting the HP rewritable optical disk library (PIN C1700A). The adapter is targeted towards 900 Series HP 3000 CIO-based system users connecting to the HP optical disk library and includes an SCSI card, two-meter cable, bus terminator, and manual.

Features and benefits

- industry-standard interface
- fully ANSI SCSI-2 compliant
- supports SCSI common command and message set
- supports asynchronous and synchronous data transfers
- up to six meters connectivity distance
- 5 Mbytes/sec burst transfer rate capability
- 16-bit DMA backplane transfers
- single-ended line transceivers

Contact your HP representative for more information.

Mass Storage

Optical storage for 900 Series HP 3000 and HP 9000 Series 800 systems

HP's family of optical products has just expanded to include a rackmount library system. This configuration joins the desk-side library system and the standalone optical drive subsystem that were introduced in 1989. Support for the entire direct access secondary storage (DASS) family has grown to include 900 Series HP 3000 and HP 9000 Series 800 systems. These DASS products are targeted towards users needing low-cost, high-capacity storage and unattended backup operation.

The HP Series 6300 Model 20GB/A desk-side configuration (PIN C1700A Opt. IAB) offers 20.8 Gbytes of direct-access storage. The one-meter rack configuration (Opt. IAC) enables storage expansion to 41.6 Gbytes with a second library system in the same cabinet. Each system includes 2 drives and 32 optical disks that are automatically loaded by an autochanger. Average disk access time is 100 msec, with an average media exchange time of 10 seconds.

Optical disks provide reliable, removable, long-term storage. Automated optical disk libraries provide online access to vast amounts of information at a fraction of the hard disk cost (optical media is only \$.38/Mbyte).

HP product-line positioning

The HP Optical Disk Library Systems (PIN C1700A) are now supported on 900 Series HP 3000 systems in conjunction with the TurboSTOREIXL II backup software (P/Ns 36397A or 36398A). (See June 1990 issue of *HP Channels*.) With the 2x data compression (standard on TurboSTOREIXL II), each optical library can provide over 35 Gbytes of unattended backup capacity at up to 2.8 Gbytes/hour backup rate. Data recovery is much faster because the read performance of the optical is twice that of write. The performance can be doubled to approxi-

mately 5.5 Gbytes/hour and over 70-Gbyte capacity with the addition of a second autochanger.

With the addition of online backup feature to TurboSTOREIXL II, users can not only have true unattended backup and fast restore capability no matter how large a system, they can do this online.

HP 9000 Series 800 HP-UX 8.0

HP 9000 Series 800 users can also take advantage of the rewritable optical technology for automating their backups and bringing more archive information online.

On HP 9000 systems, HP optical products can be accessed as standard Winchester devices. Each media surface is configured as a 325-Mbyte mountable file system. The autochanger/driver automatically loads the appropriate media cartridge to provide transparent file access.

Optical technology on the HP 9000 is ideal for online archive, unattended backup, and electronic image management. Future software enhancements, such as HP Omniback, will provide fast HP-UX backup with speeds of up to 5 Gbytes/hour in certain configurations; HP AIMS software will provide effective electronic image management capability.

HP 9000 Series 800 HP-UX 7.0

For users who cannot wait for HP-UX 8.0, HP is providing a CIO-based SCSI adapter card and a driver for qualified accounts under HP-UX 7.0. It supports the same optical disk and library system products as will the HP-UX 8.0 solution with certain configuration restrictions. Users will be required to upgrade from HP-UX 7.0 when HP-UX 8.0 is available.

Ordering information

Product No.	Description
C1700A	20.8-Gbyte rewritable optical disk library system, on-site installation included
Opt. IAB	In a deskside cabinet
Opt. IAC	In a 1-meter (19-inch) rack cabinet
Opt. 133	Delete rack
Opt. 231	Delete 31 optical disks
C1701A	Standalone optical disk drive subsystem (with one 650-Mbyte rewritable optical disk)
27251A	CIO SCSI host adapter for XL
36397A	TurboSTORE/XL
36398A	TurboSTORE/XL II with online backup
27147A	HP-UX 8.0 CIO SCSI host adapter card
93302M	CIO SCSI host adapter card
93302MD	HP-UX 7.0 SCSI device driver

Contact your HP representative for a copy of the HP Series 6300 Model 20GB/A product brief (PIN 5952-0328) and for more information.

Mass Storage

Support tape in DDS format on all 900 Series HP 3000 systems

Effective October 1, a new option (Option AAH) will be available on midrange and high-end products that will enable users to receive their diagnostic support tape on DDS media instead of M-inch magnetic tape media.

Users receive a free diagnostic support tape with each system they buy (not with field upgrades). In the past, everyone received the tape on 1/2-inch magnetic tape media. The exception has been the Series 920-932 systems, which have always shipped the support tape on DDS media. New products such as TurboSTORE II/XL have made DDS a more attractive solution for midrange and high-end users. The new Option AAH simply enables us to ship the support tape on the appropriate media for users who have a DDS device instead of a 1/2-inch magnetic tape device.

Option AAH has no charge. It will be available on the following products:

Product No.	Description
A1007A/AH	HP 3000 Series 925
A1060A/AH	HP 3000 Series 935
A1109A/AH	HP 3000 Series 955
A1130A	HP 3000 Series 960
A1134A	HP 3000 Series 9801100
A1149A	HP 3000 Series 9801200
A1600A	HP 3000 Series 949

Contact your HP representative for more information.

Mass Storage

New mass storage systems for HP Apollo 9000 Series 400 workstations running Domain O/S

The HP Series 6000 Model 330D (PIN C2212D) is a 332-Mbyte SCSI disk drive in an expandable compact package. This product offers options to add more disk drives and a rewritable optical drive. A QIC 60-Mbyte cartridge tape drive, a 1.3-Gbyte DDS-format digital audio tape (DAT) drive, and a 600-Mbyte CD-ROM drive will be offered at a later date.

The HP Series 6000 Model 330D is targeted towards HP Apollo 9000 Series 400 workstations with SCSI interface running Domain O/S. The high-performance disk drive has been tuned for Domain O/S and is especially suited for high-performance standalone workstations and servers.

The HP Series 6000 Model 660D (PIN C2213D) is a 664-Mbyte SCSI disk drive in an expandable, compact package. This product offers options to add more disk drives and a rewritable optical drive. A QIC 60-Mbyte cartridge tape drive, a 1.3-Gbyte DDS-format digital audio tape (DAT) drive, and a 600-Mbyte CD-ROM drive will be offered at a later date.

The HP Series 6000 Model 660D is targeted towards HP Apollo 9000 Series 400 workstations with SCSI interface running Domain O/S. The high-performance disk drive has been tuned for Domain O/S and is especially suited for high-performance standalone workstations and servers.

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Models 330D/660D features and benefits

- **Multimechanism packaging** — Cost savings in lower list price, less cabinet and floor space requirements.
- **Domain O/S "tuned" disk drive** — Higher performance with increased throughput.
- **Preconfigured at the factory, or user-installable upgrade kits available** — Configuration flexibility and ease of installation.
- **Multiple devices available** — Complete mass storage solution from HP, one-vendor solution.
- **SCSI interface** — Industry standard.

HP product-line positioning

This is the first time an HP-designed external disk drive will be offered on HP/Apollo workstations running the Domain operating system. These new products were designed to meet the needs of high-performance HP/Apollo workstation users. With available hard disk drive options for the Models 330D and 660D, capacity of a single box ranges from 332 Mbytes to 2 Gbytes. The Models 330D and 660D are designed with three full-height 5 1/2-inch slots available for mass storage devices. This allows HP/Apollo workstation users to configure their unique mass storage needs all in one box. At introduction, options available for the Models 330D and 660D are disk drives and the 650-Mbyte rewritable optical drives only. Options and upgrade kits to add a QIC 60-Mbyte cartridge tape, a 1.3-Gbyte DDS-format digital audio tape (DAT) drive, and a 600-Mbyte CD-ROM will be available at a later date. Each Model 330D and 660D can be upgraded in the field when the other mass storage mechanisms are available.

By integrating multiple mechanisms into a single system box with a common power supply, cost savings are achieved. Lower cost means lower list prices. The disk firmware has been specifically tuned for Domain 10.3 on Series 400 workstations.

A vertical upgrade kit will also be offered from HP DIRECT. This kit will allow users to place their mass storage system in a desk-side configuration.

Ordering information

User documentation for the HP Series 6000 Models 330D and 660D will be localized for some countries. The documentation will be available in English at introduction; German, French, and Japanese translations will be available at a later date.

Product No.	Description
C2212D	HP Series 6000 Model 330D mass storage system, consists of a 332-Mbyte fixed disk drive in a compact package with upgrade capability
Opt. A01	Adds a 332-Mbyte fixed disk to C2212D
Opt. 005	Adds a rewritable optical drive to C2212D, includes an optical disk cartridge
Opt. W03	Converts 1-year return-to-HP warranty to 90-day on-site warranty
C2213D	HP Series 6000 Model 660D mass storage system consisting of a 664-Mbyte fixed disk drive in a compact package with upgrade capability
Opt. A01	Adds a 332-Mbyte fixed disk to C2213D
Opt. A02	Adds a 664-Mbyte fixed disk to C2213D
Opt. 005	Adds a rewritable optical drive to C2213D, includes an optical disk cartridge
Opt. A22	Adds two 664-Mbyte fixed disks to C2213D
Opt. W03	Converts 1-year return-to-HP warranty to a 90-day on-site warranty
C2290D	Upgrade kit to add a 332-Mbyte fixed disk drive to a Model 330D/660D
C2291D	Upgrade kit to add a 664-Mbyte fixed disk drive to a Model 330D/660D
C2294A	Upgrade kit to add a rewritable optical drive to a Model 330D/660D, includes an optical disk cartridge

Note: All upgrade kits come standard with HP installation included. Each kit has Opt. D02, which will delete HP installation. All upgrade kits come standard with a 1-year return-to-HP warranty, convertible to a 90-day on-site warranty.

For more information, contact your HP representative.

Mass Storage

New 120- and 168-Mbyte hard disk drives

Hewlett-Packard introduced two new 3 1/2-inch embedded-AT hard disk drive accessories for the HP Vectra PC family on October 1, 1990. These new mid-range hard disk drives improve upon today's 108-Mbyte and 152-Mbyte hard disk drives by increasing capacity, availability, reliability, and performance — all at a greatly reduced price.

Product No.	Description
D1679A	120-Mbyte embedded-AT hard disk drive
D1680A	168-Mbyte embedded-AT hard disk drive

These new midrange drives are designed and targeted for the high-office and PC-CAD market segments. The average seek time is < 16 milliseconds and the disk transfer rate is 10-13 Mbits/second.

Supported systems

Both of these new accessories come with a drive tray and rails, as well as a cable to connect to the AT-multifunction card in an HP Vectra PC. In many respects, these new embedded-AT hard disk drives are very similar to the 42- and 84-Mbyte hard disk drives introduced earlier this year.

The 120- and 168-Mbyte hard disk drives will be supported on the HP Vectra QS/16S, QS/20, 386125, and 486 PCs.

Features and benefits

- **Higher capacity** — users get more hard disk capacity. With 120 and 168 Mbytes, users now have ample space to save and quickly access soft fonts, graphic images, files, and libraries generated by environments such as NewWave, MS Windows^B 3.0, OS/2 Presentation Manager, AutoCAD, PageMaker[®], and scanners.
- **Great price** — users get more functionality at a lower price.
- **Reliability** — these new drives improve on the reliability of existing drives by about a factor of 5. Users can expect trouble-free computing with these new drives.

- **Performance** — allows users to quickly access programs, files, and data. These new drives, with <16 millisecond access times and disk transfer rates of 10-13 Mbits/second, pull information into the PC system at a very good speed.
- **Compatibility** — allows the use of existing hardware and software. With the introduction of these drives, HP now has 42-, 84-, 120-, and 168-Mbyte embedded-AT hard disk drives that all use the same AT-multifunction card found on every HP Vectra Model 1 PC. All four of these drives, configured in any combination of pairs, can be supported in a dual-drive system.

Product No.	D1445A	D1679A*	D1446A	D1680A*
Capacity (Mbytes)	108	120	152	168
Disk size (inches)	5¼	3½	5¼	3½
Average seek time (ms)	<17	<16	<17	<16
Disk transfer rate (Mbits/sec)	10	10-13	10	10-13
Controller type	ESDI	Embedded-AT	ESDI	Embedded-AT

*New

MS Windows is a U.S. registered trademark of Microsoft Corporation.

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

Mass Storage

Vertical installation kit available for SCSI disks

Introduced October 1, the new user-installable vertical installation kit (PIN C2299A) allows HP Series 6000 Models 330S/D and 660S/D mass storage systems to be placed in a vertical, deskside configuration. The kit is targeted towards users of the Models 330S and 660S and the new Models 330D and 660D mass storage systems with HP Apollo 9000 Series 400 workstations or in other configurations where Design Plus cabinets are not utilized.

The installation kit will be supplied by HP DIRECT with in-stock availability (see phone ordering numbers in the Supplies section of this issue). Contact your HP representative for more information.

Mass Storage

HP Series 6000 Models 330S and 660S price decrease

Users can now purchase the HP Series 6000 Model 330S (PIN C2212A) and 660S (PIN C2213A) disk drives and their upgrade disks at a lower, more competitive price.

These disk drives are designed to meet the needs of high-performance HP workstation users. With available hard disk drive options for the Models 330S and 660S, capacity of a single box ranges from 332 Mbytes to 2 Gbytes. The Models 330S and 660S are designed with three full-height 5¼-inch slots available for mass storage devices.

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Along with the disk drive mechanisms, other devices available for integration into the Models 330S and 660S are a 1.3-Gbyte digital audio DDS-format tape drive, a 650-Mbyte rewritable optical drive, and a 600-Mbyte CD-ROM drive. These mechanisms will remain at the current price.

HP workstation users can integrate multiple mechanisms in a single box allowing them not only a flexible mass storage device, but cost and space savings by using a common box and power supply. Contact your HP representative for more information.

Ordering information

Product No.	Description
C2212A	HP Series 6000 Model 330S mass storage system, 332-Mbyte fixed disk drive
Opt. 001	332-Mbyte upgrade disk
C2290A	Upgrade kit to add a 332-Mbyte fixed disk drive to a Model 330S/660S
C2213A	HP Series 6000 Model 660S mass storage system, 664-Mbyte fixed disk drive
Opt. 001	332-Mbyte upgrade disk
Opt. 002	664-Mbyte upgrade disk
Opt. 022	Two 664-Mbyte upgrade disks
C2291A	Upgrade kit to add a 664-Mbyte fixed disk drive to a Model 330S/660S

Mass Storage

Selected HP disk drive discontinuance

The HP 7962B and 7963B 152- and 304-Mbyte HP-IB disk drives, the HP 97962B associated 152-Mbyte upgrade kit, and the HP 19560B 19-inch rack-mount kit will all be removed from the November 1, 1990, HP Price List. Each of these products have available

replacement products with better price/performance ratios. Replacement products come in either an HP-IB or SCSI interface. The chart below outlines each of the products and their replacements. Contact your HP representative for more information.

Product No.	Capacity/interface	SCSI	Replacement products HP-IB
7962B	152-Mbyte/HP-IB	HP Series 6000 Models 330S/660S	HP Series 6000 Models 335H, 670H
7963B	304-Mbyte/HP-IB	HP Series 6000 Models 330S/660S	HP Series 6000 Models 335H, 670H
97962B	152-Mbyte/HP-IB	HP Series 6000 Models 330S/660S	HP Series 6000 Models 335H, 670H
19560B	Rack-mount kit	n/a	n/a

Mass Storage

Hard disk drive accessories discontinuance

The 108- and 152-Mbyte half-height 5¼-inch ESDI hard disk drive accessories (P/Ns D1445A and D1446A) for the HP Vectra QS/16S, QS/20, and 486 PCs will be removed from the November HP Price List. Orders will be accepted through November 30, 1990.

Due to the October introduction of the new 120- and 168-Mbyte embedded-AT disk drive accessories (P/Ns D1679A and D1680A), the 108- and 152-Mbyte drives are no longer needed. Users who need these capacity points should migrate to the 120- and 168-Mbyte improved hard disks. These new hard drives provide more capacity, improved reliability, immediate availability, and better performance — all at a lower cost.

Contact your HP representative for more information.

Mass Storage

HP 35401A obsolescence

The HP 35401A ¼-inch cartridge autochanger tape drive will be removed from the HP Price List on November 1, 1990. It will have a support life of 10 years.

The HP Series 6400 Model 1300H and 1300S DDS-format tape drives (P/Ns C1511A, C1512A), which provide 1.3 Gbytes of data storage on a single cassette, are the recommended alternative for users wanting high-capacity tape backup where ¼-inch tape compatibility is not a requirement.

Contact your HP representative for details of system support.

Networks

New networking capabilities make 900 Series HP 3000 even more open

Hewlett-Packard is further enhancing its capabilities for multivendor connectivity on the 900 Series HP 3000 by providing the following features:

- **ARPA services and Ethernet** — for connectivity to HP and non-HP systems
- **New OSI services** — for connectivity into OSI environments
- **SNA Distribution Services** — for electronic mail integration with IBM
- **Novell's NetWare** — for increased support of Novell PC users
- **Network Computing System (NCS)** — for developing distributed applications

Products that provide interoperability allow HP 3000 users to leverage their investment by increasing the ease of sharing information among multivendor systems. In addition, new application programming tools provide a foundation for multivendor application development, giving developers an open system to develop new and portable solutions. This means more solutions will be available on HP 3000 systems.

The 900 Series HP 3000 now provides users many choices to create a multivendor network that provides the greatest leverage of existing business resources.

ARPA Services and Ethernet connectivity

ARPA Services/XL (ARPA/XL) provides de facto industry-standard multivendor networking on the 900 Series HP 3000 over both local and X.25 wide area networks. In addition, the ThinLAN/XL link will be enhanced to support both 802.3 and Ethernet simultaneously. These enhancements are particularly valuable for any user standardizing on ARPA TCP/IP Ethernet protocols for multivendor connectivity.

File Transfer, the first ARPA service, will be available with MPE XL Release 2.2. For additional information, read the article entitled, "ARPA Services enhances multivendor connectivity on 900 Series HP 3000 systems" in this issue of *HP Channels*.

New OSI services

Multivendor connectivity will continue to be enhanced on 900 Series HP 3000 systems. In the next few weeks, HP will be announcing support for FTAM, the OSI file transfer service, and the OSI transport. This means a full native seven-layer implementation of the OSI model on the HP 3000 system, as well as Government OSI Profile (GOSIP) compliance (GOSIP has become a requirement for selling into U.S.

Government accounts).

Electronic mail integration with IBM

HP further strengthens its integration to IBM with HP SNA Distribution Services/XL (SNADSIXL). HP SNADS/XL allows users on HP systems to exchange electronic messages between HP DeskManager and IBM OfficeVision/MVS (DISOSS). This means improved corporate communications. HP SNADSIXL is available with MPE XL Release 2.2. For additional information, read the article entitled, "Electronic mail integration with IBM" in this issue of *HP Channels*.

Increased HP 3000 access for Novell PC users

Today, PC LAN environments are dominated by Microsoft's LAN Manager and Novell's NetWare. To address the large installed base of NetWare PC LANs, HP is enhancing its Novell integration to 900 Series HP 3000 with NetWare/XL. NetWare/XL is based on

Novell's latest and most powerful product, NetWare 386. NetWare for the HP 3000 supports file and print sharing, server administration and management, and applications programmatic interfaces (APIs) including the Sequenced Packet Exchange (SPX) protocol for developing client/server applications. This means a smooth growth path for Novell PC LAN and better data integrity from the HP 3000 server. In addition, Netware/XL will support virtual terminal capability for Novell PC LAN users to access HP 3000 server applications. This means investment protection in both the existing PC LAN and the HP 3000 while providing user access to "mission-critical" resources. For more information, contact your HP representative.

Network Computing System

Network Computing System (NCS) is a set of distributed computing tools that provides true intervendor computing in heterogeneous environments. NCS makes it easy to develop and run applications that use resources throughout the network, better utilizing available computer resources. NCS is a key component of the Distributed Computing Environment for Open Systems Foundation (OSF), as well for HP's NewWave Computing. NCS will be introduced in 1991 but is available now for selected developers. For information on this limited distribution of NCS, contact your HP representative.

ARPA Services enhances multivendor connectivity on 900 Series HP 3000 systems

ARPA Services/XL is a family of products of which HP ARPA File Transfer Protocol (PIN 36957A) is the first to release. Multivendor connectivity on the 900 Series HP 3000 systems has been enhanced with the support of ARPA Services/XL. ARPA/XL provides de facto industry-standard networking services over local area networks (LANs) and X.25 wide area networks (WANs). It is targeted towards users of 900 Series HP 3000 systems requiring multivendor access to manufacturing and engineering applications and is particularly valuable for any user standardizing on ARPA/TCP/IP/Ethernet protocols for multivendor connectivity.

Features

ARPA Services/XL provides file transfer and virtual terminal access. ARPA/XL provides file transfer using the FTP protocol and virtual terminal access (also referred to as remote logon) using the TELNET protocol.

Benefits

Multivendor connectivity protects a user's investment in a diverse computing environment by offering wider access to valuable computing resources and applications. Furthermore, extensive testing and comprehensive support of ARPA Services/XL means reliable interoperability and thus maximum accessibility to resources and applications.

HP product-line positioning

Until now, Network Service has been used to provide connectivity between the HP 3000, HP 9000, and HP 1000 systems. ARPA Services/XL, when completely rolled out, will provide richer connectivity between these systems and, therefore, is recommended.

In multivendor environments where users are standardizing on ARPA TCP/IP, we recommend ARPA Services/XL to integrate HP systems into the network. However, for those users standardizing on OSI, HP's OSI networking services are recommended.

Technical specifications/configuration

HP ARPA File Transfer Protocol (FTP) runs on 900 Series HP 3000 systems and requires the ThinLAN 3000/XL Network Link or DTC/X.25 XL Network Link products. The ThinLAN/XL product has been enhanced to support Ethernet.

The ARPA TELNET service will be implemented in the Datacommunications and Terminal Controller (DTC/3000).

Ordering information

Product No.	Description
36957A	HP ARPA File Transfer Protocol
<i>Processor options (must choose one)</i>	
Opt. 310	For HP 3000 Series 920, 922LX
Opt. 315	For HP 3000 Series 922RX
Opt. 320	For HP 3000 Series 922, 925LX, 925,932
Opt. 330	For HP 3000 Series 935
Opt. 335	For HP 3000 Series 949
Opt. 340	For HP 3000 Series 950, 955, 960
Opt. 350	For HP 3000 Series 980
Opt. OCD	Upgrade credit for Opt. 310
Opt. OGI	Upgrade credit for Opt. 315
Opt. OCE	Upgrade credit for Opt. 320
Opt. OCF	Upgrade credit for Opt. 330
Opt. OGL	Upgrade credit for Opt. 335
Opt. OGM	Upgrade credit for Opt. 340

HP ARPA File Transfer Protocol (FTP) is the first ARPA service to release. It appears on the September 1, 1990, HP Price List and is available for shipment with MPE XL Release 2.2 in October 1990. TELNET will begin to roll out in the second calendar quarter, 1991. Contact your HP representative for more information.

SRM moves to SRM/UX and begins gradual disc

The Shared Resource Manager (SRM) is a proprietary file/printer/plotter server for HP 9000 and HP Vectra PC LANs. The functionality of the SRM server will be available on an HP 9000 Series 3001800 running HP-UX 8.0 in the first quarter of 1991. SRMIUX is an HP-UX emulation of the SRM allowing BASIC and Pascal SRM workstations to transparently access the HP-UX file system. HP 9000 Series 3001800 systems can now be used as a workstation and as an SRM server. SRMIUX supports client connections with either SRM cards (PIN 98629A) or LAN cards (PIN 98643A). SRMIUX not only accesses all HP-UX supported peripherals, but also supports the familiar SRM spooling capabilities to a connected printer or plotter.

SRMIUX enables BASIC and Pascal SRM workstations to do what they do best: real time I/O and data acquisition combined with what HP-UX does best: computation, networked communication, graphics, and data management.

A gradual discontinuance of the following proprietary SRM system components will be implemented in a manner and timing consistent with user needs.

Utilities will be available to help the non-HP-UX SRM system administrator install, configure, and maintain SRMIUX. Please refer to the following article entitled "SRMIUX announcement" that describes the features and use of SRMIUX.

Why and when

More and more of our users are asking for increased sophistication of the standard HP-UX based LAN networks. Network Services, ARPA/Berkeley products, and NFS with its Yellow Pages are just a few of HP's standard LANs offering comprehensive multi-vendor networking.

Using an HP-UX workstation with a daemon emulating the SRM server functionality, SRMIUX provides users with the ability to communicate on these worldwide UNIX system networks. This also enables SRM clients to access a vast array of HP-UX supported peripherals: disk and tape drives, printers, and plotters. The most frequent request we have had from users is to use an HP 9000 Series 300 as an SRM server, just as is implemented in SRMIUX.

The following SRM Series 500 products were discontinued in August 1990: SRM interface (PIN 50961A), coax upgrade (PIN 50961U), and access utilities (PIN 98694A). Users can add an old server (PIN 50960A or Series 200 with PIN 50962A IC) until May 1991 and add new BASIC and Pascal SRM clients with the interface card (IC, PIN 50962A) until January 1992. The rationale for this timing is to give users an overlap period after SRMIUX is released to add clients to existing SRM networks. These SRM networks as standalone systems or mixed with SRMIUX systems will be supported until January of 1997. We recommend that new SRM networks or networks adding a new server use SRMIUX.

All product number options not specifically listed and all support services are included with their parent part numbers. Contact your HP representative for more information.

Product No.	Opt.	Description	Discontinued	End support
50961A		Coax upgrade Series 500	Aug. 1990	Aug. 1995
50961U	500	Coax upgrade Series 500	Aug. 1990	Aug. 1995
97058A		SRM software Series 500	Aug. 1990	Aug. 1995
98694A		Access utilities Series 500	Aug. 1990	Aug. 1995
50960A		Server box	May 1991	May 1996
50961U	200	Coax upgrade Series 2001300	May 1991	May 1996
98619A		SRM OS	May 1991	May 1996
50962A		SRM interface card	Jan. 1992	Jan. 1997
50963A		HP Vectra PC SRM	Jan. 1992	Jan. 1997
98693A		Access utilities Series 2001300	HP-UX 9.0*	5+ years

*The access utilities (AU) for the Series 200/300 will be available until HP-UX 9.0 releases (not orderable in 9.0).

Note: The coax upgrade (CU) will be discontinued on a different schedule based on its system.

Networks

SRM/UX announcement

The Shared Resource Manager on HP-UX (SRMIUX, P/N E2085A) is a replacement for the soon-to-be-obsolete Shared Resource Manager (SRM). See previous article for more details. The SRMIUX is targeted toward existing SRM users and HP BASICWS and Pascal/WS users who need networking.

Features and benefits

SRMIUX allows:

- HP BASICWS or Pascal/WS client connections via LAN or existing SRM interfaces and cables
 - transparent client access to the standard LAN
 - consolidated, consistent system administration on a single HP-UX system
 - test and measurement and other systems to be included within a standard networked computing environment
- the user to preserve investments in wiring, expertise, and software

Technical specifications/configuration information

SRMIUX is the solution many test and measurement and other HP BASICWS and Pascal/WS users have been waiting for to solve their network integration problems. Users will be able to link their standalone systems together using existing SRM cabling to an HP-UX server for easy access to a networked environment. If the user needs to move to a local area network, SRMIUX will coexist on the same cable if the clients are HP 9000 Series 300 workstations. The SRMIUX server can be either a Series 300 or 800 system, and is not dedicated to just SRMIUX tasks. The user may already have the necessary HP-UX system to use as a server. The Series 800 servers may be connected to clients only through the LAN, but Series 300 servers will support both LAN and SRM interface cards.

SRMIUX will be on the December 1 HP Price List. Look for more details in upcoming issues of *HP Channels*. Contact your HP representative for more information.

Networks

HP LAN Manager client/server developer kits now available

Developers can now write their own state-of-the-art client-server applications using the recently announced HP clientserver developer kits for HP LAN Manager using the Named Pipes/Mailslots Developers' Kit or ARPA Sockets Application Programming Interfaces.

Utilizing the HP LAN Manager Named Pipes/Mailslots application programming interfaces, developers can write their own clientserver applications that optimize the front-end capabilities of the MS-DOS and OS/2 client platforms, while taking advantage of the HP-UX HP 9000 systems as the front-end computing server. ARPA Sockets can additionally be used in the same fashion.

An example of a clientserver application would be a standard order processing system. Client/server technology would utilize the PC as the front-end tool that processes ordering information using a graphical user interface such as Windows 3.0 or Presentation Manager on OS/2 while the actual database is an SQL database back-end running on an HP 9000 Series 800 system. The HP-UX system is optimized for database performance, while the PC front end is optimized for the user interface, data manipulation capabilities.

The LAN Manager Developers' Kits allow end users and developers to utilize the rich set of APIs that are available with HP LAN Manager products, namely Named Pipes and Mailslots. Named Pipes/Mailslots are becoming increasingly popular in the PC marketplace, as they provide a rich set of clientserver capabilities and are network transport independent.

The HP ARPA Sockets allows developers to write socket applications from an MS-DOS client to any server that supports the peer-to-peer sockets protocol. ARPA Services 2.0 is required on the MS-DOS client to execute an application developed with the ARPA Sockets for MS-DOS. ARPA Sockets provides developers with a UNIX system defacto peer-to-peer API in the MS-DOS and TCPIIP environment.

Developers' Assist services

The HP LAN Manager Developers' Assist is six months of developer support. Worldwide LAN Manager developers are supported during the design of their client-server applications via the CompuServe electronic bulletin board service. HP LAN Manager Developers' Assist provides:

- **Question/problem submittal** — Developers can submit questions 24 hours a day and receive responses from HP's highly qualified staff within 3 working days. This feature is intended to answer all sockets, named pipes/mailslots, and the rest of the LAN Manager API questions. Problems, defect reports and API call usage, program sequence, and API consulting can be reported through this feature. High-level application design consultation or support of general LAN Manager installation and configuration questions are not provided.
- **Technical database** — Frequently asked questions, known bugs, work arounds, marketing information, and much more are stored in an on-line technical database. This database lets developers query technical information or look at hints and discoveries from other developers, thereby improving developers' productivity.

Developers' Assist is bundled in with the Named Pipes or the ARPA Sockets Developers' Kits (P/Ns D1815A and D1813A, respectively). The bundled service includes six months of CompuServe Assist. For developers who need additional support, the Developers' Assist Supplement (PIN D1816A) can be purchased, which is a standalone six-month Developers' Assist agreement provided through the same CompuServe Account.

The Developers' Assist service includes software from CompuServe Corporation, which is licensed to a single user on a single PC. For those users who desire more than one person to access the Developers' Assist services, they will need to purchase multiple units of PIN D1816A product to meet their needs. Contact your HP representative for more information.

Ordering information

Product No.	Description
D1815A	HP LAN Manager Named Pipes/Mailslots Developers' Kit
D1813A	HP ARPA Sockets Developers' Kit for MS-DOS
D1816A	HP LAN Manager Developers' Assist Supplement

MS-DOS is a U.S. registered trademark of Microsoft Corporation.

Networks

PC Application compatibility with HP LAN Manager now available

PC MS-Net Application compatibility with HP LAN Manager products has now been fully tested. The most popular PC applications with MS-Net functionality are certified to work with HP LAN Manager products. PC MS-Net Application is targeted toward users who desire a tested list of PC applications that work on HP's LAN Manager platforms.

Features and benefits

Application compatibility for MS-NET applications should no longer be an issue for users. Over 50 of the most popular PC applications have been tested by an independent third-party certification firm running the TCPIIP protocol on HP's LAN Manager products. The results of the independent testing verified HP's compliance with the MS-NET application base. These applications were tested on 386 MS-DOS clients utilizing memory-saving technology. Additional MS-NET applications beyond the applications tested should work with HP LAN Manager.

- As a result of the successful application compatibility testing, we are confident that in addition to the list of certified applications, all MS-NET applications will run over the TCPIIP protocol on the following HP LAN Manager products (Versions 1.0):
 - HP LAN Manager/X for HP 9000 Series 300, PIN B1003A
 - HP LAN Manager/X for HP 9000 Series 800, PIN B1011A
 - HP LAN Manager/X for 3861486, PIN B1018A
 - HP LAN Manager for OS/2, P/N D1809A, D1810A

continued on next page

- These applications are in addition to any application supported by 3Com over the 3Com specific protocols (XNS, DLC, and NBP)
- In addition, third-party vendors that have written applications specific to the HP LAN Manager APIs are included on this list.

Configuration information

- 386 DOS clients were tested on IBM, Compaq, and HP platforms with at least 1 Mbyte of RAM.
- Application testing on HP LAN Manager 1.1 will happen soon. Testing will include NetBIOS applications and MS-Net applications for 286-based clients with 640 Kbytes of memory on a reduced memory TCPIIP stack. Results will be published by December 1990.
- 3COMEMM, the 386 memory technology bundled with LAN Manager, was utilized to maximize the amount of conventional memory available for application use.

HP product-line positioning

Application compatibility for all MS-net applications exists today. This represents the majority of PC and PC LAN applications. Once 286 clients with 640 Kbytes memory and NetBIOS applications have been certified, there will be no barriers to application compatibility with HP LAN Manager 1.1 products.

Contact your HP representative for more information.

Networks

Oracle RDBMS on HP-UX 7.0 now supports HP LAN Manager/X

Oracle's relational database management system (RDBMS) now supports client/server computing with HP's LAN Manager/X networking products using TCPIIP and Berkeley Sockets. Oracle's RDBMS is targeted toward users of HP-UX systems and MS-DOS PCs who want to take advantage of Oracle's client-server computing solutions for their database management system.

Features and benefits

- Oracle's industry-leading SQL database now supports HP-UX 7.0 allowing MS-DOS client PCs with ARPA Services 2.0 to act as a front-end to the database, working in parallel with HP LAN ManagerIX for file and print sharing to the same HP-UX host. Users needing to integrate Oracle's RDBMS into the HP LAN ManagerIX environment now have a fully supported solution.
- Oracle's full line of front-end software tools is available and supported on the MS-DOS client. These tools include SQL*Plus, SQL*Forms, SQL*Menu, SQL*ReportWriter, SQL*Report, Client Manager, and Oracle for 1-2-3.
- Oracle's support of LAN ManagerIX allows users to perform database operations more efficiently, distributing the processing between the HP-UX server and the MS-DOS PC. The full capabilities of LAN ManagerIX can be accessed concurrent with the Oracle RDBMS.

HP product-line positioning

Oracle's support of LAN ManagerIX now makes it possible for HP 9000 Series 800 and 300 systems and HP LAN ManagerIX networking software to connect DOS PCs to Oracle's SQL database and front-end tools to provide an effective client/server computing solution. This provides MS-DOS PCs with an industry-leading client server database and provides all of the capabilities of LAN ManagerIX for DOS and OS/2 PCs.

Configuration information

- HP 9000 Series 300 and 800 systems must be running HP-UX Version 7.0.
- ARPA Services 2.0 (PIN D1812A) *must* be installed on each MS-DOS client. HP LAN ManagerIX (P/Ns B1003A and B1011A) may be installed on the HP-UX server and MS-DOS clients with the TCPIIP protocol stack.
- Oracle RDBMS Version 6.0.27 is required on the HP 9000. Oracle SQL*NET TCPIIP for Series 300 or 800 is also required. Oracle SQL*NET TCPIIP for 3Com TCPIIP is required on each MS-DOS client. In addition, one or more of the client front-end tools is required: SQL*Plus, SQL*Forms, SQL*Menu, SQL*ReportWriter, SQL*Report, Client Manager, and Oracle for 1-2-3.

Availability

All products are available now from Hewlett-Packard and Oracle. Contact your HP representative for more information.

HP 10:10 LAN Bridge — the best Ethernet bridge on the market

The HP 10:10 LAN Bridge (PIN 28673A) is a two-port, Ethernet/802.3 learning bridge with Spanning-Tree and OpenView Management. It is targeted toward MIS and telecom managers needing to subnetwork Ethernet/802.3 LANs, or with specific security needs.

Local LAN bridges have become a commodity with over 35 vendors in the market today. The new HP bridge is the best available based on a price/performance/feature-set comparison.

Connection of multiple isolated LANs into a single network can increase the productivity of a corporation's information system. To conserve network bandwidth, the HP bridge provides a variety of filtering methods to restrict local traffic and add security between workgroups. The new HP bridge can filter and forward data packets as fast as the LAN can operate, this is called media-speed. By segmenting a larger LAN into smaller clusters, a network administrator can more easily manage and troubleshoot the network.

Features and benefits

- **low price** — affordable in any size network
- **isolates local traffic** — saves bandwidth
- **plug 'n'play** — saves installation time
- **reliable** (197,000 hours MTBF) — reduces downtime
- **end-to-end data integrity** — guarantees link utilization
- **transparent to upper protocols** — multivendor environments
- **media speed** — never a network bottleneck
- **both BNC and AUI** — saves MAU cost
- **console port** — low cost, local troubleshooting

- **OpenView Bridge Manager** — saves time and money, easy-to-use, centralized network manager to monitor, configure, and control

HP product-line positioning

The bridge is an addition to the existing EtherTwist Hub 10Base-T product family, both having the same modular rack 'n' stack enclosures. This allows HP users the flexibility to create networks to suit their needs, without restrictions of having a single, expensive cardage unit.

Technical specifications

The HP 10:10 LAN Bridge is a MAC-layer learning bridge that examines each packet from both LANs. It forwards only the packets that need to be forwarded (those with a destination on the opposite side of the bridge), thus conserving bandwidth on both segments.

HP bridges use the spanning tree algorithm developed by the IEEE 802.1 committee to support backup links between LANs in case of link failure.

HP OpenView Bridge Manager (PIN 28653B) is a windows-based application providing the ability to centrally monitor and control the HP 28673A and 28674A bridges. The Bridge Manager can coexist on the same DOS PC with the EtherTwist Hub Manager, which is also an SNMP-base manager.

The bridge comes standard with one BNC and two AUI ports for connection of the two LAN segments. An RS-232-C console interface is provided for administrators to gain access to the bridge for configuration, diagnostic, and troubleshooting, even when the network is down. An array of LEDs on both the front and back provides quick information of the bridge's condition. Contact your HP representative for more information.

New HP Remote Bridge

HP users are looking for inexpensive methods of connecting geographically dispersed sites. Digital links are becoming more affordable, and now, an affordable hardware solution exists from Hewlett-Packard — the HP Remote Bridge (PIN 28674A). It can connect one local and one remote 802.3/Ethernet LAN to form a single, extended network. The new bridge is a two-port, Ethernet/802.3 to 56-Kbits/s DDS, fractional T1 or T1 MAC-layer LAN bridge. It is targeted towards MIS and telecom managers needing to connect two or more remote Ethernet/802.3 sites.

Features and benefits

- **low price** — affordable in any size network
- **isolates local traffic** — saves bandwidth
- **"plug 'n'play"** — saves installation time
- **reliable** (197,000 hours MTBF) — reduces downtime
- **end-to-end data integrity** — guarantees link utilization
- **auto-configuring WAN link** — saves setup time
- **transparent to upper protocols** — multivendor environments
- **media speed** — never a network bottleneck
- **both BNC and AUI** — saves MAU cost
- **console port** — low cost, local troubleshooting
- **OpenView Bridge Manager** — saves time and money
- **easy-to-use** — centralized
- **network manager** — to monitor, configure, and control

continued on next page

HP product-line positioning

- new addition to the existing EtherTwist 10Base-T product family
- same modular, "Rack 'n' Stack" enclosure as the EtherTwist Hubs
- as an end node, the HP Remote Bridge will work with a properly configured HP Router or Wellfleet Router at a central site

Technical specifications

The bridge comes standard with both AUI and BNC ports for connection to the backbone LAN cabling. A standard V.35 interface to an external DSU/CSU provides access to common services, such as 56-Kbit/s DDS, 64 Kbit/s, fractional T1, T1 and CEPT E1 (2.048) digital communication links. The HP Remote Bridge is a learning bridge that examines each packet from the local and remote segments. It forwards only the packets that need to be forwarded (those with a destination on the opposite side of the bridge), thus conserving bandwidth on both the local and remote segments. HP bridges use the spanning tree algorithm developed by the IEEE 802.1 committee to support backup links between LANs in case of link failure. At a single site, multiple bridges can be stacked and connected via the BNC port with a ThinLAN coax cable to provide access to multiple WAN links.

Networks

Enhanced terminal I/O solutions

The Datacommunications and Terminal Controller (DTC) is HP's strategic platform to provide a consistent solution to connect end-users in HP-only and multivendor environments. HP's goal is to provide end users with:

- multivendor transparent local and remote access
- association of standards and proprietary protocols benefits
- scalable homogeneous device management integration under OpenView

During the past months, HP has made critical improvement to the DTC capabilities:

- DTC/3000 switching capabilities have been extended to support access to HP 3000 MPE V, HP 9000 Series 800, DEC VAXes, whether local or remote.
- Multivendor testing guidelines are available to extend this capability to other HP and non-HP systems to broaden the business opportunities.
- Introduction of the DTC16 for cost-effective low-end configurations and distributed connection requirements in HP 3000 environments.
- DTC48 support on HP 9000 Series 800.
- Shared printers and modem support on the DTC/9000.

Today, HP is reinforcing its commitment to providing a scalable homogeneous family of terminal servers to provide identical local and remote access with high performance both in an HP and non-HP environment through DTC16 support on the HP 9000 Series 800, enhanced DTC/3000 functionality, and enhanced OpenView DTC Management.

For more information on each of these subjects, please refer to the following articles in this issue of *HP Channels*:

"Enhanced terminal I/O solutions"

- "Enhanced DTC management platform"
- "Enhanced DTC/3000 functionality"
- "Introducing the DTC16 for HP 9000 environment"

Also refer to these past *HP Channels* articles:

"Introducing new DTC/3000

connections" — April 1990 issue

- "Introducing HP DTC Device Access/ARPA software for HP 9000 systems" — September 1990

Enhanced DTC management platform

Release 6.0 (A.06.06) of HP OpenView DTC Manager (PIN D2355A) provides network management software for the DTC product family which includes enhanced centralized management and support of new PCs.

HP OpenView DTC Manager is targeted towards HP 3000 and HP 9000 environments where access from DTCs is needed.

New features and benefits

Along with the support of new DTC functionalities, release 6.0 of HP OpenView DTC Manager provides the following new DTC management features:

- Centralized management facility has been enhanced to help users better control their equipment and operation costs. Up to now, the centralized management facility was only possible via a modem link, with Hayes-compatible modems. It now allows all DTC management functions (except backup/restore) to be carried out at a central HP OpenView workstation, across either a modem link (with Hayes or non-Hayes modems), or an X.25 link (with HP 2334A, HP 2334A+, or HP 2335). Users with large distributed networks can now manage DTCs (via their local workstation)

from a single central site, even across public networks. In addition, it is now possible to remotely support different versions of HP OpenView DTC Manager from a central HP OpenView workstation. Users of the centralized management facility can now upgrade the versions of HP OpenView DTC Manager on the DTCs of different sites at their own pace and convenience.

In addition to HP Vectra PCs (ES/12, 286112, QS/16S, QS/20, RS/16, RS/20C, RS/25C), HP OpenView DTC Manager is now supported on IBM PS/2-55 and Compaq DeskPro 386120. This enables users with an installed base of these PCs to use them as the OpenView Windows workstation, and leverage off previous investments.

New business opportunities provided with the new DTC management functionalities allow users to do the following:

- leverage off previous investment of equipment
- better control of large network from a central site, therefore reducing operating costs

Ordering information

Starting October 1, all shipments of the HP OpenView DTC Manager software will support the new features described above.

- Users who bought the subscription services of PIN D2355A will automatically receive the new release of the software.
- New users, or users without subscription services need to buy PIN D2355A.

Users must first order the HP software materials update service for the HP Vectra PC. Order this once for PIN D2355A.

Product No.	Opt.	Description
H2027A+S00	OJT	Software materials update service for HP Vectra PC
<i>Must also order one of the following services</i>		
H2026A+L00	OJT	HP BasicLine for Vectra
H2025A+H00	OL7	OpenView ResponseLine support
H2024A+T00	OL7	OpenView TeamLine Support

We strongly recommend that users buy at least ResponseLine level of service. Ordering the subscription services automatically provides users with future releases of the product and its documentation. Contact your HP representative for more information.

Networks

Enhanced DTC/3000 functionality

Enhancements for the Datacom and Terminal Controller for HP 3000 systems (DTC/3000, P/Ns 2340A and 2345A) provide better performance, improve system availability, local and remote transparent user-access, and smoother migration from HP 3000 MPE V systems.

Features and benefits

Hewlett-Packard is committed in continuously tuning OLTP performance; improvements have been made to the DTC/3000 to increase the system availability and the performance through protocol tuning.

The PAD-access on the DTC has been improved to provide transparent system access for remote end users; end-users on the DTC now have a coherent user interface and behavior when accessing 900 Series HP 3000 systems, whether they use local asynchronous access or DTC PAD functionality.

Migration of existing applications from HP 3000 MPE V to MPE XL has been made more flexible by allowing users to choose between single or double echo type-ahead.

These new enhancements show HP's commitment and continued effort to ease the migration from MPE V to MPE XL systems and to offer transparent access for both local and remote end users, in order to create new business opportunities.

Software requirements

- MPE XL release 2.2
- For HP Openview-based DTC Management, PIN D2355A release 6.0L

Refer to the article on page 32 in this issue of HP Channels entitled, "Enhanced terminal I/O solutions" for more information.

Networks

Introducing the DTC16 for HP 9000 environment

The Datacomm and Terminal Controller with 16 ports for the HP 9000 Series 800 systems (DTC16/9000, P/Ns 2340A, 2343A/C) provides up to 16 direct-connect ports or up to 12 modem ports for asynchronous connections of terminals, printers, or PCs to one or more HP 9000 Series 800 systems.

The DTC16 is targeted towards HP 9000 users requiring cost-effective LAN-based connectivity for small concentrations of users in distributed business environment and manufacturing plants.

Features and benefits

Starting with release 6.0 (A.06.06) of HP OpenView DTC Manager, the DTC16 (which was introduced on the HP 3000 environment in June 1990) is now also available on HP 9000 Series 800 systems. Aggressively priced, the DTC16/9000 is the solution of choice for HP 9000 users with small groups of users requiring access to systems.

The DTC16/9000 provides the following features:

- modular connectivity, with eight direct-connect port modules or six modem connect port modules
- access to one or multiple HP 9000 Series 800 systems
 - printer support and printer sharing through the HP DTC Device Access/ARPA software (PIN D2355A Option AAO or AAI) between multiple HP 9000 systems
- full modem support
- HP Openview-based DTC Management

HP product-line positioning

Hewlett-Packard is continuously expanding its offering and continues to improve the DTC family. This trend will be pursued in the future, building on the DTC family as the communication platform for all HP and non-HP systems. The DTC16/9000 complements

our current DTC offering on the HP 9000 multiuser systems as well as other HP products: the HP TS8 and HP 9000 multiplexers (CIO-6, CIO-16, NIO-8).

The positioning of these different products is as follows:

The DTC16 complements our current product offering with an aggressively priced low-end terminal server, providing new business opportunities for HP 9000 Series 800 customers.

Software requirements

The DTC16/9000 requires HP-UX release 7.0, as well as release 6.0 of the HP OpenView DTC Manager (PIN D2355A release 6.0). New users should request an ACK date on or after October 1 to get the 6.0 release. Users requiring printer support/printer sharing on the HP 9000 also need to order the HP Device Access/ARPA software (PIN D2355A Option AAO or AAI). Note: When the OpenView Windows Workstation (PIN 32054B Option 201) is ordered, the HP Device Access/ARPA software still needs to be ordered separately. The DTC16/9000 also requires the ARPA Services/800 to run on the HP 9000 Series 800 systems.

Ordering information

The DTC16/9000 uses the same hardware as the recently introduced DTC16/3000. All options (except Option 310; X.25 is not available on the DTC/9000) are available with the DTC16/3000. Add-on products (PIN 2343A/C) are also available.

continued on next page

Criteria	DTC16/9000	DTC48/9000	TS8	MUXes
Target market	HP 9000 Series 800 environment		Mixed HP 9000 and non-HP environment; ARPA networks	Standalone systems
Environment	Business office and manufacturing plants where connections are distributed to small groups of users	Large centralized MIS centers or need for high port counts on standalone systems	Environments where connections are distributed to small groups of users	Small to medium centralized MIS centers
Printer access	Printer sharing	Printer sharing	Printing sharing	Dedicated printers
Remote access	Modem connection	Modem connection	Modem connection	Modem connection
Management	HP OpenView DTC Management for single and multiple system access		HP LSM-based for single and multiple system access	Host-based management

Product No.	Description
2340A	Datcommunications and Terminal Controller with 16 ports, must order 1 and only 1 Option 640, 641, 642, 840, 841 or 842. A maximum of 1 Option 650 or 850 can be ordered; no Option 310 can be ordered
Opt. 015	Sets for 220 V
Opt. 640	Configures DTC16 for ThickLAN and provides six RS-232-C 25-pin modem connections installed in the DTC16 (ThickMAU and 6-meter AUI cable provided)
Opt. 641	Configures DTC16 for AUI use and provides six RS-232-C 25-pin modem connections installed in the DTC16 (no MAU provided)
Opt. 642	Configures DTC16 for ThinLAN and provides six RS-232-C 25-pin modem connections installed in the DTC16 (BNC-T connector provided)
Opt. 650	Provides six additional RS-232-C 25-pin modem connections installed in the DTC16
Opt. 840	Configures DTC16 for ThickLAN and provides eight RS-232-C 25-pin direct connections installed in the DTC16 (ThickMAU and 6-meter AUI cable provided)
Opt. 841	Configures DTC16 for AUI use and provides eight RS-232-C 25-pin direct connections installed in the DTC16 (no MAU provided)
Opt. 842	Configures DTC16 for ThinLAN and provides eight RS-232-C 25-pin direct connections installed in the DTC16 (BNC-T connector provided)
Opt. 850	Provides eight additional RS-232-C 25-pin direct connections installed in the DTC16
2343A	Add-on DTC16 Asynchronous Connector card. provides eight additional RS-232-C 25-pin direct connections
2343C	Add-on DTC16 Asynchronous Connector card, provides six additional RS-232-C 25-pin modem

Availability

The DTC16/9000 is available with release 6.0 of P/N D2355A, which began shipments October 1, 1990. Users who previously bought the subscription services on P/N D2355A with a DTC

product will automatically receive the new release of this software.

For more information on the HP OpenView DTC Manager, contact your HP representative.

Networks

Introducing the HP Network Mass Storage System

Not available in Europe

The HP Network Mass Storage System (P/Ns C2261A, C2262A, C2220A, C2221A, C2222A, C2224A, C2420A, and C2421A) is a complete, flexible mass storage solution that offers superior storage capabilities, unsurpassed dependability, and ease of use — all in a single SCSI system. It is targeted toward midrange to high-end PC servers running Novell NetWare 386 and requiring >300 Mbytes.

Features and benefits

The HP Network Mass Storage System actually consists of eight individual products that are quickly and easily configured to meet specific needs. The system offers PC LAN users advanced functionality previously available only on minicomputers.

- **A complete mass storage solution** — This system offers users a complete storage solution consisting of high-capacity disk drives, high-capacity tape backup devices, and backup/recovery/archive software to ensure data integrity.

Support on IBM PS/2, Compaq DESKPRO, and HP Vectra PCs and selected PC compatibles

— The HP Network Mass Storage System can be sold into multivendor networking environments requiring connection to PC-AT or MCA servers.

High-capacity, high-performance disk drives — The HP Network Mass Storage System features disks that are industry leaders in reliability and performance. Designed and manufactured by HP, these SCSI disks boast a 150,000 hour mean-time-between-failure (MTBF) rate.

Available in 332-Mbyte, 664-Mbyte, and 1-Gbyte capacities, users can choose the capacity that best fits current requirements and add more later if needed.

Fast, reliable, unattended backup — A 1.3-Gbyte DDS-format digital audio tape (DAT) drive allows unattended backup of network storage. Each DAT tape can back up 1.3 Gbytes of data in under two hours with no operator intervention, depending on application. It also features Fastsearch, a facility that finds a file on the tape in an average of 20 seconds.

▪ **Configuration flexibility** — The HP Network Mass Storage System allows any of the disks and DDSIDAT drive to be configured in a compact cabinet that holds three full-height devices. Users can install any device and add more devices later, if required.

▪ **Backup/restore/archive capabilities from the industry's best** — HP has teamed with two independent companies that offer market-leading solutions for the most critical mass storage applications: backup, restore, and archive. Cheyenne Software's ARCserve + TAPE and Emerald Systems' EmQ/EmLIB are premier applications that support the Network Mass Storage System. Plus, they are available directly from HP for ease of ordering by dealers or users.

▪ **Diagnostics for easy trouble shooting** — A key competitive differentiator is a set of diagnostics developed to ensure integrity of the user's data. These diagnostics allow LAN managers or support persons to determine whether devices were installed properly, and pinpoint possible problems with any storage device.

▪ **Novell NetWare Ready certified** — Only products that pass Novell's NetWare Ready certification procedure can carry the Novell stamp. This stamp represents Novell confidence that the product contributes to reliable and high-quality network operation.

▪ **High-performance network operation** — High-performance disk drives, DDSIDAT drives and backup/recovery/archive software all contribute to high-performance network

operation. The disks feature an average seek time of 16.5 ms to 17.5 ms. The DDSIDAT drives can back up 1.3 Gbytes in two hours. And high-performance software manages the backup/recovery/archive function without impacting network traffic and performance.

HP product-line positioning

The HP Network Mass Storage System is clearly a leader in PC networking storage. It offers greater configuration flexibility to meet individual user requirements, competitive network performance, and a very competitive price. In addition, it offers features such as intelligent diagnostics, which help pinpoint possible problems with storage devices.

Ordering information

When ordering the HP Network Mass Storage System, follow these three easy steps to ensure all necessary items are ordered.

1. Learn which Host Bus Adapter is required for connection to the PC server. Then select the proper cabinet model that includes the HBA.
2. Order the mass storage devices that will be configured into the system. And don't forget to order backup.
3. Order the backup and recovery software. Note: Steps 1 and 2 are required; Step 3 is optional.

These base products include the cabinet, Host Bus Adapter, SCSI cables and terminator, power cord, manuals, driver and diagnostic software, and configuration labels.

Product No.	Description
<i>Step 1</i>	
C2261A	HP Network Mass Storage System for PC-AT servers
C2262A	HP Network Mass Storage System for MCA servers
C2269A*	HP Network Mass Storage System for SCSI daisy-chaining
<i>Step 2</i>	
C2220A	332-Mbyte disk drive
C2221A	664-Mbyte disk drive
C2222A	1-Gbyte disk drive
C2224A	DDSIDAT tape drive
<i>Step 3</i>	
C2420A	Emerald Systems' EmQ/EmLIB software
C2421A	Cheyenne Software's ARCserve + TAPE software

*P/N C2269A only includes the cabinet, SCSI cable, power cord, and manuals.

Contact your HP representative for more information and for copies of the following product literature.

Lit. No.	Description
5952-3093	Sales guide
5952-0634	Product brochure
5952-3092	Technical data sheet
5952-3095	Price list
5952-3096	Emerald Systems' EmQ/EmLIB technical data sheet
5952-3097	Cheyenne Software's ARCserve + TAPE technical data sheet

Networks

HP offers powerful new storage capabilities

Not available in Europe

The new HP Network Mass Storage System includes market-leading solutions for the most critical mass storage application — backup/restore/archive.

This system is targeted towards midrange to high-end PC servers running Novell NetWare 386. The new HP Network Mass Storage System is a combination of hardware and software which, working together, provides a complete and reliable solution for data storage and management on PC LANs. The product can be ordered with a choice of several leading solutions for data backup, recovery, and management, all designed specifically for use with the 1.3-Gbyte digital audio tape (DAT) drive in the HP Network Mass Storage System.

Features and benefits

- **Emerald Systems' EmQ/EmLIB** — This solution runs under Microsoft® Windows 3.0 to give users reliable data management and ease of use. It allows backup of local and hard disk files and Novell security structures from any node to one or more tape drives attached to the file server.

- **Cheyenne Software's ARCserve+TAPE** — This centralized network backup solution delivers attended and unattended backup and restore services for users across the internet. It offers options for both workstation and file server backup to a central, shared device.

HP has worked directly with these companies to provide a fully functional, completely compatible, and fully tested and supported solution for these applications. The HP Network Mass Storage System will be available in Europe in the first half of 1991.

See article in this issue entitled, "Introducing the HP Network Mass Storage System" for ordering information and a list of available literature. Contact your HP representative for more details.

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

Networks

HP Wire Test Instrument price decreased

The price of the HP Wire Test Instrument (PIN 28687A) has been decreased. A member of the new HP EtherTwist family of 10BASE-T twisted-pair LAN products, the HP Wire Test Instrument verifies and troubleshoots twisted-pair cabling for Type 10BASE-T networks. It lets the user quickly and easily perform the necessary tests to evaluate the key parameters specified by the Type 10BASE-T addition to the IEEE 802.3 standard. The HP Wire Test Instrument is targeted toward HP dealers of twisted-pair ethernet (10BASE-T) products, vendors of 10BASE-T LAN products, users with 10BASE-T LAN with over 100 nodes planned or installed on site, and LAN integrators or cable installers.

Features and benefits

- **Tests key parameters for Type 10BASE-T networks** — crosstalk attenuation, signal attenuation over frequency, burst noise, and continuity.
- **Evaluates both individual 4-pair and bundled 25-pair cable.**
- **Easy to read LEDs** — indicate which pairs have been selected for testing, which tests have been selected, and which pairs passed or failed.
- **16 character display** — steps user through test procedures and provides diagnostic information.
- **Lightweight** — this portable unit weighs less than 10 pounds.

- **RS-232-C printer port** — provides a standard printer connection so a hard copy of test results can be quickly obtained.
- **Monitor function** — lets user take up to a 24-hour look at the cabling for identification of intermittent cabling problems.
- **Quick wiring connections** — made with built-in 50-pin telco connector or 12-port modular adapter for 8-pin jack connections.

HP product-line positioning

Fundamental to any network implementation is the cable that supports the network traffic. Testing the integrity of twisted-pair cabling can sometimes be complex due to the dynamic characteristics of the technology. The HP Wire Test Instrument makes twisted-pair cabling verification and troubleshooting quick and easy to manage by measuring the key parameters specified for Type 10BASE-T networks.

HP is the first computer vendor to ship an instrument designed specifically to test twisted-pair cabling for Type 10BASE-T LANs. The HP Wire Test Instrument differentiates itself from the competition with its complete testing and easy-to-use features. A complete competitive analysis is available in the product brief (see below).

Also available from HP is the HP Wire Test Service. This service, performed by HP customer engineers on a time and materials basis, is designed for users with smaller LANs or for those requiring a complete suite of services from HP.

Contact your HP representative for more information and for a copy of the HP Wire Test product brief (PIN 5953-5046).

Printers

Connecting HP LaserJet printer to Apple Macintosh: 10 common configuration questions

Along with the tremendous response we have seen to the introduction of HP LaserJet printers for Apple Macintosh computers, some questions have arisen. We'd like to share our answers to the 10 configuration questions most commonly asked by current and potential users.

How do I connect an HP LaserJet printer to a Macintosh computer?

The HP LaserJet IID, IIP, III, and IIID printers have been designed specifically to connect with a Macintosh, once the proper equipment is installed. Users need both the optional HP AppleTalk Interface Kit and the HP PostScript cartridge along with appropriate printer memory (see question below).

How much memory is required to use Postscript in HP LaserJet printers?

- For HP LaserJet IIP/III printers:
 - 1 Mbyte for all letter-sized jobs, and
 - 2 Mbytes for all legal-sized jobs
- For HP LaserJet IID/IIID printers:
 - 2 Mbytes for single-sided printing (letter and legal), and
 - 4 Mbytes for all duplex printing

Can I use the Postscript cartridge without the AppleTalk Interface Kit, or vice versa?

No. The HP PostScript cartridge and the HP AppleTalk Interface Kit are both required to connect an HP LaserJet printer to a Macintosh computer. (Note: You can use the HP PostScript cartridge with an IBM AT and compatible computer. If you are not connecting a Macintosh computer, you do not need the HP AppleTalk Interface Kit).

Can I use third-party Postscript cartridges or Postscript clones with the HP AppleTalk Interface Kit?

No. The HP PostScript cartridge and the HP AppleTalk Interface Kit were developed to be used together. Third-party PostScript products do not work with the HP AppleTalk Interface Kit.

Can I use third-party printer memory with the HP AppleTalk Interface Kit and HP Postscript cartridge?

HP memory is tested and guaranteed to work with the HP LaserJet printers. Some problems have been identified by our Personal Peripherals AssistLine as being caused by some third-party memory boards.

Do the HP LaserJet IID, IIP, III, and IIID printers use the same AppleTalk Interface Kit?

No. You will need to order the following:

- AppleTalk Interface Kit for the HP LaserJet IIP printer, PIN 33417A
- AppleTalk Interface Kit for the HP LaserJet IID, III, IIID printers, PIN 33416A

Which Macintosh computers are compatible with HP's AppleTalk solution?

- Mac Plus
- Mac IIx
- Mac SE
- Mac IIcx
- Mac SE/30
- Mac IIci
- Mac II
- Mac Portable
- Mac IIfx

continued on next page

Do I need to use the HP AppleTalk Interface Kit if all I want is a direct connection to my Macintosh computer?

Yes. The HP AppleTalk Interface Kit is used to communicate between a Macintosh computer and an HP LaserJet printer, both as a direct connection and on a network. Users will need to purchase the appropriate cable, based on whether they are attached to a network or connecting the printer directly to an individual Macintosh.

Can I connect my Macintosh computer and my IBM PC to the HP LaserJet printer at the same time?

We do not recommend that you directly connect an IBM PC and a Mac to an HP LaserJet printer at the same time. Several third parties offer solutions that facilitate sharing a printer among Macintosh computers and IBM PCs.

If purchased and installed the AppleTalk Interface Kit, but I cannot select IO=AppleTalk from the front panel of my printer. Does this mean my AppleTalk Interface Kit is defective?

The most common reasons for this error are that the HP Postscript cartridge is not plugged in properly or a third-party Postscript product is being used. You must have the HP Postscript cartridge plugged in and the AppleTalk Interface Kit installed in order to select IO=AppleTalk.

For more information, contact your HP representative.

Printers

PC printer spooler available worldwide

With the increasing use of fonts and graphics to print complex documents, users are experiencing long "keyboard lockouts" when printing or plotting, cutting the productivity of the PCs. Printers are becoming a bottleneck when matched with the new, faster PCs.

HP has selected PrintCache (PIN 35177C) as the spooler software of choice and has now arranged to distribute it worldwide. Worldwide support for this product comes in conjunction with HP's bundling of PrintCache with all HP 7475 and ColorPro plotters.

PrintCache is the fastest print buffer of any kind tested, either hardware or software, which means users will get tremendous time savings when printing or plotting. PrintCache is tested and compatible with Windows 3.0 and New-Wave, as well as most LANs, hardware spoolers, and printer-sharing devices.

The product is available from HP or any HP dealers. A data sheet for this product is available, PIN 5954-9801. For more information and for a copy of the data sheet, contact your HP representative.

Printers

New lower prices on HP toner cartridges

Effective September 1, pallet and one-third-truckload prices for the HP LaserJet printer toner cartridges will be reduced. The reduced toner cartridges include:

- for the HP LaserJet IIP printer — PIN 92275A/Z/N
- for the HP LaserJet, LaserJet PLUS, LaserJet 500 PLUS printers — PIN 92285A/Z/N
- for the HP LaserJet Series II, IID, and III printers — PIN 92295A/Z/N

Product No.	Description
92275A	Single unit
92275Z	80 units (1 pallet)
92275N	1,920 units (1/3 truck)
92285A	Single unit
92285Z	36 units (1 pallet)
92285N	864 units (113 truck)
92295A	Single unit
92295Z	64 units (1 pallet)
92295N	1,536 units (113 truck)

Contact your HP representative for more information.

Scanners

HP ScanJet Plus scanner software upgrades

HP ScanJet Plus scanner users can now upgrade the software for any of the following interface kits sold for the scanner:

- PC Interface Kit, PIN 88295A
- Macintosh Interface Kit, PIN 88395A
- PS/2 Interface Kit, PIN 88495A

The upgrade kit for the Macintosh includes the new Desk Gallery Plus image-scanning and grayscale-editing software. The upgrade kits for the PC include the new Scanning Gallery Plus 5.0 image-scanning and grayscale-editing software. Manuals are also included with each upgrade kit.

Upgrades will be provided free of charge for those users who purchased the kits listed above on or after August 1, 1990. Proof of purchase is required to obtain the free upgrade. All registered owners of the HP ScanJet Plus scanner will receive letters directly from HP explaining the upgrade kits and how to order them.

Nonregistered owners will only hear about the upgrade kits through their dealer, service center, publications, or word of mouth.

- *Scanning Gallery Plus 5.0 Upgrade* — includes both image-scanning and editing software for the PC and PS/2
- *Desk Gallery Plus Upgrade* — includes both image-scanning and editing software for the Macintosh
- *Desk Scan Upgrade* — includes only image-scanning software for the Macintosh

Contact your HP representative for more information. Users in the U.S. can call 1-800-848-9283 toll free to order their upgrade kits.

Terminals

HP 3000 system adds support for HP 700/43 terminal

The 900 Series HP 3000 systems are adding support for the HP 700143 ASCII display terminal (PIN C1006G Option ABA). The HP 700143 display terminal, not previously supported on MPE XL systems, provides a lower-cost terminal alternative for the 900 Series applications that do not require the sophisticated capabilities of the HP 700192 display terminal. The HP 700143 replaces the HP 700141, which was discontinued October 1 (the HP 700141 discontinuance was announced in the July issue of *HP Channels*). The HP 700143 terminal is targeted towards 900 Series HP 3000 applications not requiring HP 900192 display terminal capabilities.

The HP 700143 does not support 900 Series HP 3000 VPLUS or block mode. The HP 700143 also differs from the HP 700192 in the handshaking

sequences that cause the HP 700143 to transmit data to the host. These sequences are documented in Appendix B of the HP 700143 Display Terminal User's Guide (PIN 5959-5011) in the section entitled "Sending Data." Specifically, the HP 700143 does not use the DCI handshake sequence used by the HP 700192.

Applications that use these escape sequences should enable type-ahead capability to ensure that all data sent from the HP 700143 is properly received by the HP 3000. Further information on the operation and functioning of the HP 700143 can be found in the HP 700143 Display Terminal Reference Manual (PIN 5959-5013). This support of the HP 700143 is effective with MPE XL Release 1.2.

Contact your HP representative for more information.

Terminals

Price increased on selected HP monochrome monitors

Effective in the U.S. only

Hewlett-Packard will increase the price of the amber and green monochrome monitors (P/Ns D1181A and D1181G) in the U.S. effective November 1, 1990. Any orders placed before November 1, 1990, will receive the current list price. The price of the white monochrome monitor (PIN D1181W) will remain at the current price.

These price increases reflect HP's intent to move to a single monochrome monitor offering. HP plans to discontinue the amber and green monochrome monitors in mid-1991, but will continue to offer the white monochrome monitor. This simplification is in keeping with the major system competitors such as Compaq and IBM who offer only white monochrome monitors.

Contact your HP representative for more information.

Also in this issue

*Introducing the
HP Optical
Storage Server*

9

Supplies

Supplies

HP DIRECT order phone numbers

HP DIRECT Fast Phones—the easy, direct way for users to order supplies, accessories, media, furniture, and software from HP DIRECT.

Location	Telephone Number
Australia	(3) 895-2645 (3) 895-2615 (3) 895-2815 (3) 895-2861 (3) 895-2619 (008) 339-861 (toll-free) (222) 2500-61416151616
Austria	
Belgium/Luxembourg	(2) 761 31 11
Canada	800-387-3154
Toronto Local	416-671-8383
Denmark	80 30 16 40
Finland	(0) 887 2361
France	(1) 69 86 17 25
Greece	(1) 6828 811
Italy	(02) 95 301 532
Japan	
Sagamihara	0120 091321 (toll-free)
Middle East/Africa,	
Geneva	(22) 83 1212
Norway	(2) 24 60 90
South Africa	
Johannesburg	(11) 802 5111
Cape Town	(21) 537 954
Spain	(91) 637 4013 (91) 637 0011
Sweden	(8) 750 2400
Switzerland	(57) 31 24 90
Taiwan	
Taipei	080-211228 (toll-free) (2) 717-9608
The Netherlands	6-0501
United Kingdom	(0734) 44 12 12
United States	800-538-8787
West Germany	(30) 3322

Software Packages Available and Wanted

If you are an HP VAB with a current HP contract and 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: Commercial 3GL Application Development

Abstract: C-thru — a new, high-level character-based windowing tool, for use with commercial application software in a UNIX system environment.

Features

C-thru, from BCT Business Systems, has been specifically designed for commercial software developers who require an up-to-date "look and feel" for their products, without having to invest in major **recoding** effort.

By integrating a small number of easily understood C-thru calls into an application, a software product will be enhanced with:

- pop-up windows
- user-definable on-line help
- access to the operating system
- desktop calculators
- on-screen line and box drawing

The product integrates with most third-generation languages (3GL) available under UNIX systems, such as 'C', COBOL (specifically Micro Focus COBOL/2) and UNIX Shell Scripts.

Requirements: HP 9000 Series 800 computer, HP-UX

Company Name: BCT Business Systems Ltd.

Address: Bridge House, New Road,
Lymm, Cheshire,
WA139DY
England

Phone: (44) 92575-6074

Contact: Angela Cone

Type of Distributor wanted: Open

Geographical Coverage: Worldwide

Industry: Cross-industry; systems integration software

Abstract: PICSTalk is a multidirectional communications gateway software product used to create interfaces between applications running on otherwise incompatible systems. It provides support for multiple communications protocols and for the reformatting of the messages, allowing the interfaces to be created and rendered useful with a minimum of host effort. ASCII text files (templates) are used to define message structures and message handling procedures that are used on the gateway.

PICSTalk is run on a dedicated AT-compatible system that is connected to departmental or mainframe systems through communications or through a local area network connection. As an MS-DOS application, PICSTalk can make use of local or network printers for status messages and **error** reports, as required. Network disk resources may be used for communications queuing or to hold data derived from messages that need to be combined with later messages. This "holding" file capability acts as a short-term database for the use of the interface.

PICSTalk **provides** configuration. Analysis tools to use as interfaces are created by technical **personnel**. Five levels of message and memory analysis displays are coded into PICSTalk to use during complex message handling.

PICSTalk can be used in any setting in which there is a desire to share data that otherwise would remain in separate, incompatible computer systems.

Requirements: PC-DOS or MS-DOS 3.3, AT-compatible system with a minimum of 640K RAM and 40M hard disk.

Company Name: Trinity Computing Systems, Inc.

Address: 11 Greenway Plaza
Suite 1212
Houston, TX 77046
U.S.A.

Phone: 713-621-6911
800-231-2445
In Canada: 800-233-5964

Fax: 713-621-4750

Contact: Evelyn Roberts

Type of Distributor Wanted: Value-added reseller

Geographical Coverage: U.S., Canada

Industry: *Process control, instrumentation, scientific, CAD/CAM — requiring connectivity*

Absrracr: Fusion for HP BASIC and Pascal workstations is a standards-based DARPA TCPIIP network protocol software package that runs on HP 9000 Series 200 and 300 workstations. It provides BASIC and Pascal users file transfer, remote logon, and terminal emulation utilities. This allows access to all computer systems running TCPIIP, such as HP-UX, Apollo, Sun, Silicon Graphics, VAX, IBM PC, and HP Vectra PC. It includes an interface for applications software developers, such as CAD/CAM, database management, and specialized vertical market applications, to add TCPIIP networking protocols to their software.

Features

- executes applications on remote computers from the desktop
- transfers files to and from networked computers
- designs custom networking applications for use in environments such as instrumentation and process control

Applications include scientific, instrumentation, process control, CAD/CAM, and remote sensing and data collection.

HP Platform: HP 9000 Series 200 and 300 workstations

Operating System: Rocky Mountain BASIC, HP Pascal

Company Name: Network Research

Address: 2380 N. Rose Avenue
Oxnard, CA 93030
U.S.A.

Phone: 805-485-2700

Far: 805-485-8204

Conracr: Sales Department

Type of Disrriburor Wanted: Company developing and marketing applications software for HP BASIC or Pascal, HP 9000 workstation VAR

Geographical Coverage: Worldwide

Industry: Cross industry — HP 9000 HP-UX users

Absrracr: This software package is composed of:

MULTIFACE 2000 — a software development tool that deals with db-schema, data dictionary, programming language, menu generator, C programs generator, documentation generator, context-sensitive help, and full screen editors (for programming and application screens). MULTIFACE 2000 runs on PCs using MS-DOS. Programs and schema are generated in the PC and transferred to the HP 9000. C programs are compiled and linked to the MULTIFACE library. The schema (data dictionary) supplies data to the database access functions.

- designed for multiuser environments
 - applications are converted to standalone C programs that run directly under UNIX systems and don't overload the machine
- two-level network with a maximum of 12 links per file
 - types of files supported: indexed with or without data, indexed with key chains, normal UNIX system files with constant size registers
- no practical limits on number of logical files per physical file
- record accessed by hashed key, chain, direct
- object locking
 - query and report generator (screen, printer, file)
- fourth-generation language (with full screen editor and recompiler for error detection)
- interactive and batch structured programs generator
- screen generator (with full screen editor and data-dictionary consultation)
- programs and data-dictionary generator only generates what has been affected by modifications

MULTIFACE 2100 — a software application developed with MULTIFACE 2000 for inventory control.

- programs developed with MULTIFACE 2000
- source code supplied (to be customized if needed)
 - main modules: inventory, material receipt and issue, inventory balance and availability, purchase orders, customer orders, requirements planning

MULTIFACE 2200 — a software application developed with MULTIFACE 2000 for MRP.

- programs developed with MULTIFACE 2000
 - source code supplied
 - main modules: bill of materials, materials receipt and availability, work and production orders, purchase orders, customer orders, material requirement planning

MULTIFACE 2300 — a software application developed with MULTIFACE 2000 for PCP.

programs developed with MULTIFACE 2000

- source code supplied
- main modules: capacities and resources data input, routing data input, production calendar, production report, production resources report

Requirements: HP 9000 (HP-UX), PC (MS-DOS)

Company Name: Infotec Informatica e Tecnologia Ltda.

Address: Avenida Dr. Alberto Sarmiento, No 939
13.070 - Campinas - SP
Brasil

Phone: 0192 42-9399

Contact: Sinesio Franco Fernandes

Type of Distributor Wanted: Firms that could sell, give customer support, installation, training, develop new modules, update/modify, and help in translating if needed (if not in an English/Portuguese-speaking country).

Geographical Coverage: Worldwide

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Hewlett-Packard Company
Value-Added Channels Development
Attn: Marcia Nowicky
19091 Pruneridge Ave.
Building 46UV
Cupertino, CA 95014
U.S.A.

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Please address editorial correspondence to Tracy Wester at address listed below.

HP CHANNELS

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