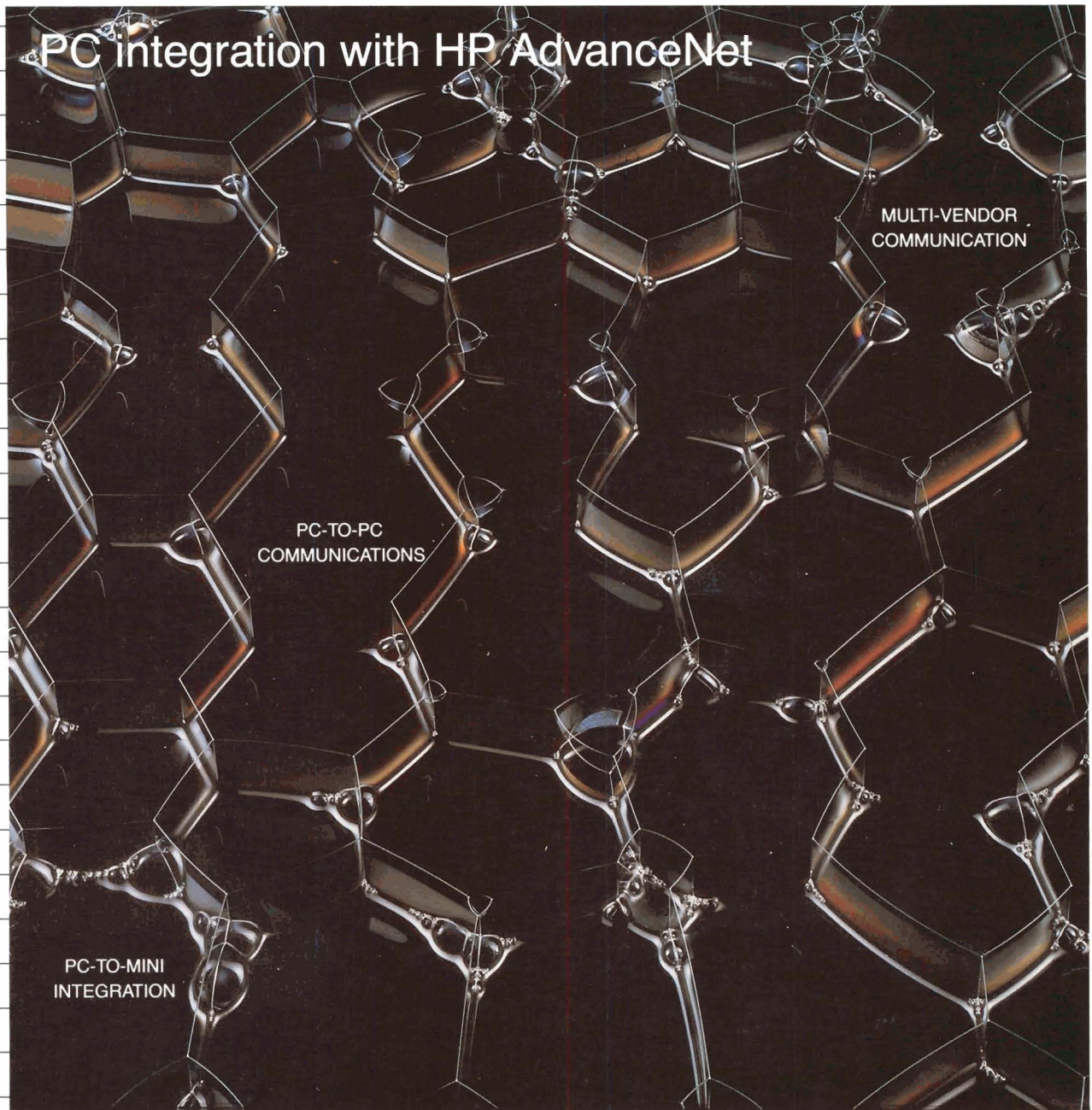


HP CHANNELS

Information For Hewlett-Packard's Value-Added Businesses

March 1988



New HP Office Share Network
Family Enhancements

HP CHANNELS

Volume 7, No. 5

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.

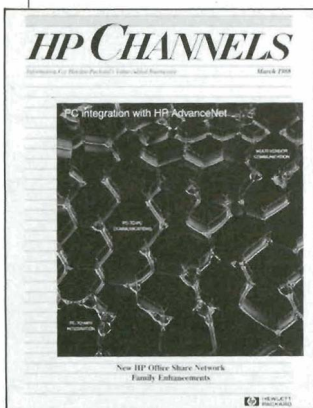
For further information on any of the products and services discussed in HP Channels, please contact your HP sales rep.

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.

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On the cover



The integration of PC users into an enterprise-wide local area network has been strengthened with a new release of HP OfficeShare that includes enhanced PC-mini integration, multivendor communication, and PC-to-PC communications. See articles beginning on page 17.

HP CHANNELS
March 1988

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HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

TSS Executive VAB Advisory Council charter meeting

Nancy Henkle, VAC Executive Programs Manager, Technical Systems Sector

Low Platt, executive vice-president of HP's Technical Systems Sector (TSS), kicked off the charter meeting of the TSS Executive Value-Added Business (VAB) Advisory Council on January 18, 1988. Low welcomed the VAB executives, discussed HP's growing business with value-added channels, and our increase in programs designed to better meet the needs of our value-added business partners. The meeting was launched in the Executive Dining Room of HP's Corporate Headquarters in Palo Alto, California, and then continued through January 20 in HP's Marketing Center in Cupertino, California.

The purpose of the VAB Advisory Council is threefold:

- 1) To receive candid input and advice on HP's value-added business programs and product strategies for the technical computer marketplace
- 2) To share information on best practices of HP's and other vendors' value-added business relationships
- 3) To strengthen our lines of communications with our VABs.

While the Technical Systems Sector has held advisory councils in the past for the software supplier channel, this was the first all-channel forum. The TSS Executive VAB Advisory Council has parallel goals to the Business Systems Sector VAB Advisory Council which is focused on the commercial computer marketplace.

Response to the first meeting and to HP's strengthening of value-added programs for the technical VAB was very positive. "HP has made a lot of progress in third party programs in a short



Charter members of the Technical Systems Sector Executive VAB Advisory Council are (l to r) Front row: Jim Blaha, HASP; Bill Denniston, Denniston & Denniston, Inc.; Karl Windrak, Systems Integrated; Bob Whitus, Holguin/Accugraph. Second row: Dick Watts, HP; Steve Haslett, HP; Frank Vullo, Hilco; Ed Bersoff, BTG, Inc.; John Layden, Automated Technology Associates; John Cooper, Fisher Controls; Fred James, Analog Design Tools; Arnold Zirkle, Pacsoft; Bill Richion, HP.

amount of time," stated Bill Denniston, president of Denniston & Denniston, Inc. John Layden, vice president of ATA, reinforced that position by saying, "My impression on the whole is that HP now has the best program in the industry." Bob Whitus, vice president of Accugraph, added, "Congratulations for having the number one VAR program!"

Members of the charter meeting included Bob Whitus, Accugraph/Holguin; Fred James, Advanced Design Tools; John Layden, Automated Technology Associates; Ed Bersoff, BTG, Inc.; Bill Denniston, Denniston & Denniston, Inc.; John Cooper, Fisher Controls; Jim Blaha, HASP; Frank Vullo, Hilco; Arnold Zirkle, Pacsoft; Karl Windrak, Systems Integrated.

All of the VAB Advisory Council presentations were highly interactive with much valuable input gained from the attendees. Areas covered are listed below.

- VAB Issues/Concerns
 - HP's VAB Program Review
 - Factory Floor Strategy
 - DesignCenter Strategy
 - Marketing Your Business with HP, Technical Platform Strategy
 - Technical Services from the Systems Evaluation and Migration Center
- Software Productivity at HP.

At the end of the meeting, we reviewed the following issues the VABs had presented to HP as being their primary areas of concern.

- Communication of the various channel programs to VABs
- Coordination between the marketing and field organizations within HP
- Efficient education of HP's end-user sales reps on VAB products
- Faster access to factory technical resources for development help and product problem resolution
- Clarification of HP's strategic product categories where HP intends to compete with VABs.

We have efforts in place to work on these problems and will be publishing our results in later issues of *HP Channels*.

Membership positions on the council will be rotated to ensure new members' ideas are brought to the attention of HP management. However, for continuity, all of the current members are invited back for at least the next forum, scheduled for July 18-20, 1988. If you would like to participate in the VAB Advisory Council, work through your HP sales rep to make your request known.

If you have any questions on the council or wish to contact a council member, please contact Nancy Henkle, Value-Added Channels Executive Programs Manager, Technical Systems Sector, 408-447-1030.

Customer Support

Training

HP 3000 service training

HP Customer Service Training (CST) is offering maintenance training for the HP 3000 Series 3X/4X/6X/7X and Series 37 computers.

Course 35022A (Series 3X/4X), Course 99075A (Series 6X/7X), and Course 35022B (Series 37) are designed to provide students with board-level troubleshooting and repair technology. Hardware topics such as ROM-based Diagnostics, System Backup and Boot-up, and Hardware Installation are reinforced with application software discussions.

Course information

- 35022A, 15 days
- 99075A, 8 days
- 35022B, 8 days

For additional course and/or schedule information or a copy of the course data sheet, please contact Customer Service Training at 415-691-5300 or via toll-free numbers at 800-523-0696 (in the continental U.S.) or 800-882-9595 (within California).

Training

HP 1000 service training

HP Customer Service Training (CST) is offering maintenance training for the HP 1000 M/E/F and A-Series computers.

Course 91303A (HP 1000 M/E/F-Series) and Course 35131A (HP 1000 A-Series) are designed to provide students with board-level troubleshooting and repair technology. Hardware topics such as memory, I/O, and diagnostics are reinforced with machine language programming discussions.

Both 91303A and 35131A are eight days. For more information or a copy of the course data sheet, please contact Customer Service Training at 415-691-5300 or via toll-free numbers at 800-523-0696 (in the Continental U.S.) or 800-882-9595 (in California).

Training

HP LaserJet printer service training update

HP Customer Service Training is making available the following HP LaserJet printer maintenance training schedule for 1988.

Product No.	Description	Length (days)
50042	Enhanced HP LaserJet printer service training	
Opt. 001	HP 2686A/D printer	5
Opt. 002	HP 33440A printer	4
Opt. 003	HP 2686A/D and HP 33440A printers	7

Schedule

Customer Service Training headquarters, Mt. View, California

- Week of:
- April 5
 - May 2
 - June 13
 - July 6
 - September 12
 - October 24

Technical Training Center, Dallas, Texas

- Week of:
- May 23
 - August 1

Technical Training Center, Rockville, Maryland

- Week of:
- April 25
 - June 6
 - August 15

For further information or a copy of the course data sheet, please contact Customer Service Training at 415-691-5300 or via toll-free numbers at 800-523-0696 (Continental U.S.) or 800-882-9595 (within California).



Business Computers

General

Language/Toolset bundles obsolete

The following Language/Toolset marketing bundles have been obsoleted from the April HP Price List.

- 31503A COBOL II developer's package
- 31504A FORTRAN 77 developer's package
- 31505A Pascal developer's package

Therefore, it will no longer be possible to get a discount when these languages and Toolset are purchased together. These products must now be ordered separately. Support for these bundles will continue for five years.

Small Business Computing

HP 250 upgrade offer

Now HP 250 users can upgrade to the more powerful HP 260 Series 40 at an extremely affordable price. This is an outstanding opportunity for users to increase their productivity at a lower cost.

Details

HP 250 users can return their system to HP and receive an attractive trade-in credit towards purchase of a new HP 260 Series 40. But not only the HP 250 may be returned; to meet our users' needs in every aspect, many peripherals have been included in this program. These peripherals may be returned towards purchase of new ones, thus adding significant value to the trade-in credit.

Why upgrade now?

- The HP 250 desk model will reach the end of support life soon. Hardware support contracts will be discontinued. HP does not guarantee availability of exchanged parts after this time, which consequently may result in a situation where a defect system cannot be repaired.
- A new HP 260 system, including mass storage devices, printer, and terminals, provides tremendous savings in cost of ownership.
- A new HP 260 Series 40 boosts performance by approximately 100 percent over the old HP 250 system and supports up to 15 active users.

Interested? Then call your local HP sales rep today to get your Power Up "Plus" Information Pack.

Small Business Computing

45003A/45004A memory boards discontinued

The 64- and 192-Kbyte memory boards (45003A and 45004A) for the HP 250 business computer system will be discontinued and removed from the HP Price List on April 1, 1988.

We recommend that those users requiring additional memory for their HP 250 system purchase the 256-Kbyte memory board (45007A). This memory board is fully compatible with the 64-Kbyte and 132-Kbyte memory boards and provides double storage capacity at the same price as the 132-Kbyte memory board.

Small Business Computing

Price increase on HP 260 upgrade products

Effective April 1, 1988, the list price of the Performance Upgrade PLUS (Turbo Board), PIN 45261AH, will be increased by about 10 percent. At this point in time, still another additional price increase is foreseen and will take place on November 1, 1988.

The price for the Processor Upgrade from an HP 260 Series 30 to the HP 260 Series 40 (45072AH) will also be changed as of April 1. Please contact your local HP sales rep for more information.

HP 3000

HP 700 terminals support clarification

HP 3000 MPE VIE support for the HP 700192 and 700194 terminals include support as a console and as a workstation on UB-Delta-4 MIT. The HP 3000 MPE VIE computer line, from the Series 37 to the Series 70, support these terminals as workstations. The HP 700192 terminal is the supported console on Series 37s through Series 58s (including the HP MICRO 3000XE) *except* the HP MICRO 3000. The following tables clarify the support policy.

Console support

HP 3000 SPU	Method connection	MIT support
Series 37, 37XE	ATPIM and ATP37	UP-Delta-4
MICRO 3000	Not supported	Nor supported
MICRO 3000XE	ATPIM and ATP37	UB-Delta-4
Series 42, 42XP, 52	ADCC	UB-Delta-4
Series 48, 58	ADCC	UB-Delta-4

Workstation support

HP 3000 SPU	Maximum configuration	MIT support
Series 37, 37XE	ATP37	14 UB-Delta-4
	ATP/M	28
MICRO 3000	ATPIM	15 UB-Delta-4
MICRO 3000XE (5 slot)	ATP37	14 UB-Delta-4
	ATP/M	16
MICRO 3000XE (10 slot)	ATP37	28 UB-Delta-4
	ATP/M	56
Series 42, 42XP, 52	ADCC	56 UB-Delta-4
	ATP	92
Series 48, 58	With/without	UB-Delta-4
	ATP EIP	152
Series 6X, 70	1 or 2	
	IO Bay	400 UB-Delta-4

HP 3000

New manual update services for HP 3000

Now users can order Manual Update Services (MUS) for individual HP 3000 products rather than for an entire product category.

Resulting from user feedback, the change in product structure reduces user support costs and eliminates the delivery of extraneous manual updates. The new products became effective February 1 for new users, and at contract renewal for existing users.

Previously, MUSs were only available for an entire category – delivering updates on all of the category's products as they became available. Category MUSs became obsolete on February 1.

Under the old structure, if users wanted updates of manuals for two Language Category products (FORTRANIV, PIN 32102B; and COBOL II/V, PIN 32233B), a product within the Productivity Tools Category (Inform/V, PIN 32246A), and a product within the Utility Category (OPT/3000, P/N 32238A), they had to purchase and receive updates on *all* products within these categories.

The costs involved in this example are listed here.

Product No.	Description	Monthly cost*
99081B+Q00	Language Category MUS (for FORTRAN and COBOL)	\$15
99082B+Q00	Productivity Tools Category MUS (for Inform)	10
99084B+Q00	Utility Category MUS (for OPT)	<u>5</u>
<i>Total monthly cost:</i>		\$30

The user would receive updates for the 40 products covered under these three categories, but wants updates for only four of the products.

Using the same example to illustrate the advantages of the new structure, the user would purchase, at a lower cost, the following products.

Product No.	Description	Monthly cost*
32102B+Q00	MUS for FORTRANIV	\$ 5
32233A+Q00	MUS for COBOLIV	5
32246A+Q00	MUS for Inform/V	5
32238A+Q00	MUS for OPT/3000	5
<i>Total monthly cost.</i>		\$20

The user would then begin receiving updates for these four products. As the examples show, product versus category MUSs reduce support costs *and* the user's potential frustration with sorting through unnecessary manual updates.

Please contact your local HP sales rep for implementation details.

* *Monthly costs are U.S. list.*

HP 3000

Introducing HP Symbolic Debugger/XL

HP Symbolic Debugger/XL (31508A/R) is a powerful, full-featured symbolic debugger to help users locate and correct errors in programs. The feature set facilitates high programmer productivity and user friendliness. This window-oriented debugger allows the user to examine the program state in which an error or some other condition occurs. The user may then take corrective action and resume execution, or abort the program.

Supported programming languages

HP Symbolic Debugger/XL is an example of leveraged technology across Precision Architecture (HP-PA) systems. Its origin is the HP 9000 Series 800, where it was developed to support the languages operating under HP-UX (i.e., C, FORTRAN 77, and Pascal). As a result, languages supported by HP Symbolic Debugger/XL include HP C/XL, HP FORTRAN 77/XL, and HP Pascal/XL, available on the 900 Series of HP 3000 systems.

Contact your HP sales rep for more information.

HP 3000

Introducing HP C/IXL

HP C/IXL is HP's implementation of C for 900 Series HP 3000 systems. It is a general-purpose programming language that provides the convenience and portability of a high-level language with the flexibility and efficiency of assembly language.

C is a proven systems programming language and is also widely used for

applications programming. Additionally, C is regarded as an excellent vehicle for transporting software between systems.

Highly compatible solution across systems

C is very compatible across operating environments. HP-PA systems use identical compiler technologies. Therefore, HP CIXL is completely compatible with HP C/HP-UX for the HP 9000 Series 800. Additionally, HP CIXL is highly compatible with CCSIC 3000 (for MPE V-based systems) from Corporate Computer Systems¹, C/9000, and VAX C².

Of great importance to many users is the smooth migration of C applications between MPE V and MPE XL operating environments. The CCS C/3000 compiler for MPE V-based systems is marketed and supported by Corporate Computer Systems, Inc. (CCS). CCS is an HP Plus referenced software supplier, headquartered in New Jersey. HP and CCS continue to work closely to ensure that CCS C/3000 and HP CIXL remain highly compatible. Appendix A of the HP C Reference Manual, PIN 92434-90001, contains detailed compatibility information to guide those users programming for portability.

Ordering information

HP CIXL (31506A/R) is available on MPE XL system Release 1.0. For more information, consult the CIXL data sheet contained in the Information Management HP Specification Guide (P/N 5953-9343, November '87).

¹ *CCS/C compilers are marketed and supported by Corporate Computer Systems, Inc., 33 West Main Street, Holmdel, New Jersey 07733, 201-946-3800.*

² *"VAX C" refers to C running under the UNIX operating system 4.2 BSD.*

Also in this issue

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Technical Computers

General

ALLBASE/HP-UX enhancements

Since the initial shipments of ALLBASE in March of 1987, substantial lab resources have been focused on enhancing the information management offering for HP-UX. In July of 1987, the HP TODAY interface to ALLBASE became available to customers as well as a new product, Visor, which offers menu-driven query and report-writing capabilities.

Now, in March 1988, Release 2.0 of ALLBASE is available with substantial tuning enhancements and new capabilities including Native Language Support and COBOL preprocessor support. The product tuning that has occurred was aimed specifically at increasing peak throughput and sustaining high throughput as the number of concurrent users increase. We achieved these objectives through expanded locking capabilities and by offering greater locking flexibility to the application developer.

In order to take advantage of Release 2.0 enhancements for HP SQL or HP IMAGE, it will be necessary for current installations to unload and reload their databases. For HP SQL applications, it will also be necessary to re-preprocess their application code. The benefits that can be achieved by upgrading to Release 2.0 follow.

HP SQL enhancements

- To increase concurrency during long, read-intensive transactions, HP SQL now supports cursor stability. This means that when no update has been made to a data page, the page lock will be released as the cursor or marker moves to a succeeding data page. Prior to Release 2.0, the data page locks were maintained until the completion of the entire transaction.

- Intent update locks are also now supported to reduce the possibility of deadlocks. Under this new locking mode, the system will choose a lock to allow the most concurrency while reducing deadlock potential.

To speed up joins, a modify scan feature has been implemented to minimize the number of times scans are closed and reopened.

- Native Language Support is provided for both 8- and 16-bit languages. The new HP SQL COBOL pre-processor allows users to access HP SQL databases from COBOL application programs.
- A new utility named SQLGEN enables users to generate the HP SQL commands that recreate all or part of an HP SQL environment. It facilitates any type of database recreation. It will be very useful for generating script files to recreate the database environment and to unload and reload databases for upgrading to Release 2.0 ALLBASE software.

HP IMAGE enhancements

- The initial disc space consumed when creating an HP IMAGE database can be significantly less than experienced prior to Release 2.0. Data page allocation will be based on initial capacity specified in the schema and will automatically be extended to the maximum specified as needed. Generally, when migrating from IMAGE/1000 to HP IMAGE, data will continue to expand but the magnitude of this expansion will, on average, be only half as great as it has been under previous releases.

To boost performance, a new hashing algorithm has been implemented.

- To reduce deadlock, a new procedure, HPISETMODE, has been added to implement intent update reads. When this type of read is invoked, data is locked exclusively in anticipation that the record will be updated or deleted.
- HPIGET will not jump to the new chain if the search item is updated.

- Current record positions are preserved across transactions. Datasets will not automatically return to the starting record in the dataset at the completion of each transaction.

Relation datasets and compound items are now fully supported by IQUERY.

Much of the effort surrounding this release of ALLBASE has been aimed at improving performance. These efforts will continue as we strive to position ALLBASE as the highest performing database solution on HP-UX.

HP Precision Architecture/HP-UX

Configuring a low-end HP-PA system for program development

HP-PA compilers are designed to exploit the many code optimization opportunities provided by precision architecture in order to produce the best executable code possible for user programs. A recent compiler performance study conducted by the Computer Language Lab produced several conclusions which may help in choosing an appropriate configuration for program development. Note that the conclusions listed here pertain to the compiler, linker, and XDB running on an HP 9000 Series 825 or 840, and *not* application code.

Minimum configurations of the Models 825 and 840 contain 8 Mbytes of main memory. Compiler benchmarks show that performance on an 8-Mbyte system is reasonably good for XDB, the linker, nonoptimizing compiles, and most optimizing compiles. However, in general, 16- to 24-Mbyte systems perform better – even for single users. For example, compiles with debug enabled

on a 16-Mbyte system show performance improvements of up to 150 percent over an 8-Mbyte system depending upon the particular benchmark. Compilations of 10,000 or more noncommented lines with debug enabled show much larger gains than compilations of less than 5,000 lines. The linker and optimizer also demonstrated significant performance gains on 16- and 24-Mbyte systems as compared to 8-Mbyte systems.

In summary, most nonoptimized compiles will run reasonably well on an 8-Mbyte system. For program developers of large procedures and optimized compiles, it is recommended to specify at least a 16-Mbyte system, with a 24-Mbyte system offering the best compiler performance. For additional compile performance, compiles should be done without optimization until the final stages of development.

Benchmark results for a multiuser development script can be found in the HP 9000 Series 800 performance brief (PIN 5954-9903, print date May, 1987). Contact your HP sales rep for more detailed information.

HP WOO

HP 9000 Model 825 floating point performance triples

Hewlett-Packard announced a CPU upgrade that more than triples the floating-point performance of the HP 9000 Models 825S and 825SRX systems. The formal announcement was made at the recent UniForum tradeshow in Dallas, Texas. The board upgrade boosts the Model 825 floating-point performance (as measured in Double Precision MFLOPS using the Linpack benchmark) to greater than 2.02 MFLOPS. This is approximately 90 percent faster than the Sun 4/260 and Silicon Graphics 4D/70, and over

five times faster than the recently announced MicroVAX 3600 in floating-point performance. HP now offers the highest computing performance of any workstation/server.

The upgrade is a field-installable CPU board set for HP 9000 Model 825S multiuser/servers and 825SRX super-workstations that do not require an I/O expander. No changes to application software are required to gain full advantage of the improved performance. Model 825 systems with the new upgrade are object-code compatible with all HP 9000 Series 800 systems.

The Models 825S/SRX systems still come standard with the original 825 CPU boards for users who do not require the extra performance but want a lower system price.

Ordering information

The product number of the Model 825 performance upgrade is A1036A. The A1036A requires HP-UX Version 2.1, which will be free of charge for users with SMS support contracts. Users not on support must update their HP-UX system to Version 2.1 by ordering the revision upgrade option (Option OCC) corresponding to their HP-UX user license as listed in the HP 9000 Series 800 price guide.

HP 9000

HP 9153C support on HP 9000 BASIC 5.0

The new HP 9153C disc drive is not supported under HP 9000 Series 300 BASIC 5.0. (Note that one problem exists: when 5.0 is used with HFS – Hierarchical File System – and the disc is configured as a single 40-Mbyte volume. All other configurations work fine.)

Users can now take advantage of the feature-packed HP 9153C with the current release of BASIC 5.0, and do not need to wait for an upgrade to 5.1.

The new HP 9153C offers the exceptional reliability of the 3½-inch Night-hawk mechanism coupled with a new 2-Mbyte (unformatted) microfloppy disc drive. (See January issue of *HP Channels*, page 15, for more information about the HP 9153C.)

Users can choose from options of 10, 20, or 40 Mbytes to meet their mass storage needs and take advantage of lower storage prices.

HP 9000

NFS update: NS-ARPA Series 300 HP-UX 6.0

The 6.0 revision of NS-ARPA Services/300, PIN 50952L, license to use networking software services product and corresponding media, HP 50952C, contains the following new features.

- ARPA IP level internetting
 - Rwho and ruptime Berkeley services
- Support for five LAN interfaces
- Configurable network memory limits

The ARPA IP level internetting allows the HP 9000 Series 300 to be used as an ARPA gateway into other subnets. That means you can use the Series 300 as a routing node to forward information from one LAN to another, or from a LAN to a wide-area network (WAN). The messages are automatically forwarded to the destination node on another physical cable connected by a Series 300 with two or more LAN interfaces, or to a WAN with a third party gateway. This capability makes the Series 300 a well rounded networking workhorse – further extending its reach into the ARPA world.

Rwho displays users logged into systems on the network and ruptime displays CPU utilization information about systems running on the network. These commands enhance a user's view of what other systems are doing on the network – an excellent tool for network management.

The support of multiple LAN interface cards, known as multihoming, allows for the creation of a central hub serving the needs of nodes connected to a maximum of five separate LANs, i.e., five interface cards per Series 300. That hub could be the master Yellow Page (YP) server maintaining up-to-date system administration files for all the nodes. The hub benefits users by filtering messages and enhancing network security by forwarding only information destined for a node on the appropriate LAN. Filtering also reduces traffic on LANs without the need to see messages.

Users may save networking memory with the ability to configure the maximum amount of memory they allocate, and how much per session. The previous method allocated a fixed block of memory for all networking activity. Now users can specify how much memory to use per networking call, and NS-ARPA only takes the amount of memory it needs. This is a more efficient and effective use of memory and an advantage over the competition.

NFS Services1300 requires that individuals ordering support services – SMS, Extended SMS, and MUS – use the 50969L product number, instead of the 50969A. To correctly order these support services use the following:

Product No.	Description
50969L + S00	SMS
50969L + W00	Extended SMS
50969L + Q00	MUS

6.0 NS-ARPA incompatible with HP-UX Revisions 5.X and earlier

Revision 6.0 of the (50952L/C) NS-ARPA Services1300 must execute on a Series 300 with Revision 6.0 of HP-UX. Revision 6.0 is now shipping. Therefore, users with pre-6.0 versions of HP-UX must upgrade to 6.0 HP-UX in order to use the 6.0 NS-ARPA Services/300. Systems with pre-6.0 versions of HP-UX and NS-ARPA can communicate over the network with systems with the new 6.0 HP-UX and NS-ARPA.

In order to ease convergence between the HP 9000 Series 300 and Series 800 networking products, the NS-ARPA Services1300 now follows the Series 800 implementation. As a result, some of the networking commands were changed on the NS-ARPA Services/300 revision from previous 5.X versions. Users with both 6.0 and 5.X versions of NS-ARPA will experience some differences. These differences have been outlined in an SE white paper entitled "Comparison of NS-ARPA Services1300 Before and After Release 6.0," and can be ordered from the HP Software Distribution Center SDC, PIN 50952-90098.

NS-ARPA 5.4 to 6.0 transition

The new 50952L and 50952C NS-ARPA products are Revision 6.0. The old 50952B NS-ARPA Services/300 will be removed from the HP Price List on April 1, 1988, and is Revision 5.4. Users with HP-UX Version 5.4/5 have until this time to order the 50952B NS-ARPA Services/300 without having to upgrade to HP-UX 6.0 if they want NS-ARPA. Consistent with the HP-UX products, users who have orders on the books for 50952B and the 6.0 revision must change their orders to the new 50952C/L products. Because the new 6.0 50952L/C NS-ARPA products went on the HP Price List one month after the introduction of 6.0 HP-UX products, some users may have ordered and were shipped the 50952B product expecting the 6.0 version of NS-ARPA. If you fall into this case, contact your

HP 9000

APSE products for the HP 9000

The next area of major development in software is in programming environments for software programmers. The reasons for this development are the continued shortage of software programming resources, the increasing size of complex software systems, and with the increased efficiency in hardware development, increasing growth of software development and maintenance costs as a percentage of total system costs.

APSE, Ada Programming Support Environment (or IPSE, I=Integrated), is a framework that supports and integrates various tools into it. The framework consists of mechanisms for supporting the following:

- Common user interface
- Project management (planning, estimating, defect tracking)
- Configuration management (version and release control, archiving)
Program development (compiler, debugger, editor, linker)
- Database interface (Allbase, Oracle, Informix, Unify, Ingres)
- Subsystem interface (Starbase, GKS, NS, ARPA, etc.)
- Operating system interface (HP-UX, MS®-DOS, etc.)

Users who have become sensitized to these factors and the need to increase programmers' productivity through APSE are primarily in the very-large-systems business, such as government contractors (both military and civilian), and government agencies.

With the growing interest in APSE through our current customer base and our internal company investigations,

several organizations have contributed to help APSE suppliers port onto the HP 9000 Series 800. These ports are of the following products:

Product	Company name	Location	Contact
ISTAR	Imperial Software Technology Ltd.	London, U.K.	Jim Stoddart
CENOS	GEC Software, Ltd. (part of General Electric Co., Ltd.)	London, U.K.	Patrick McGill
Software Through Pictures	Interactive Development Environments	San Francisco, Ca	

Activities that are driving this development are the DoD desire to be more cost effective and the STARS (Software Technology for Adaptable and Reliable System) program.

For more sales information on these products, please contact your HP sales rep.

HP 9000

FORTRAN 77 on the HP 9000 Series 800 — update

The HP-UX 2.0 FORTRAN 77 compiler on the HP 9000 Series 800 has been significantly improved over earlier HP-UX 1.1 and 1.2 compilers. In addition to improving compiler quality, new features have been added:

- Additional VMS, 1000, 3000 extensions (details follow)
- HP-UX system calls from FORTRAN
Long file system name support
- More flexible \$INCLUDE option
- Additional VMS extensions
 - BYTE datatype
 - Variable expressions in format statements (phase I)

continued on next page

- Extended range DO loops
- Parenthetical expressions in parameter statements
- Parameter statement allows intrinsic calls
- Octal, hex, ASCII, and Hollerith compatibility
- Looser type checking, automatic type conversions
- Selectable internal representation for LOGICAL data type
- Length specifier following symbolic name or function
- "\$" may appear in symbolic names
- Variable may be initialized in type statement
- Trig functions that take degree arguments
- List-directed internal memory I/O
- DATA statements for COMMON variables in subprograms other than BLOCK DATA subprograms

■ Additional HP 1000 extensions

- Arithmetic IF allowed to have two labels
- Modification of DO loop variable inside of loop
- UNIT = specifier in I/O allows record number qualifier
- Gaussian and Poisson random number routines
- Vector instruction set routines

■ Additional HP 3000 extensions

- Dynamic arrays in subroutines
- Character passing option compatible with FORTRAN 66
- Variable length character declaration

■ NLS support

- Message catalog for fc driver
- 16-bit character string support (phase I)

HP 9000

HP 9000 Series 800 literature

Literature on the HP 9000 Series 800 family can be ordered from your HP sales rep. These materials cover Models 8253, 840S, and the 850S.

Ordering information

Lit. No.	Description
5954-9897	Computer systems for engineering, scientific and business applications folder
5954-9898*	HP 9000 Model 825S product brief
5954-9392*	HP 9000 Model 825SRX product brief
5954-9899*	HP 9000 Model 840S product brief
5954-9900*	HP 9000 Model 850S product brief
5954-9456*	Reliability and Cost of Ownership
5954-9457*	Migration product brief
5954-9458*	Networking product brief
5954-9459*	HP-UX product brief
5954-9910D*	Value-Added Business
5954-9902	HP 9000 Series 800 software and communications technical data
5954-9903	HP 9000 Series 800 performance brief
5954-9906HP	Precision Architecture handbook
5954-9911	HP-PA interface data sheet
5954-9912	Interfaces' technical data (sales brochure)

* Comes with the folder (PIN 5954-9897), but run be ordered separately.

Obsolete literature

Lit. No.	Description
5953-8784	HP 9000 Model 840 computer systems brochure
5953-8785	Precision Architecture folder
5954-9901	HP 9000 Series 800 hardware data book
5954-99M	Software Supplier/VAR direct mail
5954-9905	UNIX World reprint article
5954-9908HP	HP 9000 Series 800 computer system poster

If you have any questions regarding this literature or the HP 9000 Series 800, please contact your HP sales rep.

HP 9000

HP 9000 software pricing guide correction

The following information on HP SQL/300 and HP Visor1300 was inadvertently omitted from the November, 1987, edition of the HP Software Pricing Guide (PIN 5954-9418), domestic and international versions. Please make a note of this information. It will be inserted in the next revision of the pricing guide.

Product No.	Description
79725A	HP SQL/300 Development Environment. A relational database management system based on Structured Query Language (SQL). Includes language preprocessors for C, FORTRAN, or Pascal programs
Opt. 022	Software on 1/4-inch tape cartridge
Opt. 045	Software on 3 1/2-inch double-sided disc
79727A	HP Visor/300 Database Access Tools. A form-based interface to HP SQL/300 databases for performing ad hoc queries or generating customized reports.
Opt. 022	Software on 1/2-inch tape cartridge
Opt. 045	Software on 3 1/2-inch double-sided disc

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Personal Computers

General

Correction: AdvanceMail on 3%-inch media

On page 29 in the October issue of *HP Channels*, in the article entitled, "3%-inch Media Available for AdvanceMail," we announced the availability of AdvanceMail in 3%-inch disc format for both the HP Vectra PC range and IBM PS/2 models 30150160. We incorrectly said the disc capacity was 1.4 Mbytes. The disc capacity is actually 720 Kbytes.

The rest of the ordering information remains the same.

Product No.	Description
27535F	AdvanceMail for the HP Vectra PC and IBM PC 5%-inch format
27535F Opt. 003	AdvanceMail for the HP Vectra PC and IBM PC 5% - and 3%-inch format

General

Updated ZBM PC kit with Business System Plus

With Business System Plus and the purchase of the BSP IBM Personal Computer Kit, users with IBM personal computers can enjoy the benefits of PAM. The BSP IBM personal computer kit has been adjusted to incorporate and be consistent with the new OfficeShare product structure. The new kit (PIN 32512A) includes the User Services/Vectra PC and the PAM license and manual.

To take advantage of the performance improvements of BSP, users need the OfficeShare software (Version B.00.00.) However, users who need immediate delivery of a BSP system

should order the old BSP IBM PC kit (32511A). Once again, PAM is only available with the purchase of Business System Plus.

To summarize, users who are connecting PCs into a BSP network need the following products:

- For Vectra PCs: 50923F, Network Services – User Services/Vectra PC
- For IBM PCIATIXT: 32512A, BSP IBM Personal Computer Kit
- For all PCs: 50929F, LAN PC User Configuration and Diagnostic Kit 50926F, StarLAN/Vectra PC Link or 50927F, ThinLAN/Vectra PC link

General

Using AdvanceMail with the HP Portable Vectra CS PC

Many users want to take advantage of the PC mailing facilities of AdvanceMail with the New HP Portable Vectra CS PC. This combination of hardware and software offers many benefits to the executive on the move, such as:

- More time for business – whenever they are in the world, users can easily keep in touch with the office and read their mail.
- Freedom from the desk – AdvanceMail users don't have to be connected to the HP 3000 to read and create messages.

Users who want to use AdvanceMail on the HP Portable Vectra CS PC should note that the current version of the software (A.01.03) requires a hard disc; the flexible disc drive version of the HP Portable Vectra PC will not support AdvanceMail.

For more information about AdvanceMail on the HP Vectra family of PCs, please contact your HP sales rep.

General

More office products supported on new PCs

To continue offering the best solutions to our users, HP will be supporting Print Central, Information Access, Resource Sharing, Cooperative Services, Business System Plus, and OfficeShare products on the new HP Vectra PC and IBM PS/2 PC family products.

Because of different system-testing schedules for the software and networking products, certification of Print Central, Information Access, Resource Sharing, Cooperative Services, Business System Plus, and OfficeShare products are being completed in phases. Listed here is the planned support schedule of the above products on the new PCs.

Planned support for new PCs

Product	System connections		
	Direct Connect (basic serial)	OfficeShare (2 and 3*)	
		Wide area (HP Serial)	Local area (StarLAN/ThinLAN)
<i>PC integration products</i>			
Print Central	Supported	No	No
Information Access	Supported	Supported	Supported
Cooperative Services	Supported	Supported	Supported
Resource Sharing	No	Supported	Supported
Business System Plus	No	No	Supported
<i>New PCs supported</i>			
HP Portable Vectra CS PC	Supported	Supported (3)	**
HP Portable Vectra CS/20 PC	Supported	Supported (3)	**
HP Vectra CS PC family	Supported	Supported (2&3)	Supported (2&3)
HP Vectra ES PC family	Supported	Supported (2&3)	Supported (2&3)
HP Vectra RS PC family	Supported	Supported (3)	Supported (3)
IBM PS2/30	Supported	Supported (3)	Supported (3)
IBM PS2/50	Supported	Supported (3)	Planned***
IBM PS2/60	Supported	Supported (3)	Planned***
IBM PS2/80	Supported	Supported (3)	Planned***

*OfficeShare 2 = existing StarLAN, ThinLAN, and Serial software products.

OfficeShare 3 = New OfficeShare family of networking software for PCs.

Available on the March 1, 1988, HP Price List. Support of the two versions of OfficeShare are indicated on the above products by a "2" and/or "3"

**Not planned

***LAN connection support is planned. Certification dates have not yet been defined.

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

General

AdvanceWrite I and II discontinued

Just a reminder that AdvanceWrite I and II will be discontinued on April 1, 1988. Users can still order these products until that date. On April 1, AdvanceWrite Plus becomes the only member of the AdvanceWrite family available in English.

We recommend that users upgrade to AdvanceWrite Plus as soon as possible. Upgrades are available for a limited time through HP Direct.

Product No.	Description
27506F	AdvanceWrite I
27507F	AdvanceWrite II
27546-60001	AdvanceWrite I to AdvanceWrite Plus upgrade
27546-60002	AdvanceWrite II to AdvanceWrite Plus upgrade

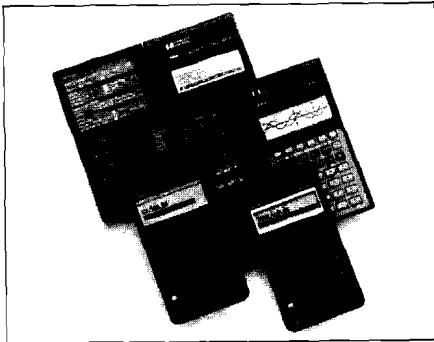
Keep in mind that these upgrades offer over 50 new features, including support of the IBM PC family, Graphics Gallery integration, new documentation, and the integration of images scanned with the HP ScanJet scanner and Scanning Gallery software.

It is important to note that AdvanceWrite I and II run only on the original HP Vectra PC or the new HP Vectra ES or ES/12 PC with the D1350A PC kit and the C1406A keyboard. Order AdvanceWrite Plus to use with the other members of the HP Vectra PC family.

For more information, please contact your HP sales rep.

Portable

HP calculator line expands with four new products



Four new calculators are now available from Hewlett-Packard. The two business and two scientific calculators build on the strengths of the HP Business Consultant and HP-28C, and improve on them. All are priced right. They're packed with the functions business and technical professionals demand and continue the HP tradition of premium quality and reliability.

What they have in common

All four of the new calculators are packed with innovative features that make them powerful and easy to use. They have:

Menus and softkeys that let users get to their solutions quickly and easily

HP Solve that provides an easy alternative to programming

Multiline displays

- An invisible infrared link to the HP 82240A infrared printer

And profession-specific solutions books are available in English for all the new calculators.

Business calculators

The HP Business Consultant II (HP-19B) is the top-of-the-line business calculator from HP. Designed for users who demand the very best, it offers

business graphics, a comprehensive set of business and financial functions, data- and time-management functions, number lists, conversion applications for currency and unit measurements, 6500 bytes of RAM, algebraic entry system, and an elegant folding case.

The new HP Business Consultant II is available with messages and prompts in German, Spanish, French, Italian, and Portuguese in addition to English.

Documentation in these languages is available separately when the calculator is purchased in the U.S.

The HP-17B Business Calculator is a real workhorse that's designed for the user who needs a function-packed, easy-to-use machine. It offers number lists, a powerful package of business and financial functions, 6500 bytes of RAM and an algebraic entry system.

In Europe and Latin America, the HP-17B is available with messages and prompts in German, Spanish, French, Italian, and Portuguese in addition to English.

Scientific

The HP-28S is unparalleled for the scientific professional or student who demands a state-of-the-art tool. It offers 32 Kbytes of RAM, memory management features for organizing items stored in memory, an advanced graphics package, symbolic algebra and calculus, sturdy folding case, and enhanced RPN with algebraic entry.

The HP-27S is a two-in-one calculator that's indispensable for technical professionals and students who also need to perform business calculations. It offers powerful scientific functions, financial functions for TVM and amortization, number lists, base conversions, appointment and time calculations, 6.7 Kbytes of RAM, and an algebraic entry system.

Solutions books

Profession-specific solutions books are available in English for all the new calculators. Business applications for the HP Business Consultant II, HP-17B, and HP-27S include *Real Estate, Banking and Leasing, Business Finance and Accounting, Marketing and Sales, and Personal Investment and Tax Planning.*

Technical Applications (featuring two advanced HP Solve functions that are not documented in the owner's manual) is also available for the HP-27S and HP Business Consultant II.

Science and engineering applications for the HP-28S include *Electrical Engineering, Mathematical Applications, Vectors and Matrices, Algebra and College Math, Calculus, and Probability and Statistics.*

Lit. No.	Description
00017-90019	Real Estate, Banking, and Leasing
00017-90020	Business Finance and Accounting
00017-90021	Marketing and Sales
00017-90022	Personal Investment and Tax Planning
00027-90044	Technical Applications
00028-90103	Electrical Engineering
00028-90111	Mathematical Applications
00028-90105	Vectors and Matrices
00028-90101	Algebra and College Math
00028-90102	Calculus
00028-90104	Probability and Statistics

Ordering information

Product No.	Description
HP-19B	Business Consultant II
HP-17B	Business Calculator
HP-28S	Advanced Scientific Calculator
HP-27S	Scientific Calculator

Contact your HP sales rep for more information about these new calculators.



Desktop

ESDI drive mechanisms available for HP Vectra RS PC

HP announces three add-on hard disc drive mechanisms for the HP Vectra RS PCs. Available in 103-, 155-, and 310-Mbyte storage capacities, these drive mechanisms are the same high-performance, high-reliability ESDI drive mechanisms that are standard in the HP Vectra RS/20 Models 100, 150, and 300.

The add-on disc drive mechanisms can be used as second hard disc drives in HP Vectra RS/16 and RS/20 PCs, already equipped with one ESDI drive. The add-on mechanisms enable the user to configure an HP Vectra RS PC with up to 620 Mbytes of disc-storage capacity. No additional cabling or controllers are required to install a second drive.

The add-on disc drives can also be used as replacement drives for users who wish to upgrade HP Vectra RS PCs with the 40-Mbyte ST-506 hard disc drive to the large-capacity. ESDI drives. When used as an upgrade, the ESDI four-function controller (HP D1677A) must also be installed.

ESDI drives are performance leaders, featuring 17 millisecond average seek time and 40,000 hour MTBF - the highest reliability for a 5-inch mechanism.

Product No.	Description
D1674A	103-Mbyte ESDI add-on drive mechanism
D1675A	155-Mbyte ESDI add-on drive mechanism
D1676A	310-Mbyte ESDI add-on drive mechanism
D1677A	ESDI four-function controller

Desktop

How to order the HP Vectra PC Keyboard/DIN

The HP Vectra PC Keyboard/DIN may be purchased in two ways: as a stand-alone second keyboard for your system, or as a substitute keyboard for the Enhanced HP Vectra PC Keyboard that is included as standard for the HP Vectra CS, ES, and RS PC families. To order the HP Vectra PC Keyboard/DIN as a second keyboard for your PC, simply place an order for the C1406A. Please note this keyboard is only supported on the ES and ES/12 systems and will be obsolete by October 1988.

To substitute the HP Vectra PC Keyboard/DIN for the Enhanced HP Vectra PC Keyboard in the HP Vectra ES and ES/12 SPU bundles, three product numbers must be ordered instead of the SPU number (D12XXA or D13XXA)

that is published in all the price guides and literature. This SPU number combines the CPU, the Enhanced HP Vectra PC Keyboard, and the PC Kit product numbers for ease of ordering. You must order each of these individual components separately (i.e., the CPU, HP Vectra PC Keyboard/DIN, and PC kit) to substitute keyboards.

These products were added to the October 1 HP Price List, please consult it for a complete description of these components. The sum of the three components' prices equals the published price for the SPU, as the Enhanced HP Vectra PC Keyboard and the HP Vectra PC Keyboard/DIN are priced the same.

Product No.	Description
<i>HP Vectra ES or ES/12 CPU + HP Vectra PC Keyboard/DIN + HP Vectra ES PC Kit</i>	
45945D	ES Model 10 CPU + C1406A + D1350A Option ABA (U.S.) Option ABA (U.S.)
45970D	ES Model 20 CPU
45966D	ES Model 21 CPU
45979D	ES Model 22 CPU
45045C	ES/12 Model 10 CPU
45970C	ES/12 Model 20 CPU
45966C	ES/12 Model 21 CPU
45979C	ES/12 Model 22 CPU
45980C	ES/12 Model 40 CPU
45958C	ESI12 Model 41 CPU
45959C	ESI12 Model 42 CPU

Contact your HP sales rep for more information.

Desktop

HP Vectra PC literature update

The HP Vectra PC literature has been updated to reflect the latest information about the HP Vectra PC family of products. Order the new literature to be better informed about our PC product offerings.

Ordering information

Lit. No.	Description	Replaces
5954-8991	HP Vectra CS PC data sheet	
5956-4320	HP Vectra RS PC data sheet	5954-8994
5956-4311	HP Vectra ES PC data sheet	5954-8992
5956-4312	HP Vectra ES/12 PC data sheet	5954-8993

Contact your HP sales rep to get copies of this literature.

Desktop

HP Vectra RS PC corrections

The February issue of HP Channels reported incorrect information regarding HP Vectra RS PC and accessories. The article describes the memory expansion kits incorrectly. The Model D1541A is an 8-Mbyte expansion kit (not 1-Mbyte), and the Model D1640A is a 1-Mbyte memory expansion kit (not 8-Mbyte).

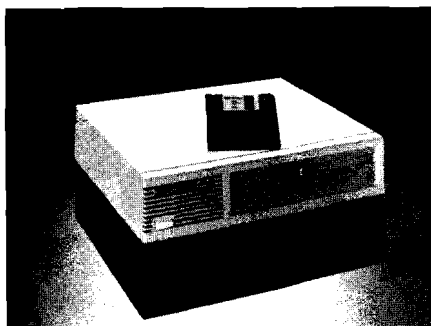
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Peripherals

Mass Storage

HP 9122C: new 3 1/2-inch floppy disc drive



Hewlett-Packard introduces the HP 9122C – a highly leveraged 3 1/2-inch microfloppy disc drive. Available in a single- or dual-drive configuration, the HP 9122C is tailored for the measurement-automation and technical-systems markets. It replaces the HP 9122D and 91225, and uses the SUBSET180 protocol. (SUBSET180 is similar to CS/80, but includes fewer commands.)

With the HP 9122C, users will receive twice the capacity over current HP floppy-only products – a full 2 Mbytes

(1.42 Mbytes formatted). This increase in capacity, however, does not mean an increase in price. The 2-Mbyte microfloppy costs the same as its lower-capacity predecessors and is ideal for backup, increases storage, and file transfers among systems.

As with any new floppy format, understanding media compatibility is important. The HP 9122C employs an ANSI-standard format-sensing mechanism to differentiate 2-Mbyte diskettes from those of other capacities. However, 2-Mbyte media should not be used in any disc drive other than a 2-Mbyte one. Existing 1-Mbyte and 1/2-Mbyte user media may be used with confidence in the HP 9122C, although 2-Mbyte media is required to obtain the increased capacity storage. The following graphic depicts backward compatibility of HP floppy discs.

Media compatibility of 3 1/2-inch microfloppy

	2-Mbyte media (Black disc)	1-Mbyte media (Grey disc)	0.5-Mbyte media (Blue disc)
2-Mbyte drive	Yes 2-Mbyte format only	Yes 1 and 0.5-Mbyte format	Data exchange only* 0.5-Mbyte format only
1-Mbyte drive	Not allowed	Yes 1 and 0.5-Mbyte format	Data exchange only* 0.5-Mbyte format only
0.5-Mbyte drive	Not allowed	Yes 0.5-Mbyte format	Yes

*A single-sided drive has only one read/write head, and single-sided discs are designed for use on only one side. Single-sided media, if used in double-sided drives on a regular basis, can cause data errors, drive contamination, and drive damage. Use single-sided media in double-sided drives only to exchange information with double-sided discs. Keep the single-sided disc as a back-up.

Contact your HP sales rep for more information.

Mass Storage

HP 9122C system support

The new HP 9122C floppy disc drive features a compact package design and a microflop that's twice the capacity of HP's current 3%-inch microflop

products. In addition, single- or dual-drive configurations are available. The disc drive is supported on many HP systems and is attractively priced.

System support

System	Support	Comments
HP 9000		
Series 2001300 BASIC	5.0	
Series 2001300 PAWS	3.2	
Series 300 HP-UX	6.0	
DOS coprocessor		Future support is planned.
HP 1000		
A-Series RTE-A	5.0	
9845B/C	Yes	Call Structured Software Systems at 609-386-7294.
9825T	Yes	Same as 9845B/C
Instruments		
3562 dynamic signal analyzer	Yes	
1630 logic analyzer	Yes	
Personal computers		
HP 150C	No	HP 9123D is drive of choice.
HP Vectra PC	No	Uses integrated 2-Mbyte floppy drive

The HP 9122C comes standard in a dual-drive configuration. Option 001 specifies a single-drive configuration.

Mass Storage

HP announces new midrange disc drives

The HP 7959B, 7963B, and 97963B are Hewlett-Packard's new 5%-inch disc products, each with 304 Mbytes of capacity.

The HP 7959B is a single-mechanism disc subsystem using the same package design as the current HP 7957A and 7958A disc drives. The HP 7963B is the same height and width as the above products, but almost twice the depth. This extra space allows up to two additional mechanisms, to be placed in the package (for a maximum configuration of up to three 304-Mbyte mechanisms).

Each mechanism contains its own controller. The HP 97963B 304-Mbyte upgrade kit will be field upgradeable.

All three products are based on HP's own 5%-inch Winchester disc mechanism. This HP-designed and built mechanism features a seek time of 17 ms, and overall performance similar to higher capacity 8-inch discs. Other key performance features include a track positioning system using embedded servo code, a channel optimization feature similar to rotation position sensing (RPS), and automatic sparing.

Lower capacity versions of these drives (81 and 152 Mbytes) will be announced and made available sometime later in 1988.

Contact your HP sales rep for further information.

Mass Storage

HP 915319154 disc drive discontinuance change

In response to user input, Hewlett-Packard will keep the HP 9153A/B and the 9154A/B on the HP Price List for three additional months beyond the previously published discontinuance date of April 1, 1988.

This means that effective July 1, 1988, the HP 9153A/B and 9154A/B will be removed from the HP Price List and enter the discontinuance phase of their life cycles. Support life will be five years.

Remember that these products are being discontinued due to the recent introduction of the new HP 9153C. Now that the HP 9153C is supported on HP 9000 Series 300 BASIC 5.0 (except for HFS with a single 40-Mbyte volume), there is even more reason to purchase the new disc drives.

Mass Storage

Discontinuance notice for personal data-storage products

With the introduction of the HP 9122C floppy disc drive, traditional users of the HP 9122D and 9122S are encouraged to upgrade to the new 2-Mbyte product. Users will find the HP 9122C to be a more attractive offering than the products it replaces – twice the capacity

for the same price. For this reason, the following products will be discontinued September 1, 1988:

- HP 9122D – 3½-inch floppy disc drive in dual-drive configuration

Networks

More PC integration with HP AdvanceNet

Now users can get the information they need – when they need it – through HP AdvanceNet. HP has strengthened the integration of personal computer users into an enterprisewide local area network (LAN) with a new release of the

- HP 9122S – 3½-inch floppy disc drive in single-drive configuration

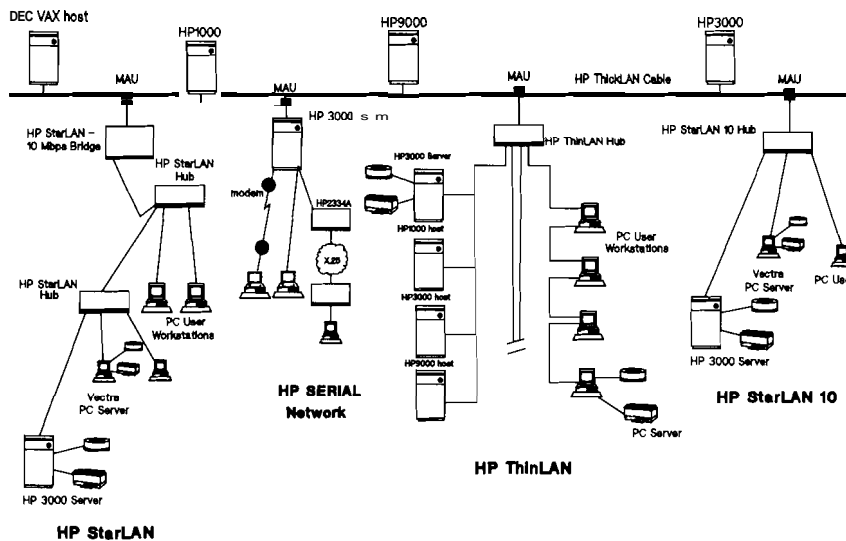
Support life for both is five years from the discontinuance date.

HP OfficeShare Family of Networking Software. This new release provides several new features for HP Vectra and IBM PCs, including enhanced PC-mini integration, multivendor communication, and PC-to-PC communications.

and may also be accessed programmatically.

- *NetIPC/RPM Development Package* – The NetIPC/RPM Development Package provides programmatic tools that enable application developers to write integrated, distributed applications utilizing the processing power of PCs and HP 3000s. NetIPC (Interprocess Communication) is a set of libraries for Microsoft C and Lattice C that enables PC processes to communicate over the network with peer processes running on an HP 3000. RPM (Remote Process Management) enables the PC to control a process on an HP 3000. The development package is sold separately from the other services, so only software developers need purchase the package. A network link is all that is required for PCs to use software on the network written with these libraries.

PC Integration with HP AdvanceNet



New services and benefits

- *Terminal Access to HP 1000, HP 9000, and DEC VAX Hosts* – Additional connectivity is offered to PC users through terminal access to HP 1000, HP 9000, and DEC VAX computers. PCs on a LAN can serve as terminals to many different machines, thus saving money by reducing equipment investment and saving time by providing multihost connectivity from a single workstation. This virtual terminal capability provides character model terminal emulation to the HP

1000, HP 9000 (all models except the Series 500), and DEC VAX machines. The capability is accessed by the user via the HP Terminal Program.

- *Network File Transfer (NFT)* – Network File Transfer (NFT) allows better communications and data exchange between PC users and their network computing environment. NFT provides network file transfer between PCs and HP 1000s, HP 3000s, HP 9000s, and DEC VAX hosts. The NFT service is accessed by a PC user with DSCOPY command,

- *PC-to-PC Communications* – OfficeShare implements a NetBIOS application interface supporting specific NetBIOS applications for PC-to-PC communication. NetBIOS support for selected third-party applications allows users access to key multi-user applications including modem-sharing and electronic mail. Currently, these listed communications applications are Hayes SmartCom II and Network Courier.

- *SERIAL over X.25* – The HP SERIAL Network software provides PC users with remote connectivity to an HP 3000, including over X.25 networks through back-to-back HP 2334A statistical multiplexers. This allows geographically remote PC users to access the network services of an HP 3000 server as if it were local.

- *Other Services plus Reduced Memory Requirements* – The HP OfficeShare Family of Networking Software enables users to enhance communication, boost productivity, and reduce costs through the additional services of disc and file sharing, printer and plotter sharing, the HP 3000 communications. HP Vectra PC servers now support up to 30 concurrent

users, and may be integrated into networks with HP 3000 servers. This new release has also significantly reduced the amount of PC memory required for the network software, and supports the LIM 3.20 Expanded Memory Specification (EMS) for the use of expanded PC memory.

Network links

The network services are sold separately from the links, allowing users to take full advantage of the flexibility of HP SiteWire. The network services can be used over any of the network links. This offers users an extremely flexible and scalable architecture. Every link can be integrated into one enterprisewide AdvanceNet LAN to provide all users with the access and services they need.

HP StarLAN – 1 Mbps LAN link using unshielded twisted pair wiring. This wiring often already exists, running parallel with the user's telephone wiring. The link supports HP Vectra PCs, IBM PC/XT/AT, IBM PS/2 models 25 and 30, and the HP MICRO 3000 and HP 3000 Series 37. It is a flexible network solution for integrating PCs and HP 3000s in complete office automation solutions. Personal computers on a StarLAN network can communicate with HP computers that are on ThinLAN or ThickLAN networks via a StarLAN bridge.

HP ThinLAN – 10 Mbps thin coaxial cable LAN link, supporting HP Vectra PCs, IBM PC/XT/AT, IBM PS/2 models 25 and 30, and HP Touchscreen PCs, as well as HP minicomputers. It is especially useful where coaxial cable is already installed, for integrating HP Touchscreen PCs, or in engineering and manufacturing environments.

▪ **HP SERIAL Network** – The HP SERIAL Network link provides an asynchronous connection to HP 3000 computers for HP Vectra PCs, Portable Vectra CS, and HP Touchscreen PCs, all IBM PCs, and IBM PS/2 models 25, 30, 50, 60, and 80. This connection allows remote PC access to PC files residing on HP 3000 servers, Information Access, HP DeskManager, terminal access, NFT, and NetIPC/RPM applications. HP Vectra PCs and IBM PCs can also make this connection via back-to-back HP 2334A multiplexers over an X.25 network.

▪ **HP StarLAN 10** – StarLAN 10 is a 10 Mbps LAN link, using unshielded twisted pair wiring, for HP Vectra PCs, IBM PC/XT/AT, IBM PS/2 models 25 and 30, the HP Touchscreen PC (North America only), and HP minicomputers. HP StarLAN 10 will allow users to use high-speed applications and workstations, such as 80386 processor-based personal computers, without the need to install new building wiring in many cases. It is especially useful in business office environments that require a large number of nodes and experience heavy network traffic. StarLAN 10 is expected to be available the first half of calendar 1988.

Mixed Link Networks – For the greatest growth potential with minimal geographic restraints, ThinLAN or ThickLAN coaxial cable can be used as a backbone for a sitewide LAN. HP StarLAN, StarLAN 10, and ThinLAN subnetworks can be attached to a backbone cable to increase distances, the number of network nodes, and to provide intercommunication of the computers on these LANs.

Summary

Like all HP AdvanceNet products, OfficeShare is based on the International Standards Organization OSI networking model. OfficeShare provides compatibility with industry standards.

such as IEEE 802.3, and employs de facto standards such as Microsoft Networks. HP AdvanceNet signifies a commitment by Hewlett-Packard to provide powerful yet easy-to-use networks with a well-supported growth path.

The new HP OfficeShare Family of Networking Software integrates PC users into scalable, low-cost networks, to provide enhanced PC-to-mini integration, multivendor communication, and PC-to-PC communications, for improved communication, increased productivity, and reduced costs. Please refer to the HP OfficeShare Network for Personal Computers data sheet (PIN 5956-4141) for more specific product information.

Networks

New distributed application development package

HP's newly announced NetIPC/RPM Development Package for PCs provides application developers with the power to write distributed applications using standard HP AdvanceNet software. The foundation for the development of advanced distributed processing applications between a PC and HP 3000 on an HP AdvanceNet network, it is a set of Network Interprocess Communication (NetIPC) and Remote Process Management (RPM) program libraries based on HP AdvanceNet standards. These libraries provide standard communication between concurrent processes on a PC and HP 3000, and the ability for a PC to start and manage a process on an HP 3000. HP distributed applications such as Information Access and HP AdvanceMail use NetIPC for PC and HP 3000 LAN communications.

The NetIPC/RPM Development Package for PCs contains programming libraries for use in Microsoft C or Lattice C programs. Other languages such as Pascal can call C routines, offering flexibility in the programming languages developers may use. The OfficeShare network transport is the network software used by the PC, and is supplied as part of the StarLAN, ThinLAN, and SERIAL Network link products. The libraries are linked by the programmer to the application being developed.

Application users need only purchase the appropriate link, and User Configuration and Network Diagnostics product to use the developed application. They need not purchase the NS-User Services/HP Vectra PC product unless they want to additionally use those network services. Applications using NetIPC/RPM libraries may be used concurrently with NS-User Services1 Vectra, allowing users to take advantage of both the application and standard HP AdvanceNet network services such as PC and HP 3000 servers. Many competitors cannot offer this complete integration *NOW*.

For the HP 3000, concurrent processes are developed using NetIPC/3000, and RPM/3000. NetIPC/3000 is provided with the HP 3000 network link product, such as the ThinLAN/3000 LAN Link, and RPM/3000 is part of NS/3000.

Distributed applications using NetIPC/RPM libraries may also be developed for use in the HP NewWave environment. This is done with NewWave development tools which are provided with the HP NewWave Developer Kit.

NetIPC/RPM is the ideal foundation upon which to develop advanced distributed applications. Application developers now can provide their customers with the power of standard distributed processing using HP AdvanceNet products.

Product No.	Description
<i>Each development PC requires one development package:</i>	
50924F	NetIPC/RPM Development Package for PCs
<i>Each development and application user PC requires one of the following network links:</i>	
50926F	HP StarLAN/Vectra PC Link
50927F	HP ThinLAN/Vectra PC Link
50928F	HP SERIAL Network/Vectra PC Link Software
<i>Each development and application user PC also requires one of the following user configuration and network diagnostic packages:</i>	
50929F	LAN PC User Configuration and Diagnostics Package
Opt. OAY	+10-user license
Opt. OAA	+50-user license
50930F	SERIAL User Configuration and Diagnostics Package
Opt. OA9	+10-user license
Opt. OAA	+50-user license

Networks

OfficeShare offers communications applications through support of NetBIOS

HP OfficeShare networking software for PCs now has widely expanded communication capabilities through the support of selected NetBIOS applications.

Now users running OfficeShare software on StarLAN or ThinLAN can use selected NetBIOS-based multiuser applications written by third-party application developers. These include such applications as electronic mail and modem services.

This capability provides tremendous opportunities for third-party application developers who can now test their NetBIOS applications on OfficeShare.

Value-added business users who are interested in testing NetBIOS applications on OfficeShare should contact their HP sales rep for details.

Tested applications

HP has verified two NetBIOS applications for use with OfficeShare network software and has plans for testing of additional key applications. We will also publish (in the second quarter of calendar year 1988) a plan that will explain how users can test applications in the field.

HP will continue to test and list applications that are written to the NetBIOS interface. As with other software testing programs at HP, listed applications are available from the vendor. HP provides support of these to a limited extent (details are included later in this article).

The following NetBIOS Applications have been listed on OfficeShare:

- *Hayes SmartCom II for the PC Network (Modem Server), Version 2.1* – This product provides modem serving capability. When a user needs the modem, he can use one that is shared by a PC acting as a modem server, so communications capabilities are immediately available to everyone on the network, whether their PC has a modem or not. Each PC can have its own password, define its own log-on procedures, set its own macros, and use all of the operating features of the standard SmartCom II.

With this product, several HP Vectra PCs or IBM PCs can share a Hayes modem to communicate efficiently with other personal computers, mainframes, bulletin boards, and information services. With SmartCom II you can:

- Share any Hayes Smartmodem product or serial asynchronous device with network users
- Route incoming data to local or network printers or discs
- Send and receive files
- Set up communications sessions to be executed automatically at a specified time

continued on next page

- Create, display, erase, rename, and print files, even those located in local or shared subdirectories
- Communicate with remote systems through share modems on PCs on the network or directly through modems attached to individual PCs (character-mode terminal emulation only)
- Asynchronous terminal access (i.e., TTY, VT100, etc.)
- Quickly access a private Hayes Transet 1000 Mailbox to send or receive messages and use it to buffer printing from SmartCom II.

■ *Network Courier (Consumers Software, Inc.), Version 1.0* – The Network Courier is a mail package that is PC based. It operates in RAM, allowing users to send or receive mail to or from other PCs on the LAN at the touch of a "hot key" without leaving their existing application. A server-based post office stores mail in each user's password-protected mailbox. Users can send registered mail, send to distribution lists, and send to other networks running the Network Courier. User can run the "monitor" function to allow notification of mail received. A Lotus[™]-like interface makes for easy learning and use.

What is NetBIOS?

NetBIOS (Network Basic Input/Output System) is a high-level programming interface to local area networks that was originally developed for IBM's PC Network. It provides PC-to-PC communications capabilities. IBM also offers a NetBIOS emulator with their Token Ring Network.

HP's implementation of NetBIOS conforms to the IBM NetBIOS Interface specified by the IBM Technical Reference Manual.

Not all applications that use the term "NetBIOS" in their description will run over OfficeShare. There are many reasons for this.

- There has not been a strict adherence to any "NetBIOS" standard by application developers and developers have used the term "NetBIOS" rather freely.
- Many applications that are said to be "NetBIOS compatible" are written to work only with the NetBIOS on the IBM PC LAN or the IBM Token Ring and have made assumptions that are based on these LANs being present. These assumptions vary from developer to developer and only testing of individual products will determine whether or not they will work with OfficeShare.

Support of listed NetBIOS products

HP's NetBIOS implementation is a reliable and high-quality product. When HP lists a value-added business application, we are stating that this application has been tested and works with our NetBIOS Interface.

As with any listed product, support for the application should be obtained from the value-added business's support organization.

Listing the SmartCom II and Net-Courier products gives users increased communications capabilities. Our commitment to continue to test and list communications applications written to the NetBIOS interface will provide even more capabilities in the future.

Networks

HP OfficeShare performance improvements

Across the key dimensions by which local area networks (LANs) are judged, HP offers a powerful set of LAN products. LAN performance is one of these dimensions. The new release of HP OfficeShare and newly introduced Business System Plus, available in the second quarter of FY'88, incorporate substantial performance improvements for LAN users.

Many improvements to HP OfficeShare performance have been made. The times for application loading and application data file loading and saving have been improved by up to 25 percent using an HP Vectra PC server. MS[®]-DOS copy file transfer times using an HP Vectra PC server have been improved by up to 100 percent. Virtual terminal performance to an HP 3000 has been improved by up to 35 percent. HP SERIAL Network performance has been improved by up to 300 percent when configured for the latest performance features. Improvements have also been made to PC user memory requirements, reducing the amount of PC memory required for the network software by up to 30 percent, depending upon the network configuration. With the use of expanded memory, up to a 60 percent reduction of memory required for network software may be achieved.

The most substantial improvements for LAN users are seen when the new release of HP OfficeShare is combined with the new version of Resource Sharing included with Business System Plus. PC applications now load from an HP MICRO 3000-based subdirectory twice as fast as before in single-user tests, with sizable decreases in file loading times. The HP 3000 Series 70 boasts similar performance gains, approaching hard disc speeds for many activities.

Load applications from any HP 3000 server

Previously recommended for HP 3000 Series 68 and 70 servers only, application loading is now entirely feasible from the full range of supported HP 3000s. Many users with low-end and midrange servers will now choose to use Business System Plus for application loading. Those who require performance near that of a hard disc should still load applications from either an HP Vectra PC server or a hard disc, using the HP 3000 server for shared files, printing, and PC backup.

New HP OfficeShare product structure

The HP OfficeShare family of networking software is now comprised of network-services software that is sold separately from the network links. The network services can be used over any of the network links, allowing users to take full advantage of the flexibility of HP SiteWire. After determining the services you require, the HP SiteWire guidelines will help you to determine your wiring and link requirements.

The HP OfficeShare family of networking software is made up of four services: PC server software, PC user software, PC user configuration and network diagnostics software, and NetIPC/RPM development software.

- **PC server software** is used by an HP Vectra PC to function as a file, print, and plot server. The PC server software for the HP Vectra PC (PIN 50925F), is all that is required for each HP Vectra PC server. Only Hewlett-Packard PCs are supported as PC servers.
- **PC user software** is run by PC users to access the services of network servers and hosts.
- **PC user configuration and network diagnostics software** is required for each PC, to configure it onto the network and for network diagnostics. One PC user software product and one PC user configuration and diagnostics software product is required for each PC user. For example, one NS-User Services for HP Vectra and IBM PCs (PIN 50923F), and one PC User Configuration and Diagnostics Package for HP Vectra and IBM PCs appropriate for the PC link used (P/N 50929F or 50930F), is needed to connect an HP Vectra or IBM PC user to all services on the network.

- **NetIPC/RPM development software** is needed only by application writers, and is linked to applications by them. PC users of those applications do not need to purchase the development software, and do not need any other services software to use only those applications; a network link product is all that is required.

The new OfficeShare software is only available for HP Vectra PC servers, and HP Vectra and IBM PC users. This new software is sold in 1-, 10-, and 50-user license products. One single-user license product must be purchased for each 10- and 50-user license product purchased. The network services for the HP Touchscreen PCs remain unchanged.

This new structure parallels the service and link structure of other HP network products, and allows users greater flexibility in selecting the services and links that best fit their needs today, while allowing for future growth. Please refer to the HP OfficeShare network configuration guide (P/N 5956-4142) for more specific configuration and ordering information.

Ordering information

Product No.	Description
Connecting HP Vectra and IBM PCs	
<i>Services</i>	
50923F	Network Services-User Services for HP Vectra and IBM PCs
Opt. OA9	License for 10 users
Opt. OAA	License for 50 users
50924F	NetIPC/RPM development package
50925F	PC server software/HP Vectra PCs
<i>Links</i>	
50926F	StarLAN/HP Vectra PC link
50927F	ThinLAN/HP Vectra PC link
50928F	SERIAL Network/HP Vectra PC link software
<i>Configuration and diagnostics</i>	
50929F	LAN PC user configuration and diagnostics package/HP Vectra PC
Opt. OA9	10-user license
Opt. OAA	50-user license
50930F	SERIAL Network PC user configuration and diagnostics package for HP Vectra and IBM PCs
Opt. OA9	10-user license
Opt. OAA	50-user license

Ordering information cont'd

Product No.	Description
<i>Upgrades for earlier versions of OfficeShare¹</i>	
50923F	Network Services-User Services
Opt. OCJ	StarLAN user upgrade kit
Opt. OCK	ThinLAN user upgrade kit
Opt. OCL	SERIAL user upgrade kit
50925F	PC server software
Opt. OCJ	StarLAN server upgrade kit
Opt. OCK	ThinLAN server upgrade kit
50929F	ThinLAN/StarLAN user configuration upgrade
Opt. OCN	Kit for HP Vectra and IBM PCs (per server)
50930F	SERIAL user configuration upgrade kit for HP Vectra and IBM PCs (per server)
Opt. OCL	Vectra and IBM PCs (per server)
<i>Upgrades for HP 3Com networks²</i>	
50913F	HP ThinLAN server software for HP Vectra PCs
50914F	HP ThinLAN user software for HP Vectra PCs
Connecting HP Touchscreen PCs	
<i>Links and services</i>	
50907A	HP ThinLAN server kit for HP Touchscreen PCs
50908A	HP ThinLAN user link kit for HP Touchscreen PCs
50910A	HP SERIAL network user link software for HP Touchscreen PCs
<i>Configuration and diagnostics</i>	
50929A	ThinLAN PC user configuration and diagnostics package for HP Touchscreen PCs
Opt. OA9	10-user license
Opt. OAA	50-user license
50930A	SERIAL Network PC user configuration and diagnostics package for HP Touchscreen PCs
Opt. OA9	10-user license
Opt. OAA	50-user license
<i>Upgrades for earlier versions of OfficeShare</i>	
50915A	Upgrade from original OfficeShare Server Software to HP ThinLAN Server Software for HP Touchscreen PCs
50916A	Upgrade from original OfficeShare User Software to HP ThinLAN User Software for HP Touchscreen PCs
<i>Upgrades for HP 3Com networks</i>	
50913A	HP ThinLAN Server Software for HP Touchscreen PCs
50914A	HP ThinLAN User Software for HP Touchscreen PCs

¹ The user must order the base product (i.e. 50923F, 50925F, 50929F, or 50930F) in addition to the upgrade option.

² Any network which uses the 3Com 3C501 card - including 3Com and Novell.

Networks

HP OfficeShare free upgrade promotion

Upcoming enhancements to the OfficeShare family of network software were announced in October, 1987. At that time, we also announced that we would provide free upgrades so that users would not have to wait to order the new OfficeShare family of network software to receive these enhancements.

The free upgrade promotion for HP OfficeShare network software will be available from March 1, 1988, to August 31, 1988.

Terms and conditions

- Users who have ordered OfficeShare software and/or the HP Vectra StarLAN PCs (refer to matrix) *on or between October 1, 1987 and March 15, 1988*, are eligible. This free upgrade promotion provides users the opportunity to upgrade free of charge to the new release of OfficeShare with its added enhancements such as 30 users per PC server, and communication to HP 9000s, HP 1000s, and DEC VAX hosts with NFT and terminal access.
- After users have received their upgrade, the original OfficeShare product master disc(s) must be returned to the local HP sales office and destroyed. This ensures compliance with the legal copyright licensing requirements.

Ordering information

The ordering matrix lists all the original product numbers that are eligible for this promotion along with the corresponding new upgrade product numbers that will appear on the March 1, 1988, HP Price List. For specific ordering instructions and eligibility criteria, consult your HP sales rep.

Ordering matrix

Product No.	Original description	Product No.	New upgrade description
50905F	HP StarLAN user link kit for HP Vectra/IBM PCs	50923F Opt. OCJ	NS-User services StarLAN user upgrade kit
D1201A	HP Vectra CS StarLAN PC, monochrome (all options)		
D1201A	HP Vectra CS StarLAN PC, EGA (all options)		
D1202A	HP Vectra ES/12 StarLAN PC, monochrome (all options)		
D1202A	HP Vectra ES/12 StarLAN PC, EGA (all options)		
50908F	HP ThinLAN user link kit for HP Vectra/IBM PCs	50923F Opt. OCK	NS-User services ThinLAN user upgrade kit
50914F	HP ThinLAN user software for HP Vectra PCs		
50916F	HP OfficeShare network user software upgrade to HP ThinLAN user software for HP Vectra PC and IBM PC/XT/AT		
50910F	HP SERIAL network user link software for HP Vectra/IBM PCs	50923F Opt. OCL	NS-User services SERIAL user upgrade kit
50904F	HP StarLAN server kit for HP Vectra PCs	50925F Opt. OCJ	PC server software1 StarLAN server upgrade kit
50907F	HP ThinLAN server kit for HP Vectra PCs	50925F Opt. OCK	PC server software1 ThinLAN server upgrade kit
50913F	HP ThinLAN server software for HP Vectra PCs		
50915F	HP OfficeShare network server software upgrade to HP ThinLAN server software for HP Vectra PC	50925F Opt. OCK	PC server software1 ThinLAN server upgrade kit
		50929F Opt. OCN	ThinLAN/StarLAN configuration upgrade kit for HP Vectra PCs
50906A	HP StarLAN configuration and diagnostics and license for PCs	50929F Opt. OCN	ThinLAN/StarLAN configuration upgrade kit for HP Vectra PCs
50909A	HP ThinLAN configuration and diagnostics and license for PCs		
50912A	HP StarLAN/ThinLAN PC configuration and diagnostics software and license for HP 3000s (all options)		
50912R	HP StarLAN/ThinLAN PC configuration and diagnostics software and license for HP 3000s Right-to-copy (all options)		
50911A	HP SERIAL network PC configuration and diagnostics software and license for HP 3000s (all options)	50930F Opt. OCL	SERIAL configuration upgrade kit for HP Vectra and IBM PCs
50911R	HP SERIAL network PC configuration and diagnostics software and license for HP 3000s Right-to-copy (all options)		

Notes

There will be no HP 150 upgrades since this software will not be changing.

Users not eligible to receive the free upgrades will be able to purchase the upgrades at the prices listed on the March 1, 1988, HP Price List.

Networks

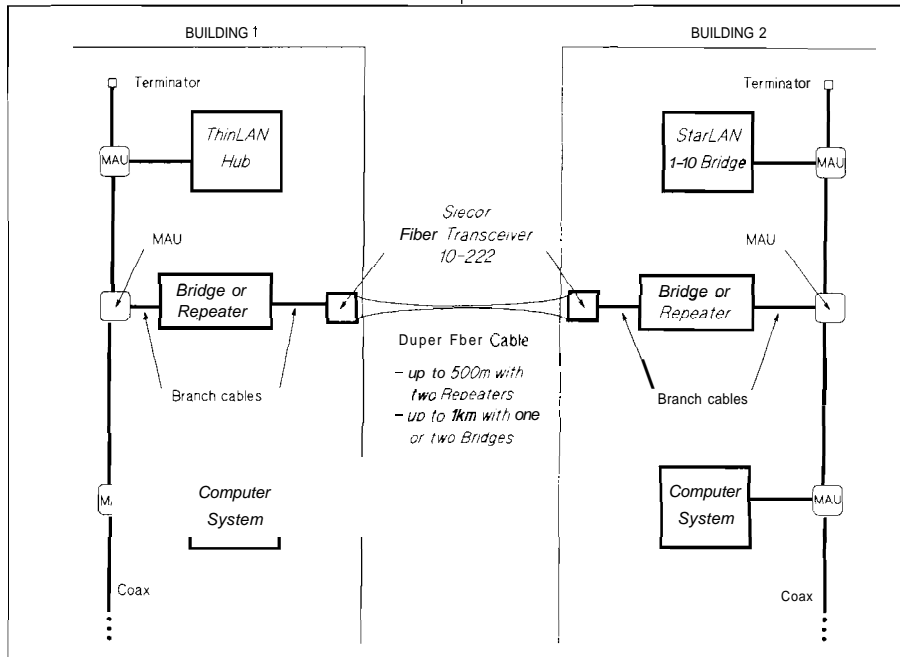
New fiber optic interbuilding link

HP SiteWire provides wiring systems for office, engineering, and manufacturing buildings or campuses. HP SiteWire now includes a fiber optic interbuilding link that can be used to extend IEEE 802.3/Ethernet local-area networks beyond the limitation imposed by coaxial cable. This link enhances the HP SiteWire solution for a campus

Promotion programs and special offers announced in *HP Channels* may not be valid outside of the U.S. Before promotions are valid in other countries, they must be announced by the appropriate HP country marketing organization. Please call your HP sales rep if you have any questions.

environment. Distances and environmental conditions between buildings will often prohibit use of coaxial cable.

To provide this link, Siecor's Fiber Optic Transceiver (PIN 10-222) is now referenced with the HP 92223A Repeater Kit and the HP 28648A 10-10 Mbps Bridge.



A fiber-optic-link configuration with two repeaters will allow maximum distance of 500 meters between buildings. Distances up to 1 kilometer can be achieved with one or two bridges. Bridges also offer the following advantage over repeaters:

- Address filtering – Traffic across the bridge is filtered depending on the location of the receiving nodes. This minimizes excess traffic on each LAN connected by the bridge.
- The maximum network topology allows eight bridges in the path between two nodes. If more than one fiber segment is required to connect multiple buildings, bridges should be used.

Siecor's Fiber Optic Transceiver is a referenced product and can be purchased directly from Siecor for \$750 (U.S. list). A technical information guide for the Siecor Fiber Optic Transceiver (PIN 5958-9015) is available from HP's Literature Distribution Center. Contact your HP sales rep for more information.

Networks

ADCC sales restricted – update

As announced in the January 1988, issue of *HP Channels*, sales of the ADCC were restricted on March 1, 1988. The ADCC Extender (PIN 30019A) will be removed from the HP Price List and the ADCC Main (PIN 30018A) will be restricted to one new main per new HP 3000 Series 52 or 58 purchased. New ADCCs will not be available for add-on purposes. New ADCCs will only be sold for console support on new HP 3000 Series 52 or 58 systems.

Users looking to add ports to their existing HP 3000 Series 39, 4X, and 5X systems should purchase the Advanced Terminal Processor (ATP). The ATP is an intelligent workstation controller that offloads character processing from the CPU by transferring data directly to and from memory. Its performance is better than the ADCC, and thus, it has increased user satisfaction. In situations where users have already configured their system with the maximum number of ATPs supported, the remarketed ADCC Main (PIN 30018AR) or remarketed ADCC Extender (P/N 30019AR) may be purchased. Note that there are no plans to increase the maximum number of ATPs supported per system. For specific configuration information, please refer to the HP 3000 configuration guide.

continued on next page

Since the ADCC Main is still needed to support console connectivity on the HP 3000 Series 52 and 58, the ADCC Main will not be discontinued until these systems are removed from the HP Price List. The support life for both the ADCC main and Extender will not end until both these systems have been discontinued and have come to the end of their respective support lives.

After March 1, 1988, the ADCC Main needs to be ordered with a new HP

3000 Series 52 (PIN 32552C) or Series 58 (PIN 32558C). Orders that request more than one ADCC Main per new Series 52 or 58 systems will not be honored. The ADCC Main and the Series 52 or 58 must be placed on the same order.

Contact your HP sales rep if you have questions concerning these ADCC restrictions.

Terminals

Announcing new members of HP 700 terminal family

Several additional members to the HP 700 terminal family, the HP 700143 and 700/44, have just been announced (see following articles).

Model	Description
700143	Fully featured ASCII terminal
700/44	PC terminal

In addition, on March 1 we're making available a soft-white screen-color version of our leading IBM 3191-compatible terminal, the HP 700171, at no extra cost. The HP 700171 is the only IBM 3270 plug-compatible terminal that currently offers this ergonomically pleasing feature.

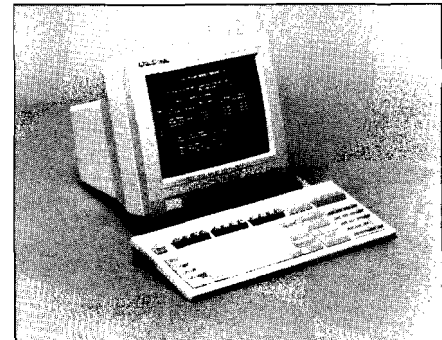
The HP 700 family of terminals are listed here.

Model	Description	Display colors
700/41	Entry-level ASCII terminal	Amber, green
700/43*	Fully featured ASCII terminal	Amber, green, soft white
700/44*	PC terminal	Amber, green, soft white
700122	DEC VT220-compatible terminal	Amber, green, soft white
700171	IBM 3191-compatible terminal	Amber, green, soft white*
700/92	HP block-mode display terminal	Amber, green, soft white
700194	HP high-performance block-mode terminal	Amber, green, soft white

*N.

Terminals

Introducing the HP 700143 fully featured ASCII terminal



Hewlett-Packard has introduced a new fully featured ASCII terminal to the HP 700 family. As a complement to the HP 700141 entry-level ASCII terminal, the HP 700143 is available on March 1, and has the following additional features over the HP 700141:

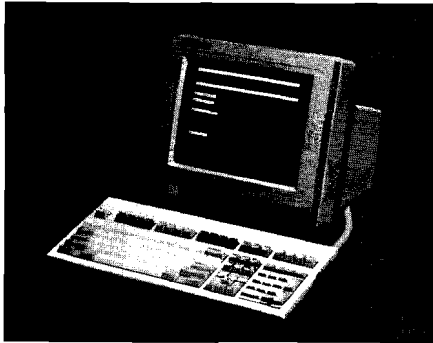
- Four pages of memory versus one
- Soft-white phosphor (PIN C1006A) in addition to green (PIN C1006G) and amber (PIN C1006W)
- 132-column support
- Three additional non-HP terminal emulations: Wyse Wy-50, TeleVideo 950, and Lear Siegler ADM 31
- Downloadable character set

The HP 700143 is priced about five percent less than its major competitor, the Wyse Wy-50. In addition, the HP 700143 also has the following enhancements over the Wy-50:

- Four pages of memory versus one
- Soft-white phosphor in addition to green and amber
- Superior display quality with a higher character-cell resolution that includes "half-dot shift" to create a smoother-looking character
- Downloadable character set
- 58 programmable keys versus 32
- 12 emulation modes versus 9

Terminals

Introducing the HP 700/44 PC terminal



Hewlett-Packard announces the HP 700144 PC terminal. The HP 700144 is available on the April 1 HP Price List for shipment to users in the U.S. (international availability is scheduled for May 1).

What is a PC terminal?

A PC terminal connects to a personal computer running a multiuser operating system. The HP 700144 PC terminal was designed for use in many alphanumeric multiuser PC environments. It can operate in ANSI mode (as a DEC VT220 with an IBM Enhanced PC, AT2, keyboard) or in PC terminal mode (as a terminal transmitting PC-keyboard-like key scanning codes to the host PC). Multi-user applications designed for VT220 emulation mode are widely available today, while applications that use the scan code mode are growing in popularity.

HP is working with Santa Cruz Operation (SCO) to support the HP 700144 on the 286 and 386 versions of their multiuser Xenix operating system. More information will be forthcoming on SCO Xenix support.

The HP 700144 offers both the DEC VT220 character set and the IBM PC character set. A user running a monochrome, alphanumeric (nongraphics) application on the HP 700144 will use the same AT2 keyboard and see the same display (IBM character set) as if the application was running on a stand-alone PC. A PC user will find the HP 700/44 minimizes the need for retraining.

In addition, the HP 700144 provides the capability of displaying either 24 or 25 lines. Crisp characters are displayed on the 14-inch screen, which is available in soft-white, amber, and green phosphors.

For those users looking for a terminal to connect to either the HP Vectra ES/12 or RS PC running a multiuser operating system, the HP 700144 PC terminal is the terminal of choice.

Ordering information

Display Product No.	Description
<i>HP 700/44 PC terminal</i>	
C1007A	Amber phosphor
C1007G	Green phosphor
C1007W	Soft-white phosphor
<i>Options</i>	
ABA	U.S. keyboard (required option)
W03	Warranty conversion to 90-day on-site

For more details, contact your HP sales rep.

Terminals

HP 700122 terminal: new keyboard localizations

Introducing three new keyboard localizations on the HP 700122 DEC VT220 compatible terminal: Spanish, Swiss-French, and Swiss-German. For your convenience, a list of all the localization options for the HP 700122 are

provided here. These options are available March 1, 1988.

Option	Keyboard	Country
ABA	U.S.	U.S.
ABB	U.S.	Europe
ABD	German	Germany
ABE*	Spanish	Spain
ABF	French	France
ABP*	Swiss-German	Switzerland
ABQ*	Swiss-French	Switzerland
ABR	U.S.	South Africa
ABS	Swedish	Sweden
ABU	U.K.	U.K.
ABZ	Italian	Italy
ACC	U.S.	U.K.
ACD	U.S.	Switzerland
ACE	U.S.	Denmark
ACF	U.S.	Japan
ACG	U.S.	Australia

*New

Terminals

Soft-white display added to HP 700171 terminal

On March 1, the HP 700171 IBM 3191 Model A, B compatible terminal will offer a soft-white display (black characters on a white screen) at no extra charge. The HP 700171 is now not only the lowest priced IBM mainframe-compatible terminal on the market today, but is now also the only IBM plug-compatible terminal to offer a soft-white display. The screen refresh rate has also been increased to 72 hertz, which produces a flicker-free screen — especially important for soft-white displays.

The soft-white screen gives the HP 700171 a unique selling advantage in the IBM-compatible terminal market. Soft-white displays, now very popular in Northern Europe and gaining popularity in the rest of the world, offer a screen that appears similar to the type-written pages on your desk and consequently may reduce eye strain.

continued on next page

The strong competitive position of the HP 700171 has gotten even better. With both the lowest price and the only soft-white screen on the market, the HP 700/71 is a great product to break into those IBM mainframe accounts.

The ordering number for the soft white HP 700171 is C1005W.

Terminals

HP Industrial Touch terminal 3-pak promotion

Hewlett-Packard is pleased to announce a special limited-time offer for the HP 3082A Industrial Touch display terminal.

Commencing February 1, users who order the HP Industrial Touch terminal 3-pak promotion will automatically receive about 18 percent off the bundled list price. The HP Industrial Touch terminal is a compact, sealed, and rugged display terminal that is plug-compatible with the HP 2392 and the DEC VT100/52 terminals.

The HP Industrial Touch terminal 3-pak consists of three HP 3082A terminals, each with touchscreen and barcode capabilities, along with one complete manual set. No other discounts (VEU), promotions, or programs may be used concurrently with this offer. However, there is no limit on the number of 3-paks users can order.

Ordering information

Product No.	Description	Quantity
HP 3082A	Industrial Touch-Display Terminal	3
Opt. 003	Add Touchscreen and Barcode Decoding	3
910	Add Complete Manual Set	1

This 3-pak promotion expires on April 30, 1988, so be sure to contact your local HP sales rep soon.

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Supplies

Supplies

Spring 1988 Computer Users Catalog now available

HP Direct sent users the latest version of the *Computer Users Catalog* by mid-February. This catalog is a remail of the Winter '87-88 *Computer Users Catalog* with a new cover and seven pages of new products. The exciting new cover features the Monterey Bay Aquarium in northern California.

New products

- HP 700 display terminals for HP, DEC, IBM, and ASCII systems
- Dust covers to protect these new terminals
- JetPlotter and LaserPlotter software to make HP ThinkJet, QuietJet, QuietJet Plus, and LaserJet printers output like plots
- iPrint software for printing forms on HP LaserJet printers
- New carrying case for HP ThinkJet printers
- Calculator cases for the new HP-17B or HP-27S calculators
- Office paper for typing and copying
- Drawer units for Design Plus mobile minirack
- RS-232 surge protector to save data and equipment from static spikes and power fluctuations

Remember, ordering from HP Direct is fast and easy, prices include surface delivery at no extra charge, and orders received by 1 p.m. are usually shipped the same day.

In the U.S., users can call 800-538-8787 and order with a purchase order, Visa, MasterCard, or American Express. International users should refer to the telephone listing at the end of this section or the International versions of the *Computer Users Catalog*.

Supplies

Media brochure in disc and tape drives

Now users will be informed of the benefits of using HP brand disc and tape media as soon as they open the box of their new HP drive.

HP disc and tape drives now include a minicatalog from HP Direct promoting HP brand disc and tape media. When users open the box, they'll find an attractive four-color brochure listing all the HP discs, tapes, storage, and cleaning accessories needed to assure optimal operation of their drive, as well as ordering instructions.

Why is the user's satisfaction assured when using HP disc and tape media? Because the same engineers who develop HP's high-quality disc and tape drives spend months defining the exact specifications and testing the disc and tape media. Users can be confident that the supplies bearing the HP logo are optimal partners for their HP equipment.

There are two versions of the flyer:

The small-systems version is included in all HP 9122 and 9153, HP Vectra and Touchscreen PCs.

- The large-systems version is included in HP 793X, 795X, 797X, 7980, 9144A, and 35401A drives.

Users may order any HP disc and tape media by calling HP Direct, using the phone numbers listed in this publication.

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	(03) 895-2645 (03) 895-2615 (03) 895-2815 (03) 895-2861
Austria	(0222) 2500-614/615/616
Belgium/Luxembourg	(02) 761 31 11
Canada	
Toronto Local	416-671-8383
Ontario	1-800-387-3417
Quebec	1-800-387-3417
British Columbia	112-800-387-3154
Other Provinces	1-800-387-3154
Denmark	04 30 16 40
Finland	(90) 887 2361
France	(1) 69 28 83 90 (1) 69 28 32 64
Greece	(01) 672 6090
Italy	(02) 9236 9702
Japan	
Sagamihara	0427 59 1311
Osaka	06 304 6021
Middle East	
Athens	(01) 682 8811
Norway	(02) 24 60 90
South Africa	
Johannesburg	(011) 802 5111
Cape Town	(021) 437 954
Spain	(91) 637 4013 (91) 637 0011
Sweden	(08) 750 2400
Switzerland	(057) 31 24 90
The Netherlands	(020) 547 6606
United Kingdom	(0734) 69 72 01
United States	800-538-8787
West Germany	(0130) 3322

Software Packages Available and Wanted

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

Software Packages Available

Industry: *Cross industry - decision support, financial modeling*

Abstract: FCS is a sophisticated, yet easy-to-use, integrated financial modeling system. The system product is frequently used for financial and marketing systems such as strategic planning systems, forecasting systems, new product evaluation, and capital expenditure analysis. It is command or menu driven using easily remembered instructions such as REPORT, CALCULATE, and GRAPH. Its modules can perform report generation, what-if analysis, hierarchical consolidation, risk analysis, statistical analysis, high-resolution graphics, screen manipulation of data, and have a direct interface to TURBO IMAGE databases. It also contains more than 150 predefined financial and statistical functions allowing applications to be developed much faster than fourth-generation languages (4GL) and lower-level languages. In addition, user written functions can be added using the same syntax as the base language. The package is being continually enhanced with new features and modules, including micro/mainframe communications to the HP Vectra PC and IBM PC compatibles.

Company Name: THORN EMI Computer Software

Address: 285 Mill Road
Chelmsford, MA 01824
U.S.A.

Phone: 617-256-3900

Contact Person: Susan Donovan

Type of Distributor Wanted: VAR

Geographic Coverage: Worldwide

Industry: *Aviation*

Abstract: DASH AIR/3000 is a total software solution for the aviation industry consisting of integrated modules for revenue accounting, rotatable parts maintenance, flight scheduling, flight following, freight accounting, crew scheduling and tracking, ticket auditing, route profit and loss analysis, general ledger, inventory, purchasing, job costing, accounts receivable, accounts payable, fixed-asset accounting, fuel accounting, and payroll.

An HP Plus software supplier since 1983, we have successfully sold and installed these packages in the U.S., Canada, Australia, Malaysia, and Europe. Current customers include national airlines, regional airlines, fixed-base operators, corporate flight departments, aircraft manufacturers, and government agencies.

DASH AIR13000 is recognized internationally as one of the world's most widely installed and best-supported aviation software packages. It runs under BASIC on all models of the HP 3000 and uses IMAGE and V-3000. In addition to the marketing potential, there is also a need for local first-line software support.

Company Name: DASH Group, Inc.

Address: Box 8666
Reading, PA 19603
U.S.A.

Phone: 215-372-4500

Contact Person: Elaine Rick

Type of Distributor Wanted: Open

Geographic Coverage: Worldwide, except U.S., Canada, South Pacific

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

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

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

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

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

HP sales reps only: To add new U.S. or Canadian accounts to the distribution for *HP Channels*, please send Tracy Wester the following information (on HP Desk 0000/53 or to the address listed below): company name address, phone number, contacts' **name/title**, and HP sales rep name, COMSYS number, and engineer code. For accounts outside of the U.S. or Canada, contact Tracy Wester to get the name of the person who handles the distribution of *HP Channels* in your country.

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

HP CHANNELS

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