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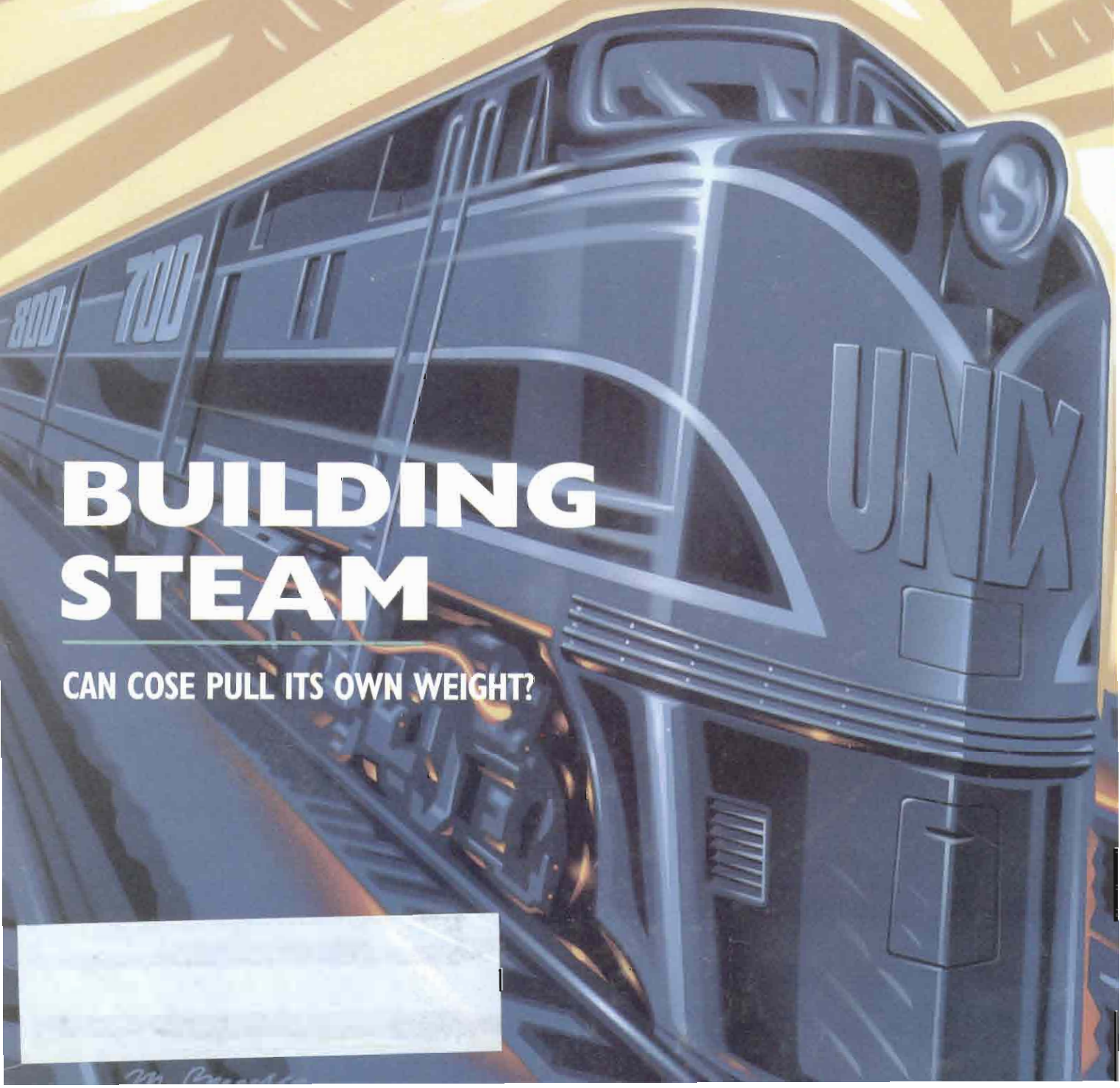

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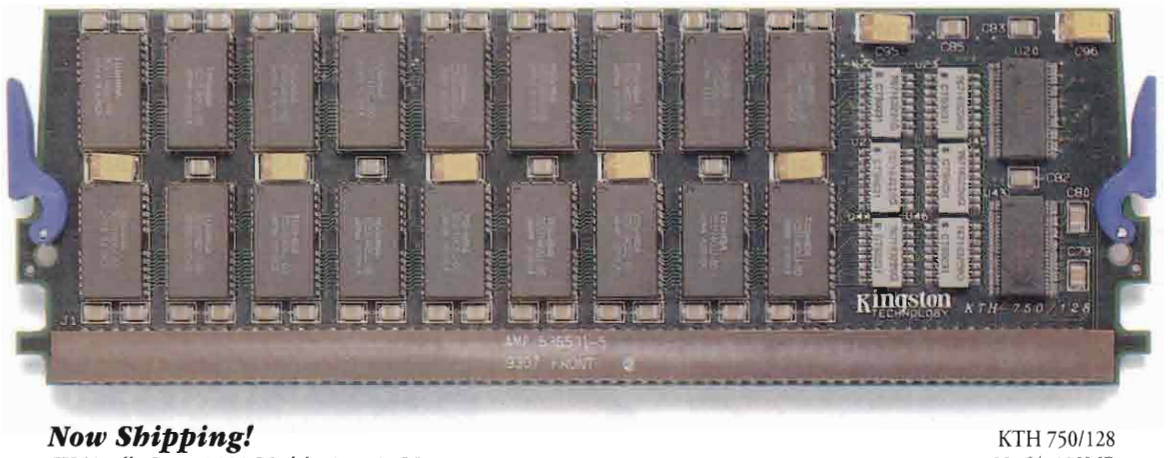

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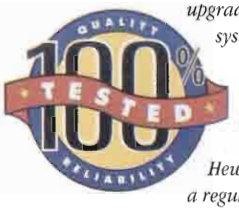

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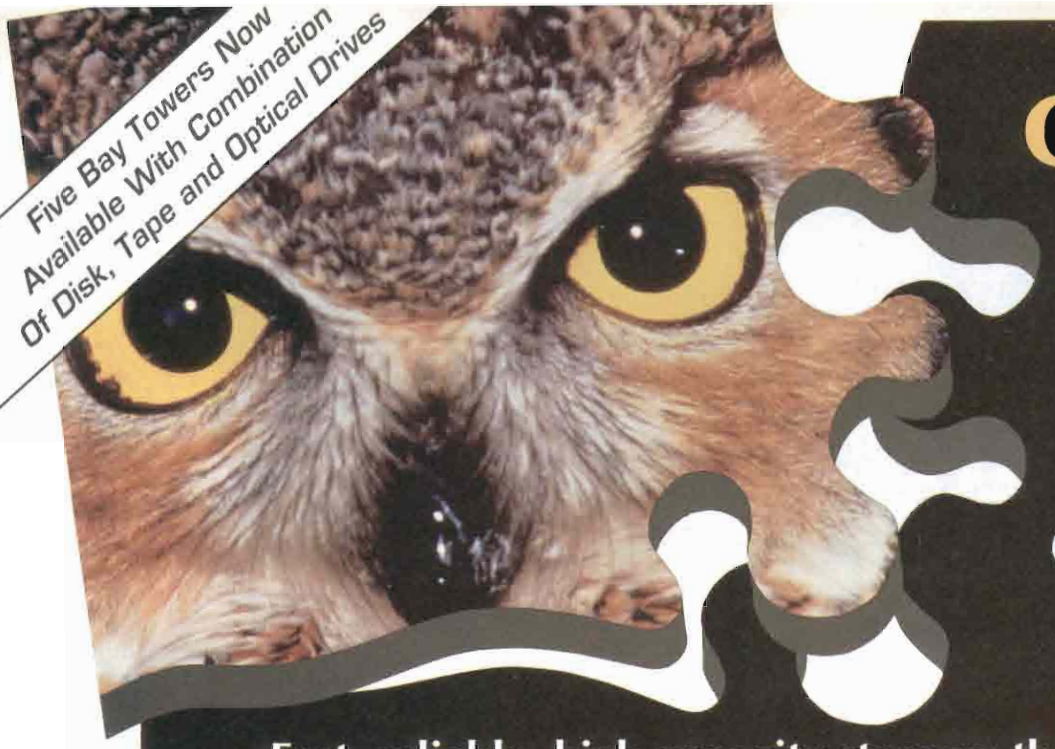

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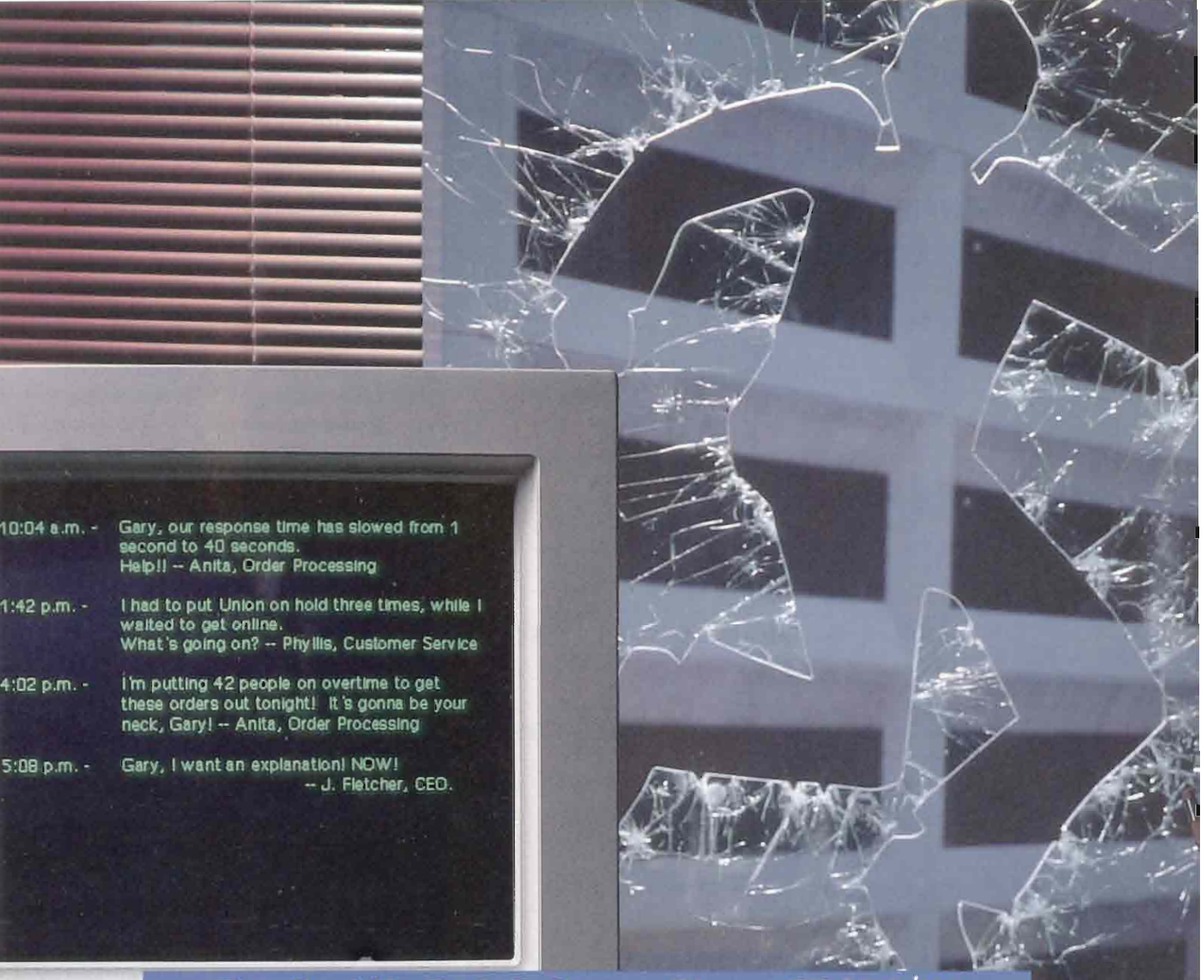

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CIRCLE 499 ON READER CARD

. . . This Is Now

It's A Season Of Change At HP Professional

By Charlie Simpson

Yes, there's something new and different about HP Professional this month. A publication, like any business, must adapt and grow to meet its customers' needs. For us here at HP Pro, our readers are our most valued customers. That's the reason behind our new look and feel.

Through surveys, speaking with readers at shows and seminars, and studying input from analysts, we've discovered that you're no longer interested in reading just about benchmarks and test scores, you "get those from the vendors' sales people."

However, you're still interested in the latest technologies and techniques, and more importantly, you want to hear what your peers are doing in corporate IS. So, beginning with this issue, we've scaled back our Lab reviews and introduced "INsites."

INsites focus on direct interviews with users, where we'll reveal the successes and sometimes failures of real-world installations, implementations and system maintenance at corporate sites ranging from Fortune 1000 to mom and pop shops.

We realize we're not the only trade journal or magazine that crosses your desk. So to help you get the most out of HP Professional, we're putting more concise and relevant product reviews along with corporate information into our Product Watch and Strategic Directions articles. Together they will help you understand where the market is heading and what issues you should be addressing when planning your MIS strategy.

Throughout 1994, our columnists will provide more technical information for HP 3000, HP 9000 and network users. And of course, we will continue to explore and define the latest techniques and technologies in our feature stories which also will include more real-world examples.

Not only have we changed our look and expanded our coverage, we've increased our editorial staff with the addition of our new Technical Editor, George Thompson and Assistant Editor, Deborah Schwartz.

Weened on PCs and raised in the world of workgroup computing, George brings a fresh, realistic view of where the industry is heading through his feature articles. Look for his new column later in 1994 addressing the questions raised by the undeniable influx of PCs.

In addition to writing Product Watches and Strategic Directions, Deborah ensures you receive the most up to date information on today's technology through our New Products section in the back of the magazine. Deborah helps guarantee the consistent quality of HP Professional along with Art Director Al Feuerstein, Associate Art Director Jennifer Barlow and Production Manager Jean Lait.

Finally, all of our editors welcome your comments and critiques in our new Letters To The Editor section. You can reach us by mail or through the Internet.

We welcome suggestions for topics to cover; improvements or changes. As the editor-in-chief my concern is to provide you with exactly what you want to read. We look forward to hearing from all of you in 1994.

Charlie Simpson

Out Of Step Or Out Of Touch

I was amazed to read Gordon McLachlan's column regarding HP's direction with NeXT software tools. It is incredibly narrow-minded to dismiss NeXT's software architecture because the niche that PCs have historically filled is 2,000 times larger than the niche that NeXTStep currently fills. The numbers don't mean a thing. IBM marketed the heck out of mediocre products that barely met users needs for years, and had great numbers. Look where it got them. And Microsoft is currently taking the same approach.

Both NeXTStep itself and the underlying object-oriented languages and toolkits are the best I have ever seen, by far. If nothing else, Jobs and crew have set the standard for excellence with software that runs today. Hopefully the other "standards" (CORBA, DCE, DME, COSE) will provide anywhere near the reliable productivity I see in the NeXT software, if and when they do see the light of day. And NeXT is not at all out of sync with the COSE initiative, much less competiting it.

COSE has never proposed to provide a standard "specification for object-orientation." In fact, I believe that the current confusion in the object-oriented tools marketplace is necessary as we try new approaches and tools. Stubbornly counting the installed user base as the guiding factor in strategic direction is particularly risky now, as is waiting for a so-called standards to become products. Amazing productivity and reliability is what development managers like me need today, and I think HP is showing real leadership by partnering with vendors who can provide such value to customers like me, not only with NeXTStep for the 700s, but with Portable Distributed Objects and Objective-C on the 800s.

As for NeXT/HP's inability to turn good ideas into products, I bet we'll see NeXTStep on the 700s before we ever see anything real from COSE or CORBA.

As for the future, NeXT has more experience with microkernel implementation than anyone on the planet. HP-UX, AIX, OSF/1, etc. are all still bloated monolithic kernels without installable device drivers or a fundamentally event-driven message-passing architecture which will be critical to next-generation object-oriented operating systems. As for the efforts of Microsoft, IBM and Apple to develop the next generation object-oriented operating system, hopefully they will learn a lot from NeXT. Maybe they could even all get together and contribute best-of-class tools; the very process that made UNIX such a rich and productive environment as its market developed commercially in the '80s.

In my view, HP is taking a real leadership role by focusing on top quality software and giving people like me what we need most — software productivity and reliability. Compliance with vaporware standards is what is "totally insignificant in the grand scheme of things."

Presley Barker
Project Manager
A.G. Edwards & Sons Inc.

I am very annoyed with the fact that Gordon McLachlan pointed out weak points of NeXTStep (which is OK) but he did not even consider NeXTStep's strong points (which are plenty, plenty, plenty) compared to other systems.

Lans Brahmantyo
Q. Image & Advertising Inc.

NeXTStep is probably the best thing that can happen to both companies. Wait till they start selling a ton of HP hardware with the Object-Enterprise partnership. Then maybe you will see that it's the right direction. Anyway, time will tell the real story...

Eric Tremblay
Developer
Walnut Creek CDROM

I feel compelled to respond to Gordon McLachlan's [column] in the October issue. I use an HP 715/50, at a contract site. I work in a Workstation Support Group that administrates HPs, DECs, SUNs and SGIs. In my spare

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time, I administer a network of machines running NeXTStep at my home office. This is to say, I am in the real world, supporting the stuff McLachlan writes about (but apparently doesn't use.)

I find McLachlan's arrogance and ignorance appalling. HP VUE can hardly be compared to NeXTStep's Workspace Manager; HP VUE is primitive and archaic by comparison. HP's overall environment, much like other generic UNIX vendors, is piecemeal, poorly integrated. NeXTStep achieves a level of integration no other platform can approach, arguably due to its object-oriented technology foundation. The barrage of "Brochure-Ware" and "Consortium-Ware" mentioned leave me unimpressed. The "object-oriented environments Apple, IBM and Microsoft are intensely developing" are years away. NeXTStep is here, now, on a growing list of architectures. NeXTStep is the only product that can prevent HP from being swept into the cracks by Microsoft, or worse, becoming just another hardware vendor that supports Microsoft NT.

Alan M. Frabutt
Senior Consultant
National TechTeam Inc.

PA-RISC maybe, but OpenView? You must be kidding! I use HPs and NeXTs every day. Most of our developers stick to the command-line to avoid VUE.

As far as the installed base goes, the entire installed base of UNIX systems (and all its variants) is miniscule compared to Microsoft Windows. So why didn't HP make a deal with Microsoft to attack this market? Because, customers want NeXTStep on PA-RISC. The best software on the best hardware.

Your article really did a great disservice to HP, NeXT and it's customers. It's the customers that want this. Companies that subscribe to market-driven quality will do their damnest to provide their customers with the solutions they want. HP and NeXT are doing this.

Ronald Pomeroy
CAM Systems Analyst
Advanced Micro Devices

Your article "Next Step In The Wrong Direction" in the October 1993 issue was so misguided and misleading that I'm astounded that you even published it. I would hope you would be more objective and factual in your articles, including editorials.

NeXT has never shown any financial numbers and has never attributed the closing of hardware manufacturing to economic failings. Here is the announcement from Conrad Geiger explaining their decision to drop the hardware portion of the company:

"Over the past two years, NeXT has been successful in selling its object-oriented NeXTStep systems to major corporations, government institutions and higher education. In 1992, sales increased 10 percent worldwide to reach $140 million. Commercial acceptance of NeXTStep, coupled with the commoditization of the hardware business, has convinced NeXT to choose being a first-tier software company leading the object-oriented computing revolution over being a second-tier supplier of hardware in a market increasingly differentiated merely by hardware price/performance."

If the author had some facts to corroborate his statement about NeXT's economic position, he never shared them and neither has NeXT. Anything else is not fact, but speculation.

The whole industry has ripped off Xerox's ideas. Apple showed the technology worked and then the industry copied Apple. Today, we find elements of the Macintosh user interface in everything from Windows to Motif. And Xerox never got a thing for it. Good products begin as good ideas. But NeXTStep is beyond an idea, it is a good product which UNIX, NT, Windows and Macintosh users agree on. NeXT has done what most UNIX vendors would like to do, hide the UNIX command line behind a graphical user environment.

It is true that the installed base is small relative to DOS, but so are many other OSs. [This statement] instills fears and uncertainty in users who might otherwise find NeXTStep to be the software solution for them. Every new software product has this problem of small installed base of users, and NeXTStep is no different. If we never gave new and different technology a chance, we'd be all on IBM mainframes today. The author is no better than IBM using FUD to scare people away from new technology and products.

NeXT stated on May 26, 1993 that "The Object+Enterprise also will integrate NeXTStep and key distributed computing standards including OMG's CORBA, OSF's DCE and DME." HP would have never allowed the deal unless NeXT had committed to these standards. Why does the author not know this, or has he conveniently left it out to aid his argument to remove NeXTStep from HP's PA-RISC machines?

NeXTStep is not the only vendor who is not a

COSE member. But that does not mean that it will not be COSE compliant in the future. COSE members will be competitors among each other, unless COSE is to be single source for operating systems, so don't single out NeXTStep. And it's too early to even say if COSE will yield anything. Again, what a disservice to your readers to suggest that any operating system that is not a COSE member is a competitor and is not a good product.

NeXTStep is currently an object-oriented operating system, yet the author refuses to inform the reader that NeXTStep is. In fact, NeXTStep is shipping currently with years of experience, while the others are still in development. The money, resources and time required to make an object-oriented OS are large. I don't think HP can afford to compete with Microsoft alone, hence the existence of OSF, COSE and X-OPEN. But these organizations are not doing object-oriented OSs and that's where the industry is heading. So, what object-oriented OS is HP going to choose from? HP must not like Microsoft. After all, didn't Microsoft run NewWave into the ground.

What NeXTStep provides HP, now and in the future, is an OS that is UNIX, object-oriented and compatible across all HP desktop systems. (HP has not even done this much!) NeXTStep provides HP with a environment that is user-friendly and responsive. For the developer, it is a well thought-out framework that speeds user interface development several times faster than HP's competitors and with better quality.

NeXTStep is a force that will leverage the software industry to a higher level of quality and lead the way in object-oriented computing.

Let your readers decide if NeXTStep is as bad as Gordon McLachlan says. Write several articles that show why HP decided to commit to a NeXTStep port and what type of problems NeXTStep is designed to solve. That would be a service to your readers! and is why people read magazines.

Tim Pugh
Scientific Programmer
College of Oceanic and Atmospheric Sciences
Oregon State University

HP Professional welcomes comments from its readers. Letters may be edited for brevity and clarity and should be addressed to: HP Professional, 101 Witmer Rd., Horsham, PA 19044. Fax number: (215) 957-1050. Internet address for staff listed on the masthead: LASTNAME @ CARDINAL.COM.

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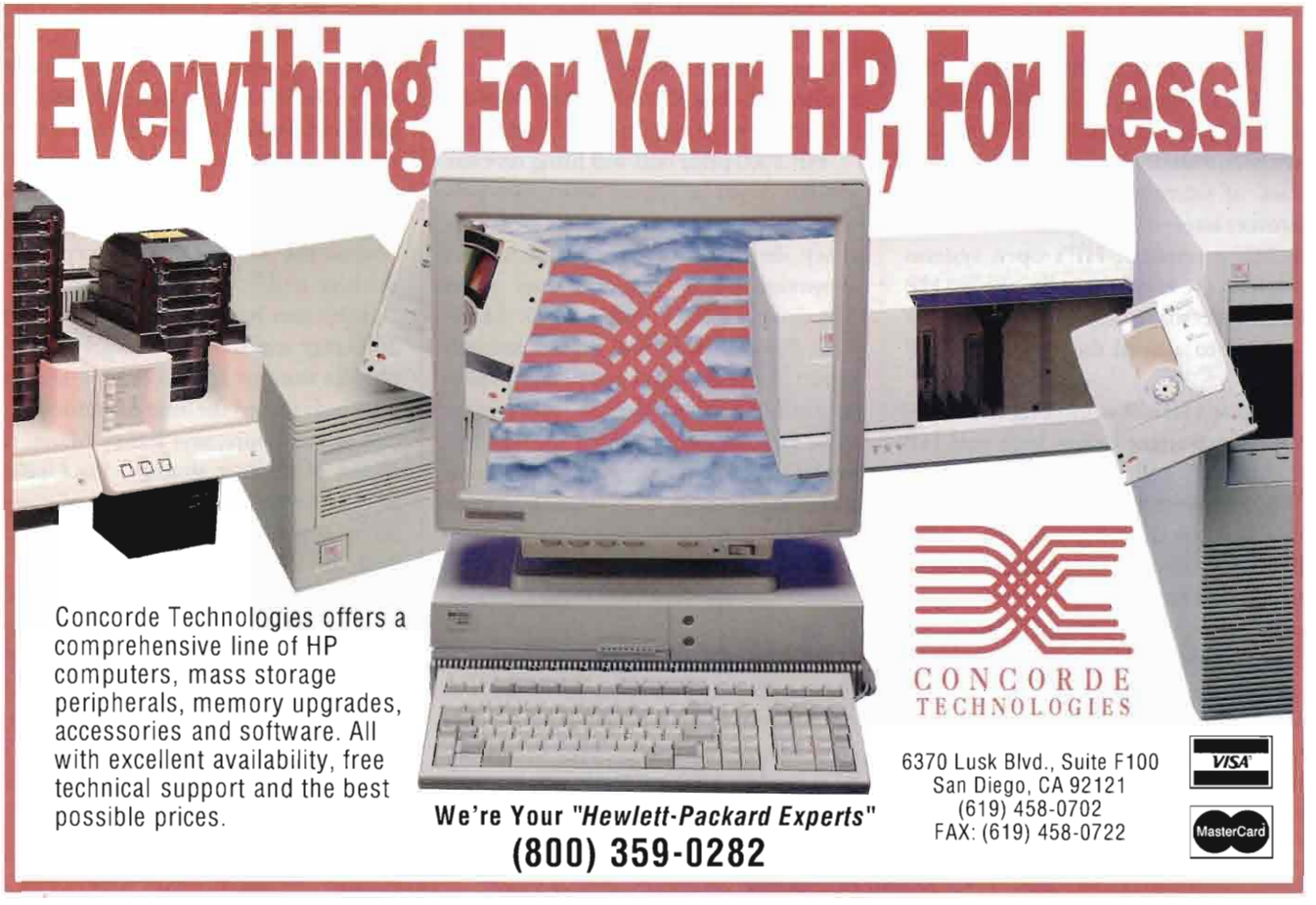

CIRCLE 232 ON READER CARD

A VARiety Of Views On The HP 3000

HP Spreads The Word In Europe

Over the last two or three years on the Old World side of the Atlantic, vendors selling software into the HP 3000 market have been frustrated with what they saw as a lack of interest from HP in spurring customer interest in the system. The overwhelming result of HP's open systems push with the HP 9000 in Europe is a HP 3000 market that is growing at probably at a quarter to a third the rate of the HP 9000.

Despite a lack of marketing effort, HP recently introduced new high-end HP 3000 models and HP Europe says HP 3000 sales were up last year, at least in units. But the overall perception of the HP 3000 in the market is that of an aging technology that no longer measures up to its slick sister system, the HP 9000.

As a result, HP's sales and marketing organizations are changing the messages they communicate. But for VARs, the only question now is how much of the damage to the HP 3000's reputation can be undone.

"In France, since 1989, HP has denigrated the 3000 in favor of the 9000 and toward UNIX, and they've killed the 3000 market in France. It's an excellent machine, but marketing-wise, it's completely dead," according to Didier Besneville, associate director of Paris-based APPIC S.A.R.L., maker of StarJet, document and forms-creation software, which is installed in 500 HP 3000 sites throughout the world.

Daniel Roman, HP France's HP 3000 product manager, explains that their marketing is targeted largely at existing accounts and, thus, the HP 3000 market for vendors of tools and databases is stagnant.

HP 3000 price cuts will bring revenue growth down in France between 5 percent to 10 percent this year in local currency, despite an increase in unit sales of approximately 14 percent, from about 220 units in 1992 to 250 in 1993. However, Paris-based UNIX market research expert Pierre Audoin Conseil says 10 percent of HP 3000 revenues in France come from new accounts, which include upgrades of existing machines, the addition of a new subsidiary to an existing account and, finally, the new client. An "important" percentage of the new accounts involve the expansion of existing accounts, he says.

In terms of existing accounts, France is Europe's second largest market with 3,400 machines installed in 2,800 sites, Roman says, adding that he believes the swing from the HP 3000 to UNIX was stronger in Germany than in France.

Nevertheless, John Saw, HP 3000 product manager for HP U.K., says the dollar ratio of HP 9000s to HP 3000s shipped, as of the "eleventh month of [FY] 1993," was 4 to 1, and somewhat higher for unit shipments.

"One of our biggest issues with HP has been the amount of push they've put behind the 9000 and HP-UX, so much so that sales of the 3000 have come largely from VARs like us," says Paul Eggleton, ASK Group's European product marketing director. "It's like a big secret within HP that they have this great machine, although to their own 3000 user base they have a strong commitment."

Despite the push to UNIX, worldwide unit sales of the "big secret" for the last fiscal year, ended in October 92, were up 14 percent over FY91, and "up just slightly more in Europe, maybe 15 percent," says Eddy Vandersmissen, European marketing manager for HP's CSY. He also says, price erosion brought worldwide sales by revenue down slightly, and left them flat in Europe. He had no final figures for the year in progress, but predicted that "the number of units may be down, but sales by value should be good, because the 3000s are doing very well at the high end."

HP's new high-end models of the HP 3000 may well have been largely responsible for that unit sales increase; from users who had reached the limit of performance and needed more, says Jeffrey Mann, director of product strategy, for Uniface B.V., Amsterdam, a developer of client-server application development tools for both the HP 3000 and HP 9000.

The introduction of those new systems make the perceived lack of commitment to the HP 3000 somewhat ironic, he adds. "HP is pouring money into the 3000; it's very expensive to develop those new high-end models. It's not like they're strangling it. They're trying to see it as a mainframe replacement."

The HP 3000 as a mainframe replacement is only one of the aspects of a

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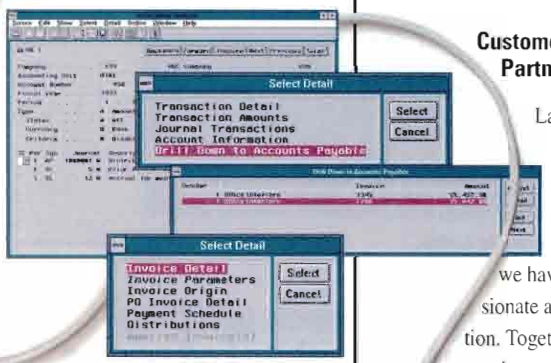

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CIRCLE 463 ON READER CARD

renewed sales and marketing effort for the HP 3000, which HP Europe initiated at the beginning of the year. Comparable to one in the U.S., the effort will focus awareness on the technical advantages the HP 3000 holds over its rivals, primarily the AS/400.

HP Europe's marketing team has been working to position the HP 3000 as a solution to business problems by focusing on getting more applications for it. The marketing effort is aimed at two markets: the installed base and new customers in focused verticals, like manufacturing, libraries, newspaper publishing, human resource management and financial accounting.

Vandersmissen says "We want to focus the awareness of a select number of sales people and of customers on the 3000 and we will try to concentrate 3000 customers with sales reps in certain industries."

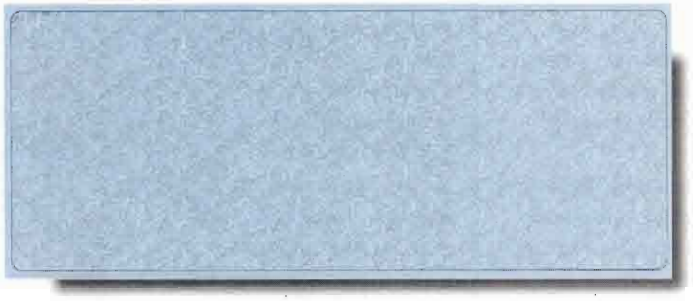
ASK Group and ORBiT Software (UK) Ltd., both in the U.K., have already seen evidence of HP's new marketing effort, while APPIC, Uniface and Oracle France have not noted any change.

Says ASK's Eggleton, "We have worked with the HP mainframe downsizing program, which is working to convince companies that the 3000 is a viable alternative to a mainframe and that there are viable applications. It's an area where the 3000 is strong, it has a track record with commercial applications and is more tuned for commercial processing environments than is UNIX."

R.L. Goodway, managing director at ORBiT, in Leatherhead, Surrey, says users are not convinced. It's only in the last quarter or two that HP has started to market the 3000 as an OLTP platform, but people have been made somewhat wary of buying. For the [3000] models 967 or 957, you're talking about $240,000(US$). Before people will make that investment, they're still asking themselves whether it's a prudent one." APPIC's Besneville is less optimistic. "Even with renewed efforts, it would take a lot of time to resuscitate it, if they could do it at all," he said.

Although vendors like APPIC and ORBiT have no intention of leaving behind their HP 3000 business, they and the majority of HP 3000 software vendors have ported their products to "open systems," namely UNIX, platforms. Now, says Besneville, 50 percent of APPIC's new business is represented by non-HP systems; 30 percent by the RS/6000 (since only the beginning of the year) and 20 percent by Ultrix, SCO and others.

HP France's Roman acknowledges that the rate of unit sales growth has slowed, but "the installed base remains unmoved; it stays completely loyal to the 3000, particularly in the large accounts." ■



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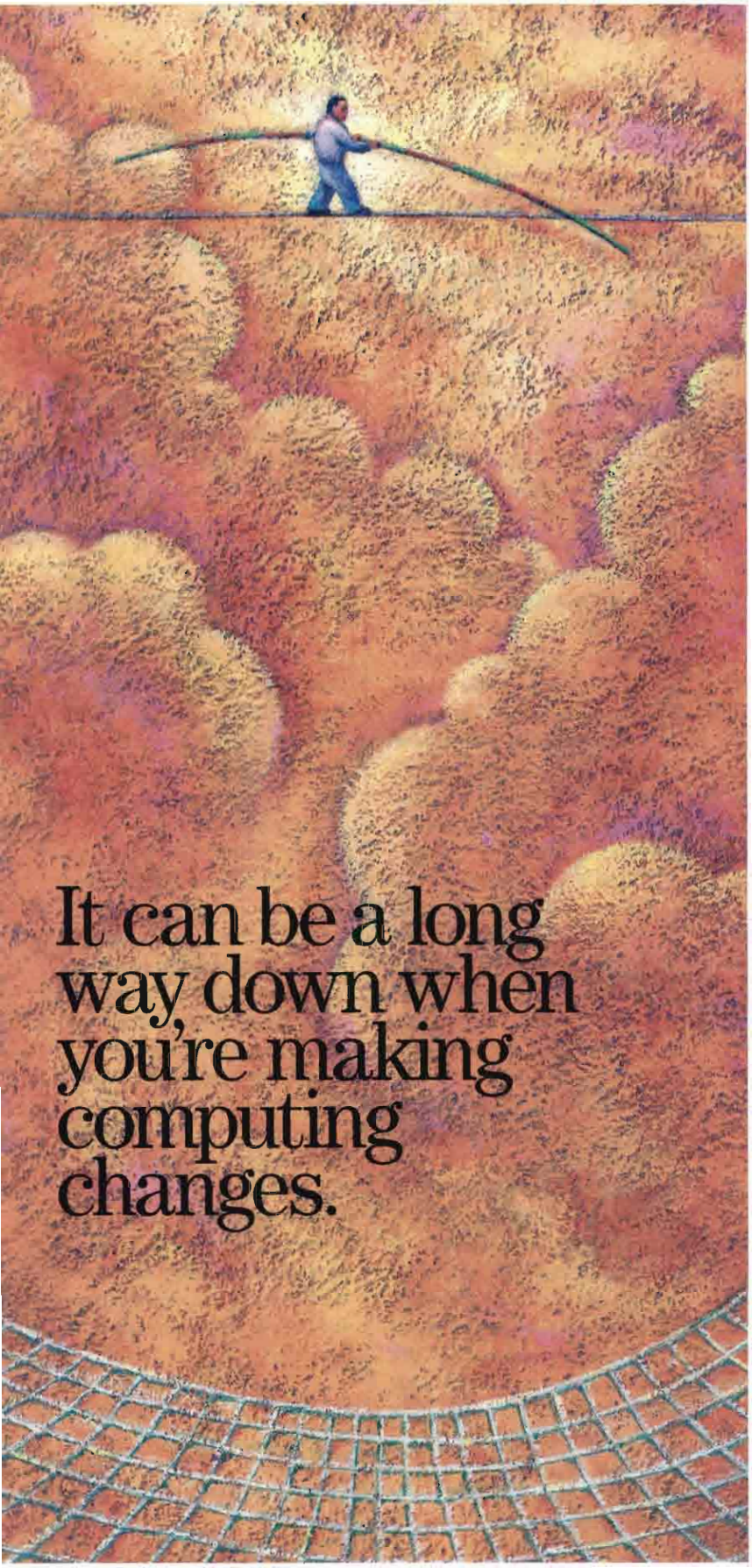

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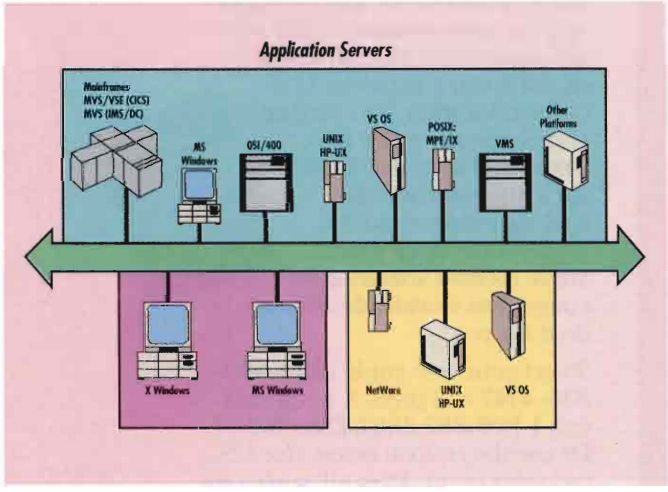
CIRCLE 130 ON READER CARD

Green With Imaging



OPEN/image

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fax: (508) 967-1105

Circle 353 on Reader Card

It's estimated that 1 billion pages of paper are produced by American companies every day. Consequently, electronic imaging has become one of the new "green" solutions for this paper overload. But, Wang Laboratories (Lowell, Mass.) has gone one step further with OPEN/image, a set of application program interfaces that enable users to add imaging technology to new or existing applications.

OPEN/image includes OPEN/ image Connect, a toolkit to image-enable existing applications. Application level integration links images with applications by enhancing the existing application code. Imaging functions include scanning, printing, faxing and the storage of black and white, grayscale and color images. Imaging functions are database-independent.

Integration between the application and images appears seamless, and users can display images with a simple keystroke. Because this approach does not affect the host, it is ideal when the user does not have access to the application's source code, does not want to modify the application or needs to image-enable an application quickly.

OPEN/image products support images in TIFF 5.0 image file format, image data compression CCITT Group 3 and Group 4 faxable compression schemes, JPEG and LZW compression, networking with TCP/IP using 802.3 and 802.5 protocols, UNIX applications and image servers, and the Microsoft Windows GUI.

The application can store image documents on image servers supported by OPEN/image, network file servers or locally on a PC workstation. Image servers supported include OPEN/image Server for HP-UX, AIX and NetWare.

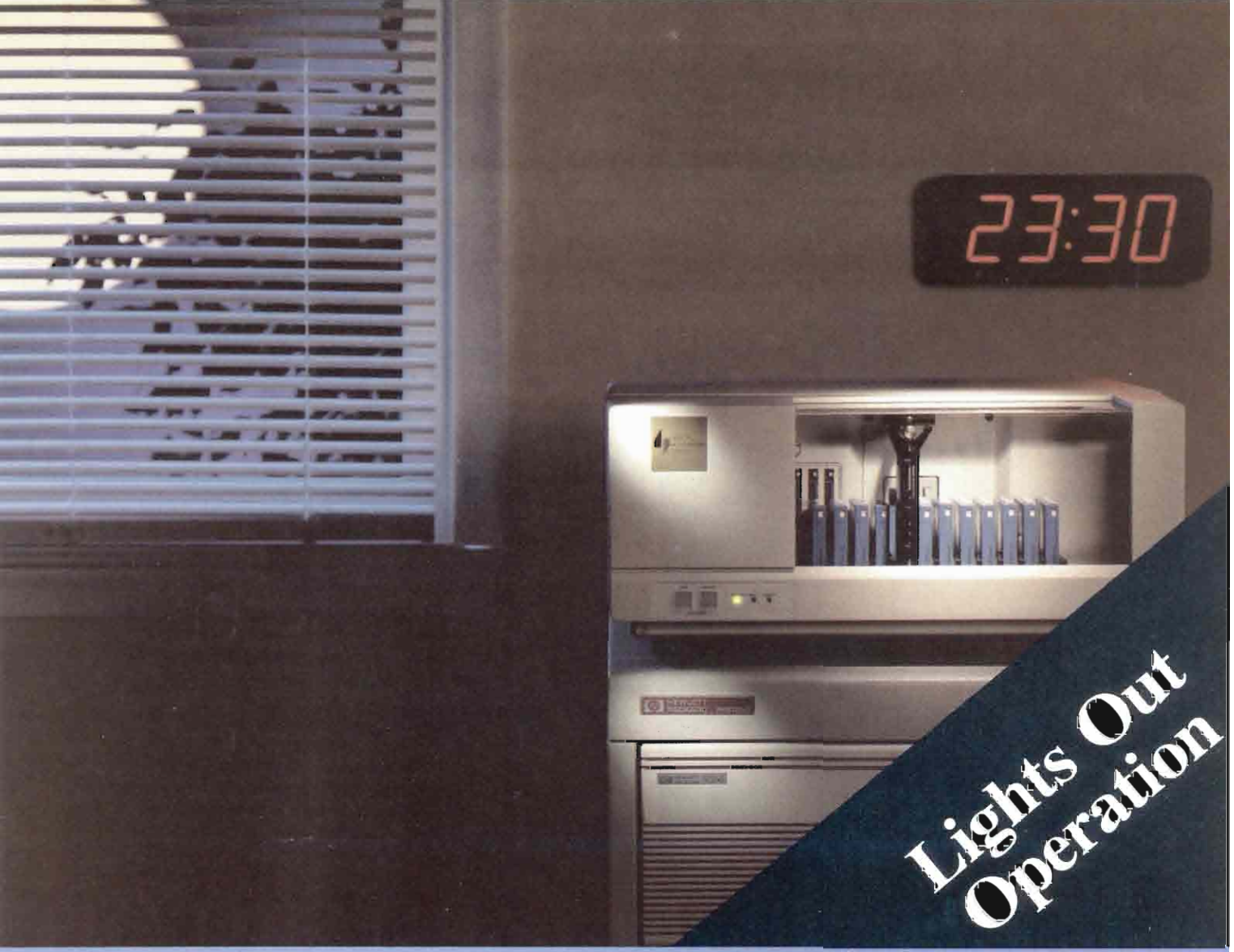
Image processing can be integrated transparently into HP-UX applications running on HP 9000 Series 800 business servers. It also enables end users to access, manage and control image documents from the host environment. "We have the ability to image-enable more platforms than any other [imaging product]," says Kerry Bensman, Wang's director of image marketing. OPEN/image can image-enable HP 3000s, HP 9000s, IBM and DEC mainframes, AS/400s, PCs and more.

OPEN/image Application Image-Enabling for HP-UX consists of three major components: OPEN/image API, Release 1.0 enables HP-UX host applications to access Wang imaging software; OPEN/image Workstation for UNIX Release 2.0 provides an interface between the API and the imaging software to provide the image functions in the form of dynamic link libraries; OPEN/image Fax API for HP-UX Release 1.0, is optional and provides access to fax functions.

According to Bensman, OPEN/image has been targeted at two groups. "We are aiming at companies and users who are looking at scalable imaging solutions to solve their business problems." But he notes that "we are also selling to third-party VARs, who then sell their image-enabled products to the end-user."

Regardless of the reason for implementing imaging, Bensman says, OPEN/image has been helpful for many companies. However, he points out, "A lot of companies don't talk about their imaging solutions, because they see it as a competitive advantage."

— *Deborah Schwartz, Assistant Editor*



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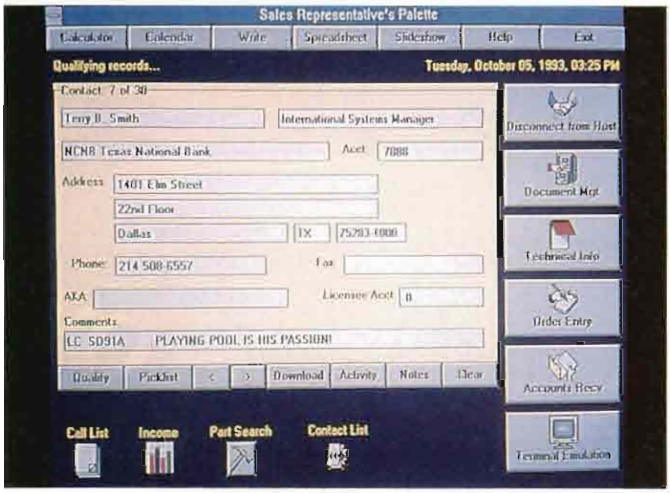

The Writers Guild of America West (WGA; West Hollywood, Calif.) is the "trade union" for West Coast screen and TV writers. WGA tracks members' contracts to make sure they are paid after their shows are broadcast.

Tom Nefeldt, WGA's director of data processing, explains that a writer's contract with network TV requires they get paid for the first three broadcasts. For subsequent broadcasts, the writer is paid residual fees.

When a show gets syndicated, it is sold to several TV stations with permission to broadcast it seven times. WGA keeps track of when, where and how many times a show is broadcast, and makes sure the writer gets paid.

During a year, an episode of *M*A*S*H* might be broadcast many times with no one the wiser except local TV viewers. "Now we just check our database to find how many times an episode of a show was broadcast," says Nefeldt.

The WGA database has grown from 2 million records (eight years ago) to 10 million records, and is growing at a rate of about 24,000 records a week. Nefeldt saw there was no way WGA operators could easily or quickly get the information they needed for their reports from the database with the retrieval method they had on their HP 3000/922 RX. "There was really only one third-party indexing system available, and that was Omnidex," Nefeldt says.

Omnidex, a multiple keyword indexing system from Dynamic Information Systems Corp (DISC; Boulder, Colo.) was developed in 1984 for HP's IMAGE database on the HP 3000, and is resold by HP as EasySearch. Now, Omnidex is available for DEC and other UNIX platforms.

According to Janet Eden Harris, DISC's vice president of marketing, Omnidex uses multiple indexing — more than one value at a time — as well as keywords to search for records in a database. The number of qualifying records is available in seconds. The user can then refine the selection or output the records to the screen or an application.

"Without a product like Omnidex," Harris says," a computer has to read every record in a database to find the ones that qualify. Depending on the size of the database and the speed of the machine, that can take minutes at the very least." The theoretical limit for Omnidex indexing is 2.1 billion records, Harris says.

DISC has enhanced Omnidex with OmniQuest, allowing users to integrate Omnidex into existing report writers, and OmniWindow, allowing users to open a window on top of an application to do database queries and retrievals.

The most recent enhancement is a client-server version. According to Harris, because indexing is performed on the server, there is fast access to server data and minimal network traffic.

"If I get back a retrieval count of 5,000 qualifying records, I can qualify the query down further, or I can start the search all over again. Up to this point, the server hasn't downloaded a thing. When the count is reasonable, I can use a "pick list" which allows me to download only specific records, or specific fields from records."

According to Nefeldt, the client-server version is used in the agency department, which provides producers with writers' phone numbers. With hundreds of calls a day, it has greatly reduced the time per call.

The next client-server version will include automatic faxing. A user will be able to select information from the database and fax it directly from the computer. "That will save us a tremendous amount of time," Nefeldt says.

—Sam Dickey, Contributing Editor

Omnidex

- Runs on HP 3000s, as well as DEC and other UNIX platforms
- Fast Access to server data
- Minimal network traffic

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CIRCLE 262 ON READER CARD

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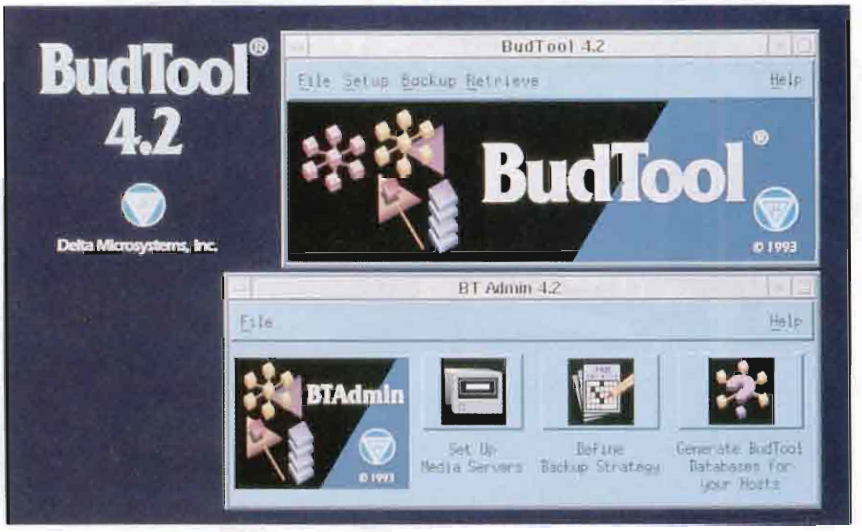

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Circle 356 on Reader Card

According to David Scott, marketing manager at Delta Microsystems Inc. (Livermore, Calif.), if you start producing backup and archiving software at the low end and try to move to the high end, there are many obstacles that you will run into.

"The issues at the high-end are very subtle, but very critical," says Scott, "We don't hit those major walls, because we've always been at the high end." Since 1988, Delta provided network backup software for SunOS. Version 4.2 of their BudTool software, shipping this month, will run on HP 9000 Series 700 and 800 machines. BudTool (Back-Up Daemon Tool) works with standard UNIX utilities to automatically backup a single machine or a heterogeneous network.

Version 4.2 works on HP 9000 platforms, but also is available on SunOS, Solaris and Auspex. BudTool uses windowed interfaces to communicate easily with the system user. Separate versions are available for Motif and OpenLook.

This version has several added features including: improved ease of use; automatic network discovery; split image support; command line interfaces for added flexibility; and additional performance features for users and system administrators.

Another notable enhancement is BTAdmin (BudTool Administrator). BTAdmin is a window-based tool that allows rapid initial set-up of BudTool. It automates configuration of computers connected to backup devices, identification of backup clients throughout the network, creation of backup requests and creation of automated backup schedules.

Split image support provides options for cases where the backup request is interrupted because the backup device reaches the end of the tape. The remainder of the backup request continues automatically on the next volume.

A network discovery feature enables network activity to be monitored for newly added file systems which are reported to BudTool and system administrators through E-mail.

BudTool performs tape management functions to ensure all information is stored correctly. It has an online history database and a table of contents is written to each tape to make searching easier.

BudTool ($5,995) supports 8mm and DAT tape drives, stackers and jukeboxes. Storage capacities range from 24 GB to over 2,350 GB. BudTool is sold separately or bundled on tape drives and jukeboxes.

Scott says Delta Microsystems' installed base is made up primarily of Fortune 1000 companies. "Our track record shows that we have always listened to our customers as to what they need. We're making sure that we can satisfy the high-end customer."

—Deborah Schwartz, Assistant Editor

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CIRCLE 351 ON READER CARD

In 1987, advertisements appeared in magazines and card decks touting a book on performance management for the HP 3000: *Taming The HP 3000*. Written in a lighthearted style, with a commonsense approach, *Taming The HP 3000*, was not the usual dry, academic tome on performance management. It quickly became an indispensable book for every HP 3000 system manager.

The author — Robert Lund, founder of Lund Performance Solutions (LPS; Albany, Ore.) — was either prescient or extremely confident when he designated the book Volume I. Volume II of *Taming The HP 3000*, emphasizing MPE/XL, was published in 1992.

In 1986, Lund, a former HP systems engineer and technical support engineer for a large HP VAR, realized that there was a growing need for "independent, supported and affordable performance tools; training and consulting."

The only supported performance tool available from HP was expensive and difficult to interpret. Although the software library had some useful tools, they were unsupported and often lacking in documentation. Although training from HP was good (Lund was one of the instructors), it was considered expensive. Performance consulting, mostly offered by only HP, was costly, and obviously lacked an independent perspective.

LPS began regular training classes in performance optimization and capacity planning in 1988. In 1989, SOS/3000 Performance Advisor, became LPS' first software product. It was unique in the way it "advised" the user on diagnosing and resolving system bottlenecks. The firm's second software product, Forecast/3000 Capacity Planner was introduced in 1990.

While Lund was working on Volume I of *Taming The HP 3000*, he was joined part time in his performance consulting business by William Lancaster. Now General Manager of LPS, Lancaster had been working with HP 3000 systems as a technical specialist for an HP VAR. In 1990, Lancaster came on board full-time and the company became Lund Performance Solutions.

Q-Xcelerator Resource Manager was introduced in 1991, and Performance Gallery was introduced in 1992. In December of 1993, LPS expanded beyond the HP 3000 market with SOS/9000, its first product for HP-UX. DeFrag/X, a badly needed tool for dealing with fragmented disks on MPE/iX systems (somewhat like HP's VINIT CONDENSE on MPE/V systems) is already in full production.

Since its formation, LPS has been guided by four principles: operate with zero debt; conduct business with uncompromising integrity; live and work with a concern for people; and master the market and the technology.

LPS' growth has been achieved through adhering to a fiscally conservative "finance our own growth, pay as we go" philosophy. This philosophy was critical during the period when MPE/XL systems were being sold, but the Measurement Interface AIFs necessary for performance management software were still being developed and were either unavailable or unstable.

LPS also has thrived by "staying narrowly focused on performance issues." Lancaster says, "We dedicate much of our time to doing the Second Opinion Analysis paid consultation. Also, as a part of standard support, we do a yearly performance analysis for any customer who requests it.

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— John P. Burke, HP 3000 Editor

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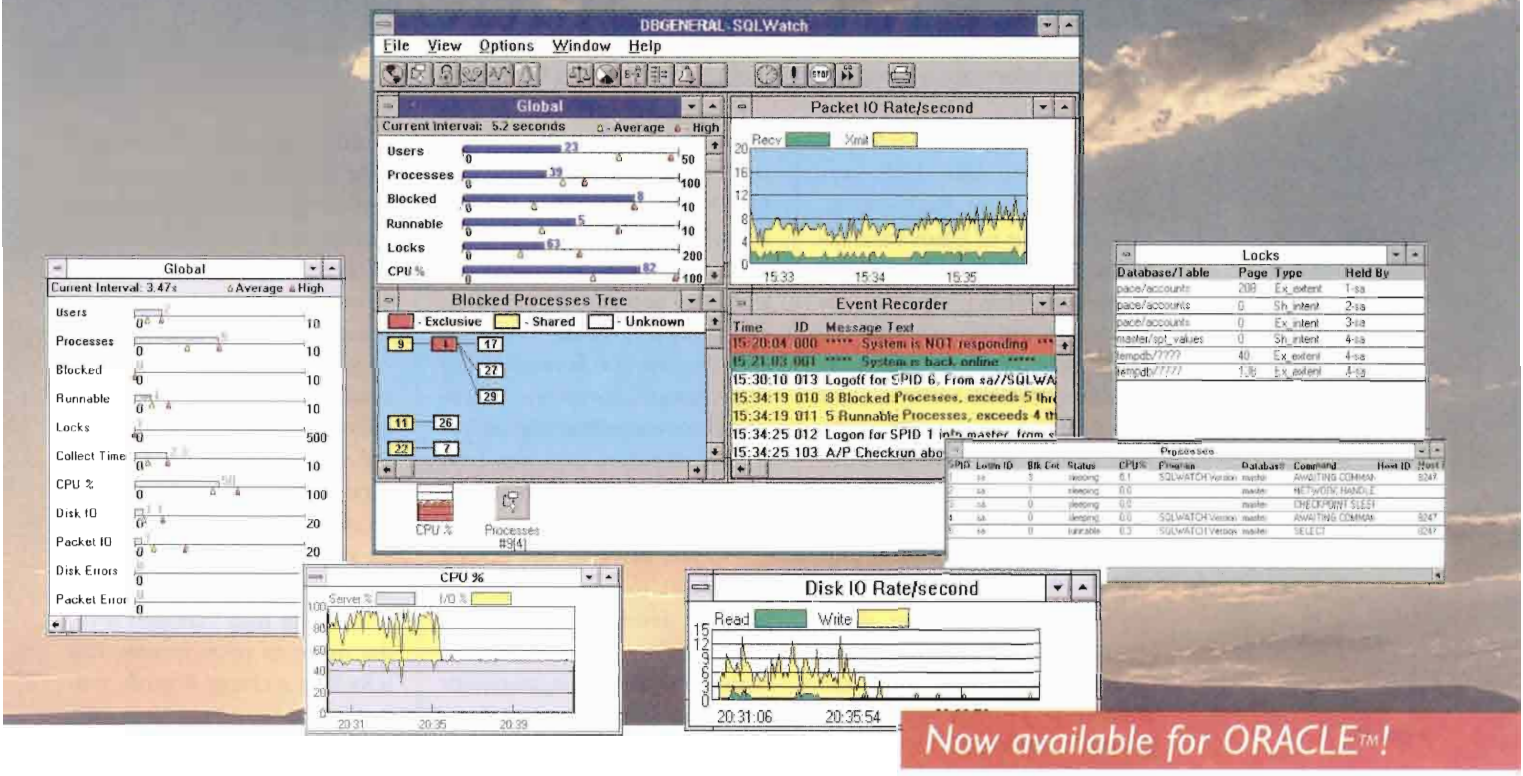

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Vice President
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CIRCLE 354 ON READER CARD

"I hate to say I told you so, but ...," says David Rubinstein, vice president of Innovative Information Systems Inc. (IISI; Norwood, Mass.), when he recounts his and his partners' decision to specialize in HP 3000 implementation services and consulting back in 1985. "At that time people said we were nuts, being in DEC's backyard and all." However, Mark Shirman, president, and Rubinstein, both former Andersen Consulting employees, along with Mark Symonds, vice president, felt "no one fully addressed the project/business applications for the HP 3000."

The aggressive, independent attitude that launched IISI over eight years ago, drives the company today as it moves into the open systems arena. "We have to manage change, and not let change manage us," says Rubinstein when explaining IISI's decision to target the client-server industry.

In a move to increase its expertise, IISI operationally merged with CDI Computer Service (Detroit, Mich.). The merger increased IISI's consulting professional staff from 200 to 500, and raised revenues to over $40 million.

IISI includes the following in its portfolio of service specialties: planning midrange computing solutions; implementing client-server technology; designing UNIX and open system applications; implementing mainframe alternatives; and integrating PC and LAN connectivity solutions. The company, which has worked with Fortune 500 firms and small organizations, considers themselves business people who understand computers. IISI lists Levi Strauss and HP itself among its customers.

"Open systems has forced companies to offer more than just a product," explains Rubinstein. According to Rubinstein many organizations faced with a client-server decision have purchased or at least decided on the components of their systems, but have no idea if there is "life after implementation." Enter IISI consultants and services.

To meet the needs of companies entering this "emerging technology," IISI has partnered with other third-party vendors such as Informix, Uniface and Computer Associates Int'l. (CAI), in addition to being a HP Channel and Premier Solutions Partner.

Despite their own partnering programs, Rubinstein remains skeptical of alliances that offer lip service. "Today you see press releases announcing partners programs. These relations take work and time. If you approach it as a one night stand that's all you get out of it."

IISI entered the alliance with CAI because the firm was concerned with servicing the system management and transition needs of users going to a mainframe alternative. Rubinstein cites their relation with CAI as an example of a hard working alliance. According to Rubinstien, CAI requires representatives to complete a five-day training program before they can represent their products. Technical staff must finish a 15-day course, as well as pass exams.

To help MIS managers make the move to open systems, IISI is looking at change from the customers' perspective. "Your MIS staff must understand how you do business," says Rubinstein. "MIS is the only department that deals with all the other departments in a company. So MIS must truly understand your business as a whole."

When asked about the reality of moving to open systems, Rubinstein says his firm sees client-server computing as a "business philosophy" as much as a technology. He explains that more people will now have access to and an effect on new information throughout the enterprise. "Organizations must be prepared to allow that."

— Charlie Simpson, Editor-in-Chief

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Hermes Takes Wing

Hermes SoftLab Earns HP's Respect And Business In Software Development

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CIRCLE 355 ON READER CARD

OmniBack, the next UNIX-based network-backup utility product to emerge from HP, has its roots in Ljubljana, the capital of Slovenia. Hermes Softlab, founded in 1990, is HP's representative in the former Yugoslavia.

"We recently decided to develop a new generation of OmniBack. We did the planning, marketing requirements and the specifications, all along involving Hermes [Softlab] and then handed over the engineering and coding work," says Ottmar Schneider, business team manager for print and storage management functions of OpenView in the Network and Systems Management Division in Boeblingen, Germany.

According to Rudi Bric, director and co-founder of Hermes Softlab, the Slovenian software engineering firm has "about 15 engineers working on this, which should be done [in manufacturing release] by the end of 1994."

Hermes Softlab's first project was in 1989, before the company was officially formed, when the engineers were asked to develop the graphical interface for OpenSpool. Hermes SoftLab is currently responsible for the complete Current Product Engineering (CPE) for OpenSpool and OmniBack, which includes back fixes and enhancements, Schneider says.

"Hermes [Softlab] started with us on small projects, went on to the maintenance engineering of products, and finally to the next step of taking on the next generation of a product. This proves that Hermes has been able to raise our level of confidence in them over time; they have also been willing to adopt the HP product life cycle guidelines," Schneider says.

HP Boeblingen likes to use Hermes because of its flexibility on short notice to run an additional project and its ability to recruit high-quality, young engineers on a contract basis.

Hermes' biggest project in Slovenia is for SDK, the social accounting agency. Hermes is building a national payments system based on 70 HP 9000 Series 800 HP-UX machines and Allbase.

The system is expected to support real-time payments between SDK's 14 branches and 46 subbranches throughout the country, to the tune of between 300,000 to 600,000 transactions per day, says Miran Zrimec, assistant to SDK's director general. A satisfied Zrimec says he finds Hermes a "very dynamic" company.

For the payments system, Hermes is using its own, specialized transaction monitor and GRACE, its new peer-to-peer messaging system targeted at developers of client-server applications. The pilot is scheduled for completion in June 1994 and should be operational at the beginning of 1995, Bric says.

Since the presentation of GRACE at Interex'93 in San Francisco, Bric says Hermes has gotten a number of inquiries from large companies in the United States and is trying to decide on a partner from among a number of companies, including Pittsburgh-based Transarc. Hermes has not yet shipped GRACE. "It's in beta-site and we're working on a second release to provide enhanced performance on local servers, which is what will be going out on January 1," he said.

"GRACE has been ported also to the HP 3000, so you can connect the 3000 and 9000 worlds. We see an opportunity specifically in this area," Bric added.

Today, the company's revenues, which Bric estimates this year to be between $2 to $2.5 million, come 50 percent from Slovenia and 50 percent from abroad. Outside of Slovenia, 80 percent of Hermes' sales are for HP platforms," Bric says. "Right now, we're just focusing on providing enough money to run the business, because we're investing in lots of things," including the backup product development and upgrades to GRACE."

— Marsha Johnston, International Editor

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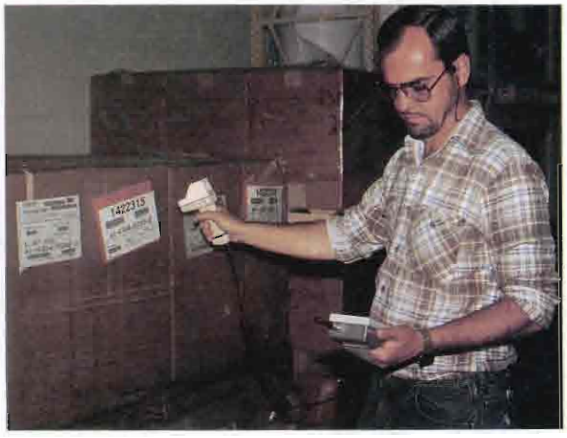
IN sites

3M Steps Up To The Bar

Scotch Tape and Post-It Notes. When you think of 3M, that's probably what comes to mind. But not for Alicia Mancino, she thinks about bar codes. Why? Because it's her job.



As project leader for bar code services within 3M's corporate IT group, Mancino clearly understands her mission: "to help 3M plants and distribution facilities take advantage of bar code technologies to become more efficient and to meet customer labelling demands."

Mancino and her three person team is responsible for data collection and label printing for between 75 and 80 3M manufactuing and distribution sites. About half of those sites are using HP 3000 systems as their "business computer," handling warehousing, production planning, shipping and inventory control. Process and quality control are handled by a variety of DEC VAXes and UNIX boxes.

While the data is collected via radio frequency terminals, bar coded labels are the key. "You can't do very efficient data collection unless you have bar coded labels," says Mancino. Those labels are produced using electronic forms software from JetForm Corp. (Waltham, Mass.)

JetForm was selected five years ago as the corporate label printing standard because of its ability to be used in all of 3M's computing environments. According to Mancino, JetForm allows labels to be designed on a PC, then "printed from either a PC or a LAN, or from the HP 3000, where our application data is."

The majority of the labels that the bar code services group produces fall into two categories: pallet load tickets and "jumbo tickets" that are used to track and trail shipments while still in 3M plants; and specialized customer labels that conform to particular industry standards for shipping from the plant. "Each industry has their own label standard," explains Mancino. "And of course, each one is different."

Besides acting as trouble-shooters for sites that use JetForm applications, the bar code services team has developed two and a half hour-long JetForm training videos and perform "label consulting." The training videos are "like a small class," says Mancino. "We spent three months and a lot of money putting together these videos to explain how to use JetForm because users weren't getting it out the manuals."

As label consultants, bar code services shows other 3M departments how to solve their particular label printing problems. Mancino stresses the trick is to integrate label printing with existing applications. For example, "as they're reporting production or doing inventory con-

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Critical Response Time

When you call for emergency help you expect a quick response. And, you also expect the rescuers will be coordinated and organized. That's why the city of Sunnyvale, Calif. spent the last five years updating and automating its fire and police dispatch system.

According to Larry St. Regis, operations manager for Information Systems, Sunnyvale was running a 15-year-old Motorola system with software from IBM that "never ported over successfully." Four and a half years ago the IS department for Sunnyvale developed loose specifications and accepted bids. "When we came in we had no idea of what we wanted," recalls St. Regis.

Sunnyvale's decision was software driven. "We selected the software from OCS (Palo Alto, Calif.) before a hardware system," says St. Regis. The platform choice boiled down to HP and DEC. Because the city was a long time user of various HP products, Sunnyvale stuck with what it knew — HP.

A year and a half ago, St. Regis installed two HP 3000s, a 937LX and a 947, as part of a three-phase implementation, consisting of fire and police dispatch, the city's records and fire prevention automation.

The first phase was a CAD emergency dispatch system completed this past April. Sunnyvale dispatch is using HP Vectras PCs running Microsoft Windows and Walker, Richer & Quinn's (WRQ; Seattle, Wash.) Reflection for Windows to access the HP 3000s. HP helped configure Sunnyvale's dispatch system by recabling the building and setting up each machine.

Sunnyvale is on a 911 emer-

continued on page 30

You Might Be Surprised By What Some Financial Management Software Vendors Mean By Client/Server Architecture.

Before you invest in accounting software that promises client/server functionality, you had better make sure its architecture is not just another makeshift contraption.

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CIRCLE 154 ON READER CARD

IN sites

3M Steps Up

continued from page 28

trol, we can print the labels as a secondary [function] and not make it an extra step. And the labels will contain the exact information they need to have."

Practically speaking, using JetForm has relieved Mancino's group from having to write the drivers for all the printers used throughout the 3M plants. At any given site, there are anywhere from one to 30 printing stations using a variety of HP LaserJets and Zebra thermal transfer printers.

More importantly however, from a corporate standpoint, the cost savings and productivity benefits have been dramatic. By doing more in-plant label printing, outside printing expenses were reduced. And costs associated with storing pre-printed label stock were eliminated.

"Without pre-printed stock," Mancino says, "we can print on the fly, we can make changes, and it doesn't obsolete all the old stock we had pre-printed before." But the real productivity gains, she says, "come from scanning bar coded tickets and eliminating data entry." Consequently, Mancino has found that inventory accuracy has increased and without having to re-key information, the entire process is faster.

Mancino's immediate goals include "getting out of the middle of supporting thermal transfer printers." Although JetForm supports the HP LaserJets already in use at 3M, they haven't supported the Zebra thermal transfer printers that Mancino says are necessary in more ruggedized situations within 3M. "They are built to 'live long and prosper' in the industrial environments," explains Mancino.

For example, one of 3M's divisions makes sandpaper. "That's a very dirty, gritty and dusty environment. So, we need these hardy printers." But when it comes to supporting thermal printers, Mancino often has to wait several weeks before JetForm comes back with a solution.

Mancino seems to take the delays in stride, because she senses that her group may be pushing the limits of what electronic forms software is designed to do. Consequently, Mancino is encouraging JetForm to view themselves as being in the bar code label business, in addition to the electronic forms business. And she says JetForm is responding by addressing some of her problems like the Zebra drivers.

In the future, as they move toward a client-server solution, 3M's dependence on its HP 3000 hosts will gradually decrease. "We will be going to LAN-based printing, with the data coming from any variety of hosts or servers," says Mancino. Over the next five to 10 years, she expects HP-UX to be the primary UNIX platform of choice. "We feel that HP-UX has the best cost/performance for all the distributed computing we do; not just bar code printing."

—George A. Thompson, Technical Editor

Critical Response

continued from page 28

gency call system where its police and firefighter's are dispatched from one location. After a 911 call comes in, one of the four dispatchers creates a call to 20 to 25 units of police or fire personnel, or both. Police dispatches are sent to a Motorola portable terminal in a patrol car. Fire dispatches go to an Okidata printer located in the fire station. Once the call is closed it takes 30 seconds for fire and 5 minutes for police to transfer the calls to the 947 which maintains the call for one year.

The dispatcher accesses a Geographical Information System (GIS) that contains every street in the city. The system "recommends" the nearest unit and maintains their availability. A cartographer from OCS created the GIS and the maps can be updated by end users. In addition, the system is linked to the state which is then linked to a federal network of law enforcement information such as vehicle identification.

St. Regis states that emergency response time has been reduced. So has the administrative overhead. "We have reduced a clerk spending eight to 10 hours processing reports down to one hour."

The second phase will upgrade the city's records management with a Novell network. "We plan on installing about 70 Vectras," explains St. Regis, all talking and accessing the 3000s." Currently, the city's E-mail runs on separate classic HP 3000s and the new PCs will access the Classic again through WRQ's Reflection software. Once the record system is functional, St. Regis says they will be able to create computer generated pin maps.

Phase three of the operations will link the fire management and prevention bureaus on a network. St. Regis maintains, "UNIX may still be a consideration. OCS is looking to port to the UNIX platform, so HP/iX may play a big part in our plans."

—Charlie Simpson, Editor-in-Chief

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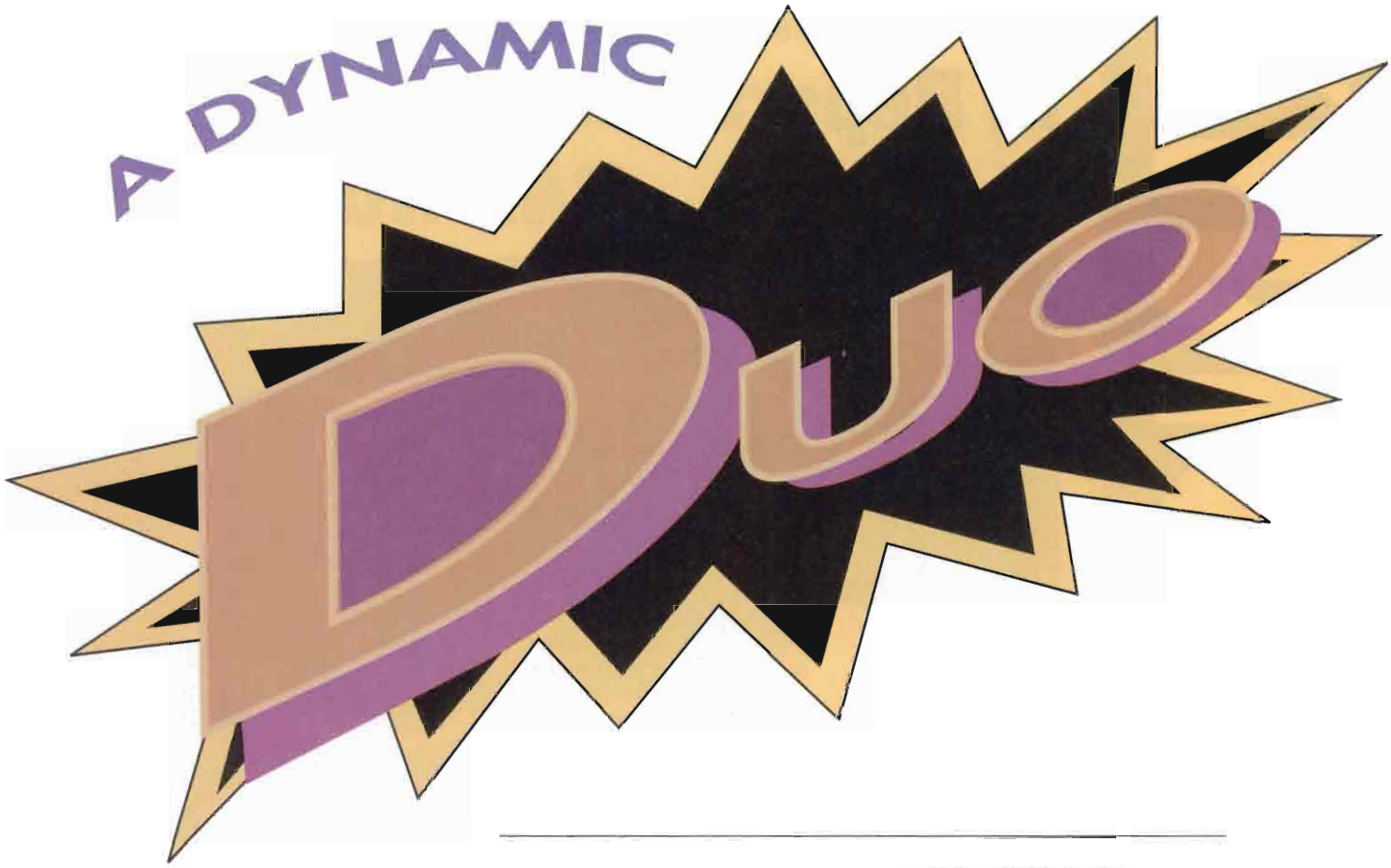

Coexistence or Cooperation. The HP 9000 Series 700 Workstations And 800 Business Servers Are Ready For Both

Mark Satterfield, advisory systems engineer for GTE (Tampa, Fla.), faced with ensuring that his new HP 9000 Series 700 and Series 800 systems worked together without a hitch as part of GTE's massive and newly emerging data services installation, chose to keep the two systems separate.

Meanwhile, thousands of miles away, another telecommunications computer expert, Bill O'Brien, manager of data networks at Bell Canada (Ottawa, Ontario), chose to link 700 and 800 systems tightly together in a large client-server network.

This is all very disconcerting. This was supposed to be a scathing expose of systems that are supposed to work well together, but don't. Unfortunately for our intrepid journalist, HP 9000 series 700 and 800 systems, as far as we can discover, get along just fine. Rats!

In Tampa, Satterfield gradually rolls out his nationwide system, which in about two years will include:

- More than 4,000 HP diskless workstations
- More than 150 Model 735 application servers
- About nine Model 827 communications servers
- Between six and 12 high-end Series 800 data servers.

Applications for the system will include sales and marketing, billing and trouble ticket work, all linked together as well as to GTE's legacy mainframe systems.

Being conservative, Satterfield avoids linking his 700 and 800 systems tightly together; however, he knows of no problems between the two systems. "We use the Series 800 for centralized data and communications applications, but internally there is really no difference between the two machines. The binaries are transferable."

Lenny Rosenthal, product marketing manager for HP 9000

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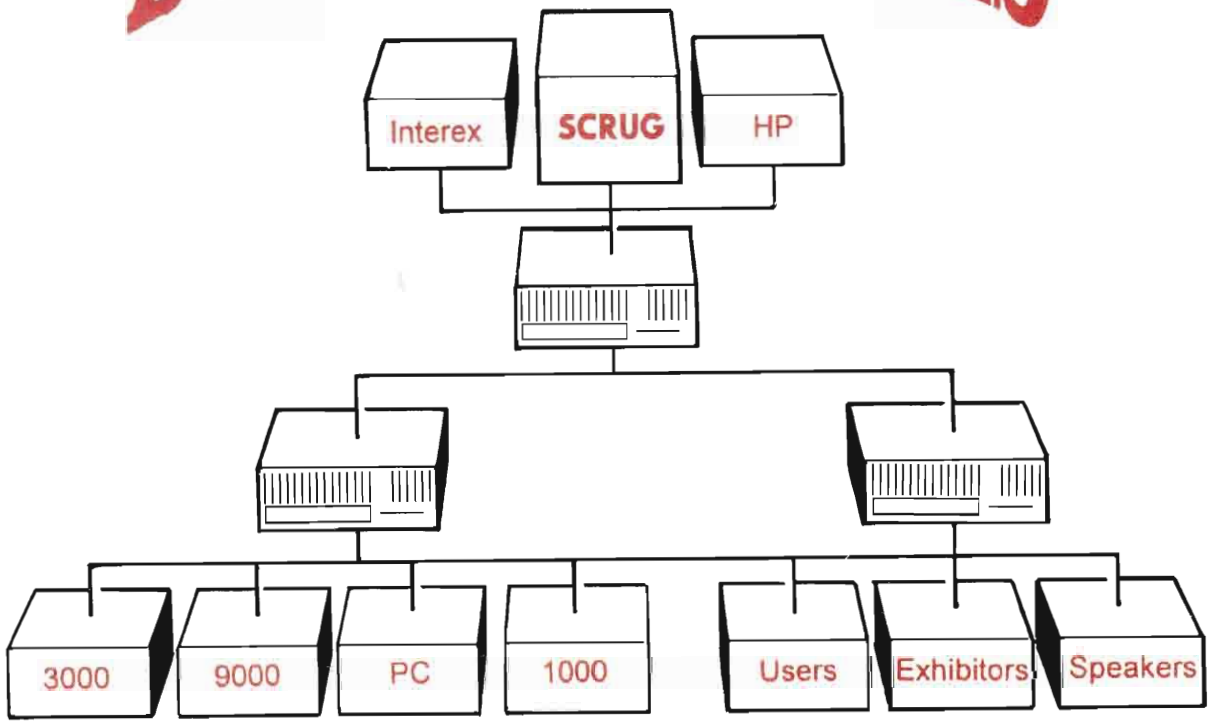

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CIRCLE 280 ON READER CARD

Over time, the Series 700 and 800 hardware and operating systems will converge.

Series 800 servers, and Keith LeFebvre, product planning manager for HP 9000 Series 700 workstations are both of the opinion that confusion over the links between their product lines is much less than it used to be.

"Series 700 products are single-user clients for both commercial and technical applications," says Rosenthal. "The workstations have a modest number of expansion slots and strong graphics [capabilities]." Series 800 products are stronger for host-type activities where expandability, large numbers of users, high availability, support for lots of I/O and disk space are crucial factors.

Because each line evolved with rather different user needs in mind, their HP-UX operating systems, although similar, were not identical. Even now, tape and I/O drivers differ. Similarly, while the PA-RISC CPUs that drive these two families are similar or identical, depending on the model, hardware differences do remain. For example, the default backplane for the Series 700 is EISA, while for the Series 800 it is the proprietary HP Precision bus — a holdover from the original HP-PA designs.

Over time, both Rosenthal and LeFebvre agree that Series 700 and 800 hardware, and operating systems will converge. "The next revision of the operating systems will be entirely compatible, although there will be slight feature set differences," says Rosenthal.

LeFebvre says, "We're moving toward common hardware and a more modular approach. We use the same underlying processors and the same memory subsystems such as disk drives, tape drives and other peripherals."

Although the two product lines began their convergence some time ago, their compatibility was not always clear to users or developers. Once HP took the time to make these similarities obvious, many developers began to realize that only a small amount of work was needed to migrate from one platform to another.

Holy Mind-Set Switch

RECENTLY, MENTOR GRAPHICS announced support for the Series 800 as a server for its CAE software products that had previously run only on the 700 models. Lotus moved its SmartSuite products in the other direction over to the Series 700. HP expects many other vendors to expand their support to include both of these lines as the convergence as well as the potential payoff of entering both markets becomes evident.

Much of the confusion stems from HP's introduction of the Series 700 family, says LeFebvre. "We introduced the 700 as a breakthrough workstation and shook up the market because the product was a desktop unit with the performance of a midrange system," he says. "Some users were confused because our servers did not have much more power than this new client system and because the client and the server had such different price/performance."

Many users turned to the price/performance of the 700 and adapted the single user systems for server applications. More recently, says Rosenthal, new Series 800 performance benchmarks give it "the highest server performance numbers in the industry," making it an easier choice. And the 700 has become a favorite as a customer service or technical client workstation.

Bell Canada uses Series 700 workstations to monitor the status of its phone networks across the Ontario region through a central facility in Ottawa. O'Brien oversees a network of the workstations tied to Series 800 servers.

The system is designed to identify and quickly direct repairs to line problems throughout the province. The network has been converted from stations using dumb terminals on a host system to HP UNIX workstations linked to a server.

When O'Brien's system first started coming together, he says there was a problem or two. The Series 800 server's X.25 I/O card at that time was designed with the assumption that communications sent over the card would be limited in size to small packages of data. O'Brien, however, needed to send "hours of continuous data" over the card, and realized his applications exceeded the capabilities of the card. "We went back to HP, and they redesigned it," he says.

Monitoring Windows connections over the network from the numerous workstations was another server issue. Users often lost track of the number of sessions they opened with the server, in part because the system made it easy to open a number of sessions at once. If the user did not carefully close each of the sessions at the end of the day, the computer maintained these sessions, even when the workstations stopped using them.

"With everybody doing that and leaving one or two open each day, you eventually have to go in and clear all of those that the 800 thinks are still open," says O'Brien. "HP needs a manager to tell you what sessions are still open with specific users." Where the links are all through the LAN, this is not a problem. The issue comes up when the links are synchronous or asynchronous.

Perhaps the most valuable aspect to the system uniting these two series of computers is the overlapping designs that might appear at first to be redundant. According to O'Brien, "Other computer makers have client-server networks designed as integrated systems where the workstation does this and the server does that with no overlapping of function. But when you use these systems in a heavily populated environment, the whole thing falls apart. HP designed each of these computers as standalone systems, with some duplication of function. That strength knits them together and the system can withstand very heavy traffic."

O'Brien notes that competing client-server systems from Sun

Microsystems, which divide up functions more fully, end up more vulnerable to failure under heavy use conditions.

Consequently, Bell Canada's technicians in Ottawa work faster and more effectively than ever before by using client-server systems that won't bog down. "These technicians cannot deal with slow response," says O'Brien. "It must be instantaneous. You cannot allow the tool they are using to delay these people or they won't use it. And the faster they go, the faster they want to go."

O'Brien has no complaints about wedding his 700 workstations and 800 servers into an effective system. HP's MPower multimedia software has been a powerful aid to ease of use and productivity, as well as unexpected cost savings — paper use has plummeted since MPower was introduced on the system.

But, sighs O'Brien, if HP has a downside, it's what they want to charge for OpenView. O'Brien can see use on his system for one or two pieces of OpenView for now, and more later. But, he says, HP has not unbundled the software, forcing users to buy the whole product at what he feels is a rather steep price.

O'Brien concedes that OpenView is the best management software of its type, but he says the license fees are just too high. "The 300 to 400 licenses we'd need would require us to own a bank. HP doesn't have to give it away, but [they should] make it reasonable."

Therefore you are unlikely to read here anytime soon that we've cornered HP top honchos near a hedge in the parking lot at 3000 Hanover Street, Palo Alto, and are peppering them with loaded questions about Series 700/800 compatibility. And by the way, crouching in those hedges is extremely tiresome. You get these awful twitching muscle spasms in your lower back unless you've gone to the trouble to get proper physical conditioning and professional lurking lessons.

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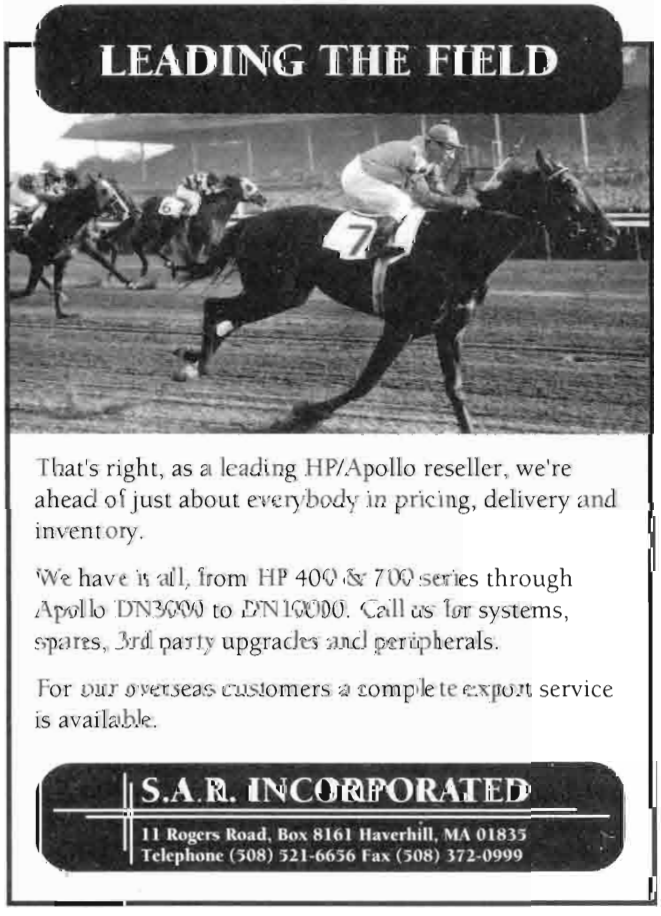

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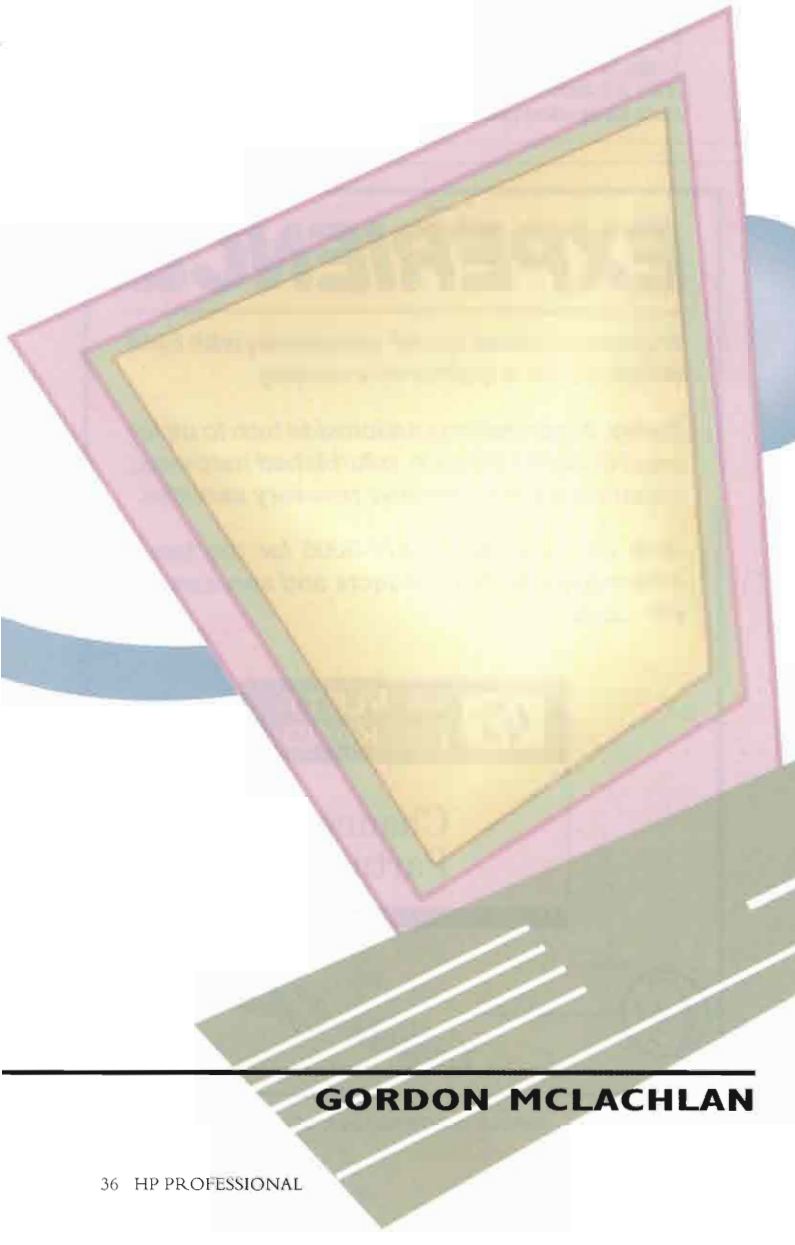
Hope Springs Eternal For Vendors Trying To Unify UNIX



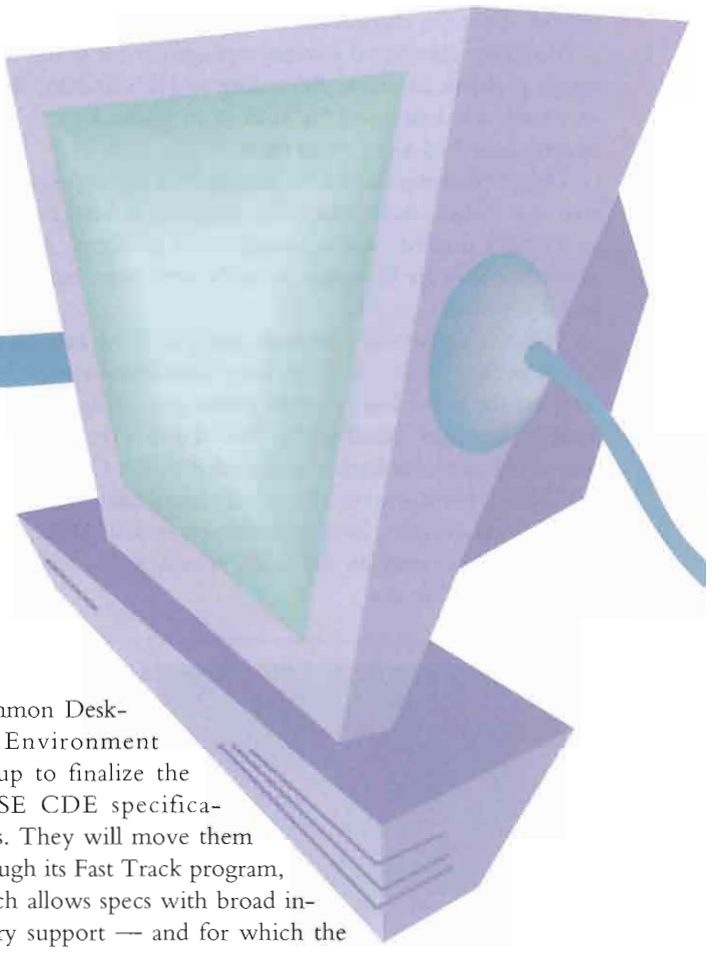
GORDON MCLACHLAN

The Common Open Software Environment (COSE) initiative — launched early last year by HP, IBM, Novell, Sun Microsystems, The Santa Cruz Operation and UNIX System Laboratories — is a strange collaboration. Its mission: to succeed in developing a unified UNIX operating system where past efforts like UNIX International, X/Open and the Open Software Foundation (OSF) have failed quite miserably.

COSE supporters, trying to avoid repeating those mistakes, have deliberately stayed away from adopting the exclusive "club" model of similar groups. Consequently, COSE is not a standards organization or an organization at all. COSE has no official standing, members, dues, fees or products. Rather, it's an informal association of companies and developers trying to work cooperatively.

Bonnie Stahlin, HP's COSE program manager contrasts COSE with previous efforts like the OSF: "Before, it used to be that we were all competing against each other, and our pri-

SE Get?



mary objective was to make sure that our own interests and our own objectives were met." Now, says Stahlin, "we have seen our objectives change to where our primary goal is to see the UNIX market grow as a whole."

Recognizing that the rate of technological change and the costs of keeping up are so high, Stahlin says, "it's imperative that we figure out a way to get a lot more done, in a lot less time, with a lot less cost. One way to do this is to partner with your competitors."

So far, a lot of the rhetoric sounds familiar. What makes COSE different? Stahlin calls it "COSE Magic." "Because it didn't come along with a bunch of rules — that you have to do this (a certain way), or pay membership — it's really loose. Everybody knows in their gut what should be done. COSE is a mechanism for doing the right thing."

The six areas in which COSE wants to "do the right thing" are: the Common Desktop Environment (CDE), distributed computing, system administration, object technology, graphics and multimedia.

COSE's centerpiece is its Common Desktop Environment (CDE), which was handed to the X/Open Company (Menlo Park, Calif.) for approval last July, meeting COSE's first self-imposed deadline. The initial CDE specification includes the following pieces: Basic administration tools that enable inter-program communication and message passing; data editing and display which provides basic desktop tools, calendar, icon and text editors, and mail interfaces; desktop integration, allowing applications to pass information using cut and paste, and drag and drop techniques; object/folder management tools; and window management based on OSF's Motif.

To process these specs in a timely manner, X/Open formed a Common Desktop Environment Group to finalize the COSE CDE specifications. They will move them through its Fast Track program, which allows specs with broad industry support — and for which the primary development work is completed — to be approved in 12 months, rather than the typical 30 months.

The biggest hurdle initially facing CDE was getting Sun to abandon its proprietary OpenLook GUI in favor of Motif. Once this obstacle was overcome, the spec was quickly cleared for takeoff. "The (CDE) technology is there," said Mike Lambert, X/Open's vice president of technical strategy. "Now the cooperation of the vendors will succeed in doing the rest."

CDE technologies are largely coming from existing desktop products of COSE members, such as OSF Motif, HP VUE and IBM OS/2 Program Manager.

Now, if only the rest of the COSE specifications were so easy. CDE is the only real specification to come out of COSE, and many — both inside and outside the group — feel that's about as far as things will go.

The COSE distributed computing initiative has not been successful in producing a unified spec. With its installed base of Open Network Computing (ONC+) customers, Sun was

not about to abandon a perfectly good product to hop on-board with the OSF's Distributed Computing Environment (DCE).

The resulting compromise — COSE platform vendors promised that they would support DCE, ONC+ and Novell NetWare clients as future standards — adds up to a lot of additional development work for those vendors as well as uncertainties about the chances for real interoperability.

Similarly, distributed systems management is going to be a tough problem to crack. According to HP's Stahlin, the area of system administration "is kind of in gridlock ... so far we haven't launched a real effort there."

Delays plaguing the OSF's Distributed Management Environment (DME) have effectively removed it from contention as COSE's unified system management platform. And Sun's venerable SunNet Manager enjoys a very large installed base and it just won't go away.

Without a platform consensus, the HP/IBM mutual admiration society backs an OpenView/Netview-based solution. Sun, on the other hand, would prefer something based on its SunNet Manager. Meanwhile, Novell and Tivoli Systems — whose object technology was discarded by the OSF in favor of the Object Management Group's (Framingham, Mass.) Common Object Request Broker Architecture (CORBA) — have yet a third approach on the table, which would help Novell grind its NetWare axe.

No wonder there's gridlock. With friends like that, COSE's system management workgroup doesn't need any enemies.

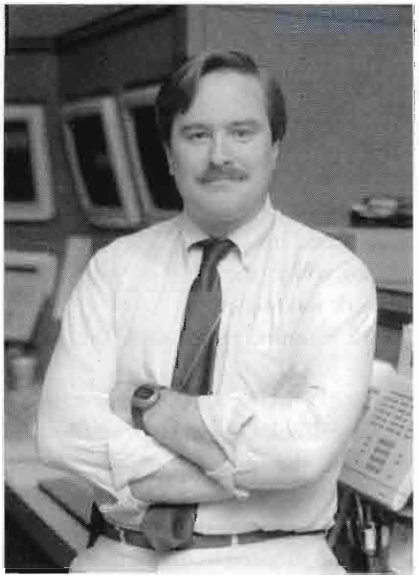
The Road Less Traveled

WHEN IT COMES TO OBJECT technology, graphics and multimedia standards, COSE is taking a back seat to the industry standards efforts already underway, and is working on speeding up these processes, rather than redefining them completely.

For object technology, COSE is following the lead of the Object Management Group whose membership completely overlaps COSE's, and whose final CORBA specs are due late in 1994.

COSE's contribution to state-of-the-art multimedia is a response to requests for technology (RFT) issued by the Interactive Multimedia Association (IMA), a trade association based in Annapolis, Md. The IMA is backed by Apple, DEC, HP, IBM, Intel and Sun Microsystems, software vendors like Lotus, Kaleida and Microsoft, and consumer electronics companies like 3DO, Mitsubishi and Pioneer as well as about 300 other companies.

So far, the IMA has issued three requests for technology to provide solutions for multimedia platform system services, data exchange and a universal scripting language. A COSE workgroup has responded to the system services RFT, which



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aims to make sure that multimedia services defined by the IMA are accessible to the COSE desktop.

Unfortunately, like COSE, the IMA is not a sanctioned standards-setting group. Perhaps no one will notice that a non-standards, non-organization — COSE — is submitting specs to a non-standards organization — IMA — in the hopes that a standard will emerge.

Recognizing that there are already enough graphics standards, the COSE graphics workgroup is concentrating on interpreting and cleaning up existing X Windows and PHIGS standards from the MIT-led X Consortium.

By now, it's clear that COSE won't be fully successful in delivering a unified UNIX anytime soon. The CDE spec, while very important for giving a consistent look and feel to various UNIX versions, is not enough.

As things stand, a COSE-compliant UNIX can be based on SVR3 or SVR4, must meet X/Open Portability Guideline (XPG 3 or 4) and support a core set of 1,170 APIs specified last September by X/Open. Given the wide range of variability allowed, and the fact that HP-UX has some 4,000 APIs defined for it, there's still a long way to go before there is anything like unity.

But it's easy to condemn COSE. The COSE announcements have been met with yawns, derisive comments and the thousand-yard stare of battle-weary veterans. And the cynical media hasn't written anything good about the effort.

But, it's a relief to see that UNIX vendors have come to the realization that they've been fighting against the wrong competition, and that there ought to be one flavor of UNIX instead of dozens.

If nothing else, COSE has helped boost the credibility of the standards efforts it is trying to accelerate. X/Open, somewhat of a paper tiger — more in the business of selling standards documentation than in actually setting standards — should take on new importance in the industry. It also de-emphasizes such groups as UNIX International and the OSF, which have done more to fracture the UNIX market than bring it together.

There are still a lot of rough spots, like the Novell acquisition of USL that made them think that COSE was synonymous with UnixWare; Sun's ongoing delusions of grandeur; and the industry's inability to come to grips with network standards. But, at least there is hope.

COSE's focus on developing an early consensus, its departure from business-as-usual, and the optimism of its participants signals a change in the way the UNIX vendors are cooperating and competing. Although COSE may not be *the* solution, it's trying real hard not to be *the* problem.

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CISCO SYSTEMS

X Windows Provides Opportunities For PC Users Using HP-UX

There are very few technologies as universally accepted, and at the same time as widely misunderstood, as X Windows. Formerly considered the windowing environment for UNIX workstation users only, X Windows is now commonly found in networks where there are UNIX hosts and PCs, but also where there are *no* UNIX workstations at all.

Why on earth would a happy PC user running Microsoft Windows introduce UNIX and X Windows onto their network? What advantage does X Windows bring to a PC user? The answers to these questions are quite simple — the X Windows, PCs and HP-UX hosts work together. Knowing this, you may conclude that these technologies could be ideal in your environment.

X windows can best be described as a windowing system

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across your network, not just on your computer. X Windows can run on a variety of hardware on your network, including PCs, workstations, hosts and X Terminals. With X Windows, your application can run on any system, such as a HP-UX host, but be displayed on any other system such as a PC. In this scenario, the PC is the X server and the HP-UX host is the X client. The client and server roles here are different from those normally associated with these terms: The client is running the application and the server is the system using the local display.

A user who relies heavily on X Windows applications would best be served by an X Terminal. Because there is no local operating system running on the X Terminal, it boots from the windowing environment on the HP-UX host and locally displays applications running on the HP-UX host.

X Windows On The PC

THE SOFTWARE THAT makes the networked window environment possible for the PC is the X Windows server program. There are many manufacturers producing this software running under either Microsoft Windows or DOS. Be sure the X Windows server software you buy for your PC supports the latest release of X Windows — X11 Release 5.

X Windows server hardware manufacturers provide specific requirements that usually include the following:

- Any PC capable of running Windows
- A mouse
- An Ethernet interface card
- A hard disk with sufficient capacity to support X Windows (usually less than 10 MB)
- A floppy drive

Xploring X Windows

Consider the impact that PCs running X Windows server software will have on the HP-UX host in the following four areas:

C P U — The PCs running X Windows server software will increase the CPU load of the HP-UX host acting as the X Windows client. Keep in mind that the application runs on the X Windows client even though the application is displayed on the PC acting as the X Windows server.

Each time you invoke an application on the HP-UX host, you increase the CPU loading. An ideal way to determine the amount of load being placed on the CPU by an application is to invoke the application on the host while running a performance monitoring tool such as HP GlancePlus/UX. You can then identify the percentage of CPU cycles consumed by one copy of the application and multiply this percentage by the number of simultaneous copies of the application you plan to run.

If, for instance, you find a desktop publishing application increases your host CPU load by 5 percent, then two copies will increase your CPU load by roughly 10 percent. If you are running several applications on your server, then it would be helpful to characterize CPU loading in this way for each application.

R A M — The amount of Random Access Memory (RAM) used by each application and user on the host system resources is difficult to determine. While the amount of RAM used by the application can be easily figured by using the same technique described above with HP GlancePlus/UX each time an application is invoked; the amount of data each user will have in RAM is harder to discern.

Going back to the desktop publishing example, two users may have documents

Have You Talked To Your X Terminal Lately?

For X terminal market watchers, like Stephen Auditore, president of the X Business Group (Fremont, Calif.), HP's September 1993 announcement of its ENVIZEX X terminals was "one of the significant announcements of 1993." According to Auditore, although X terminal competitor NCD also supports audio capabilities, "HP [ENVIZEX] is probably a bit more performance oriented."

Since then, HP has been shipping the multimedia-capable, grayscale and color ENVIZEX X terminals. With optional audio CD capability, HP ScanJet IIc support, and an internal DOS-compatible 1.44 MB disk drive, the ENVIZEX accelerated ("a") and intermediate ("i") series of X terminals can be used in environments where voice, graphic images and DOS format compatibility are important.

With an audio kit ($195) consisting of microphone and audio card, HP ENVIZEX terminal users can voice-annotate E-mail or slide presentations or use any applications supporting the HP audio API. The 3.5-inch 1.44 MB disk drive ($195), allows users to transfer files between UNIX and DOS operating systems.

SCSI/PCMCIA adapter card support allows users to install a 4 MB Flash ROM server card ($595) via a PCMCIA port. A SCSI card allows an HP ScanJet IIc to be connected to an ENVIZEX terminal. Two PCMCIA cards can be used simultaneously and will support future PCMCIA compatible devices.

Both the "a" and "i" Series models use an Intel i960CF microprocessor, a 32-bit superscalar RISC CPU designed for graphics intensive applications. According to HP, performance is rated at 165,000 Xstones for the "a" Series using a 28 MHz i960CF CPU and 110,000 Xstones for the "i" Series using a 25 MHz i960CF.

All HP ENVIZEX X terminals include 6 MB RAM, four SIMM slots, built-in thinLAN, thickLAN and 10Base-T support, two PS/2 ports, one HIL port as well as one serial and one parallel port. An optional CD-ROM ($695) includes operating systems from HP (HP-UX 8.0 and 9.0); IBM (AIX 3.2.3); Sun (Sun OS 4.1.3 and Solaris 2.1); and SCO (Open Desktop 2.0); four software manuals also are included.

HP provides three day on-site repair service at no extra charge and a limited one year warranty. HP also offers a discount to customers with 700/RX stations or any competing vendors' X terminal who want to trade up to HP ENVIZEX terminals through HP's Trade-Up 93 program.

Auditore estimates that HP, the overall market leader in X terminal revenues in 1992, will sell 60,000 units worth between $70 and $75 million (in factory revenue) for 1993. Color units represented the fastest growing segment of the X terminal market and are projected to account for 75 percent of all sales by 1994. — GAT

- Sufficient memory to support the X Windows server application (minimum of 2 MB)

X Windows server software is an application that runs on a PC that already has an operating system and other software running on it. The following are typical software requirements:

- A recent version of DOS
- Microsoft Windows Version 3.x if you plan to run the X Windows server software in Windows
- Networking software required for communication with the HP-UX host and other systems

There are many networking products supported by most X Windows server manufacturers. Many common networking applications will do the job including HP ARPA Services.

HP-UX systems support all of the following typical requirements for the host:

- X Windows software
- TCP hardware and software
- Internet address for the PC
- A login for each PC user
- The ability to issue remote commands from the PC

With all of the requirements having been met and the X Windows server software installed, there is a substantial amount of configuration required to customize the software on the PC. Icons for configuration categories such as color, fonts, communication and online help provided by some X Windows products make configuring the software on the PC straightforward. The X Windows server software is highly flexible, so you may find yourself tinkering with these configuration categories for some time identifying the options you best like.

HP-UX systems are ideal hosts in X Windows environments. Most applications you need to run across your network are available on HP-UX. Having application and user data centralized on an HP-UX host allows users to take advantage of the sophisticated system administration functionality common to all HP-UX hosts. The HP-UX host also can support many users accessing the peripherals connected to it. HP-UX systems come with all the networking and windowing required to support PCs running X Windows server software.

There are many options open to you in a networked environment running X Windows. You want to be sure to select the right platforms for your network and be sure to carefully plan the requirements for each system. You can then be sure X Windows will provide a productivity boost for all the users on your network. — *Marty Poniatowski is a technical consultant in computer-aided engineering for Hewlet-Packard in Stamford, Conn. He is the author of "The HP-UX System Administrator's 'HOW TO' Book" (ISBN 0-13-099821-4) published by Prentice Hall PTR and distributed by CBM Books, a division of Cardinal Business Media, Inc. For ordering information contact CBM Books at (215) 957-4265.*

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of varying size that are loaded into RAM. A user editing a one-page memo will have a much smaller RAM requirement than another user editing a 250-page book. You may want to make an estimate using a point somewhere between these two users.

Disk — Because of the advanced system administration and backup techniques available on the host, you may want to use the HP-UX host as the file server for the network. PC users confined to smaller capacity disk drives in the past, usually rejoice when allotted large amounts of disk space on the HP-UX host. Because these users are typically PC experts but don't necessarily have much HP-UX experience, this sometimes creates disk space problems. Be sure each user uses only a reasonable amount of HP-UX disk space.

Networking — X Windows is a lot of things, but you won't often hear it referred to as efficient. Unlike the CPU and RAM measurements earlier described, you may not find that network traffic increases linearly as PCs running X Windows are added. You need to understand the loading of your existing network before you can begin determining the effect that adding PCs running X Windows will have on it.

Table I contains some characteristics I recorded while connecting a PC running X Windows server software to an HP-UX host (HP 9000 Model 735). The application was a simple two-dimensional (2D) drafting tool. The HP-UX host is acting as the X Windows client running the application and the PC is acting as the X Windows server:

Table 1

Function Performed On PC Running X Windows	Additional RAM Consumed On HP-UX Host	Percent Increase In CPU Utilization On HP-UX Host	Percent Increase In Network Traffic
Open "xterm" window	0.5 MB	0%	1%
Invoke 2D application	3.5 MB	1%	3%
Read In Design	0.2 MB	no change	1%
Each PC running X Windows and this 2D application would consume about 4.2 MB of RAM, 1 percent of the CPU cycles and momentarily increase network traffic from 1 percent to 3 percent.			

The Shell Game

UNIX Shells Provide Choices And Convenience For HP-UX Users

One advantage that HP-UX systems have over non-UNIX systems, like MS-DOS, is the choice of command line interfaces or shells. In the MS-DOS world, COMMAND.COM is your only real choice; although I'm sure a number of Vectra and HP 150 owners still use PAM as their primary MS-DOS shell. With UNIX, there are three primary shell programs that you can choose from: the original Bourne shell, the popular C shell and the newer Korn shell.

The Bourne shell is the original UNIX command line interpreter. And, while it features a complete shell programming language, it is not as powerful as the newer shells. The C shell provides access to the same UNIX utilities as the Bourne shell, but it features a richer and more powerful set of built-in commands as well as a C-like shell programming language. Finally, the Korn shell, popular at a number of HP-UX sites, combines many of the features of both shell languages.

Perhaps the easiest way to discover which shell you are using is by using the HP-UX "finger" command on your own account. *Listing 1* shows the finger command and its output on a system I use every day.

Listing 1

```
~~%finger milesk
Login name: milesk In real life: Miles Kehoe@7052
Directory: /users/milesk Shell: /bin/csh
On since Nov 15 23:51:03 on ttyp0 from calvin
No unread mail
No Plan.
```

To change your default shell, you can use the HP-UX command chsh. The command syntax is:

```
chsh
```

To use the Korn shell, use the following command:

```
chsh milesk /bin/ksh
```

Use the finger command to confirm the change. The next time I log in, HP-UX will use the new shell. As with any change to your account, you should test the change before you log out. You could go to another terminal, but you can do it by simply creating a new session for yourself using the su command. For my user name, I enter:

```
su - milesk
```

If there is any problem with the new shell you've selected, the new session will not be able to start — but your existing session will still be logged in so you can fix the problem without bothering the system manager. The dash in the command forces HP-UX to initialize the session with a new environment. It is really optional when you are simply changing shells, but if you make changes to any of your login files like .profile, .cshrc or .login, you should be sure to use it.

Because each of the HP-UX shells uses a different language syntax to write scripts and batch files, you need to be sure any script you write will execute properly regardless of what shell a user has enabled. Luckily, you can include a special line at the beginning of any script that specifies the shell that should be used to perform the statements within the script. Consider the shell script in *Listing 2:*

Listing 2

```
~~#!/bin/sh
ls -l
ps | grep milesk
export
pwd
ls
```

The first line of the script indicates the appropriate shell for the script — here the Bourne shell. Because the export statement is not valid within the C shell, this script would produce an error in my usual C shell environment.

To create a script like this on your system, use an editor like vi to enter the script in Listing 2. Save the script as "shelltest," and make it executable using the command:

```
chmod +x shelltest
```

Run the script as shown to verify that it works properly.

Now edit the script to remove the first line and save the file again. Make sure you are using the Bourne shell by typing /bin/sh, and execute shelltest. It should run without error because all of the statements are valid Bourne shell statements. Start the C shell by typing /bin/csh. Try running the script again, and it will complain about the "export" command, which is not valid in the C shell.

The default script language, the one that is used if you don't include a #! statement, is the Bourne shell. Note that you can include the #! statement at any line in a script, but only the first one will apply. It's generally a good idea to put it as the first line of the script so you'll remember which shell you want to use.

Each of the HP-UX shells uses a different language syntax to write scripts and batch files.

Which shell is best? There isn't a correct answer. Each scripting language has features that are good for particular tasks. During the next few months, we'll take a look at some of the tasks you can program using only the HP-UX shells.

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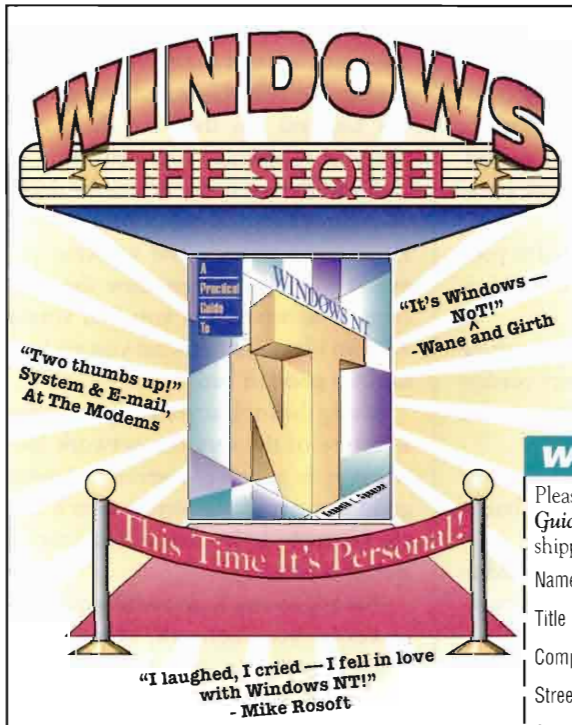

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Mapping The Madness In Your Method

Documentation Helps To Keep Your LAN Up And Your Problems Down

As networks grow, I see how critical they become to the success of the companies who use them. It's no longer just an annoyance when a network goes down. Instead, the loss of communications can cost thousands or even millions of dollars. So, it is time once again to look at developing a problem solving methodology for troubleshooting your network. The seriousness of any network problem and the time it takes you to solve it can be measured by the line of management personnel standing outside your office.

The first step in developing a methodology is to document all the equipment, lines and cables making up your network. Also, note how the pieces are connected. As you document your network, ask yourself the following questions:

- How are the hosts connected to your network? What protocols are they using?
- What boxes are connected to these hosts? How are these boxes configured and do they have ports with special configurations?
- How are networks connected across floors of buildings or between buildings ?
- How are workstations connected to your network? What are their network addresses?
- Are there any special modem configurations or setups on the WAN? How is dial backup configured?
- Do any of your devices require a UPS battery backup?

Now you have a detailed map of your entire network. But there are other benefits. First, it gives other people the knowledge of how things are connected. This is a great service to your company and your social life. Many questions can now be answered by other people which will dramatically eliminate those late night phone calls. Second, you won't be wasting time pulling new wire or replacing equipment because you forgot about a device hidden under the floor that has become unplugged. Finally, it helps you speed up future installations of equipment if you have already done it once before. Keeping equipment installation consistent makes life simple and eliminates unnecessary headaches.

After your network documentation is done, it's a good idea to take inventory of your diagnostic tools. Go to each type of device you have and learn what it can show you about the network. A device such as a router may be able to show you more information about your Novell network than the NetWare Console. Once you have this list, you can then use these varied resources to examine your network.

Now it's time to document the normal operating characteristics of your network. How many times when working on a problem do you forget how things are suppose to work? Do you find yourself with no idea whether what you are looking at is good or bad?

Using the tools at your disposal, create a picture of the way the network looks when it is running correctly. Another good thing to document is which hosts are generally active and which hosts are always down.

Now that you know what equipment makes up your network, how it is tied together and what the activity looks like on a normal day, start to develop your own methodology for problem solving.

What is the best way for you, using the tools you have identified and your network documentation, to fix things as quickly as possible? Solving X.25 problems are different than solving Ethernet problems. Having both of these or other types combined makes it an even more

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Having the best tools, but a poor methodology will have you running in circles.

complicated task. Even so, there are still three areas you can explore:

The Physical Connection. Is the host plugged into the network? Is the lease line to the remote site working? Is there power to all parts of the network needed by this user? Is the remote host or server online? Does the user have his software loaded?

The Link Layer. Is there data coming out of the users host? Is the data making it through all the interfaces in the network? Is the data reaching the remote host? Is the necessary routing information being passed through all the needed links?

Packet and Application Level. At this level the data is reaching the far host but is being rejected for some reason. Here you may need to actually decode packets and check for correct addressing. Watch out for TCP/IP data encapsulated within X.25 packets. The X.25 packet could have the correct address, but the inner TCP/IP packet could be wrong. Don't forget to check your network and system log files for error messages here.

Education, documentation and contacts with other network administrators will allow you to expand and improve your methodology. The best way to meet these people and get training is to participate in local and national users group. Another way is through forums on CompuServe and news groups on the Internet.

Once you have such a methodology developed and you have the proper tools, problems can be solved quickly. Having the best tools, but a poor methodology will leave you running around in circles. This not only wastes your time, but could be costing your company real dollars in lost sales and productivity.

— *Cahoon's Internet address: cahoon@cardinal.com*

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CIRCLE 495 ON READER CARD

John P. Burke

The Good, The Bad And The Puzzling

MPE/iX 5.0 — It's About Time

MPE/iX 5.0 is scheduled for release in early 1994. And after being my number one pet peeve for the last 15 years, and for the first time since its birth in the distant, mist-shrouded past, MPE will have a fully supported method for changing the time online! Who says HP doesn't listen?

The time change mechanism is quite sophisticated, providing a gradual time shift (as a default) — important when going backward so as not to mess up any log files. However, another pet peeve goes ignored: there is still no way to reset the spoolfile number counter online.

Remember when we were told that disk fragmentation was not a concern on MPE/iX? Apparently, that is not quite true. There are situations where severe fragmentation will exact a performance penalty. Not like on MPE/V, but a performance penalty nevertheless. More importantly, and certainly more likely to create the dreaded all-nighter, is the need for contiguous sectors on LDEV 1 when updating the operating system. MPE/iX needs the equivalent of MPE/V's VINIT CONDense. (Even DOS 6.0 has DEFRAG!)

LUND Performance Solutions recognized this need and announced DEFRAG at INTEREX'93. HP claims to be working with a third-party (LUND?) to provide a defragmentation solution after MPE/iX 5.0. However, HP is being coy about what exactly will be provided with FOS and what will be available at an extra cost, committing only to providing something to deal with the LDEV 1 problem.

There is also an ongoing project to produce a high-end scheduler/dispatcher after release 5.0 of MPE/iX. It will support the definition of workgroups with guaranteed percent CPU.

There are no funded projects to support multiple job and/or spooler queues. Granted, there are third-party solutions for this; however, an operating system designed for enterprise computing should have these capabilities.

Release 5.0 of MPE/iX will have dynamic detail dataset expansion for IMAGE/SQL. Also, QUERY will support the Third-Party Indexing interface (TPI). Later in 1994, IMAGE/SQL will support the TPI. This is critical to getting high performance out of the SQL access to IMAGE.

Currently, the client-server tools for ALLBASE/SQL or IMAGE/SQL using ALLBASE/SQL PC APIs, create one job for every client — an undesirable situation, especially for larger installations. With MPE/iX 5.0, this is changed: a process, not a job, is created for each client.

STRATEGIC CHANGE

Have you noticed the increase in advertisements for the HP 3000 in mainstream business publications over the last six months? The ads touting the HP 3000 as a solution platform indicate a significant change in HP's 3000 strategy.

In the past, it was dominated by what Rich Sevcik, general manager of the Systems and Servers Group, referred to as an "even handed" approach, creating a "level playing field" on which HP-UX and MPE/iX would compete. But in reality, "open systems" continues to mean UNIX to most people. So, it is good to see HP finally extolling the virtues of the HP 3000 by prominently highlighting its suc-

cesses and backing up its claim that it would rather sell an HP 3000.

Manual Diaz, general manager, Worldwide Sales and Marketing, Computer Systems Organization, made a convincing argument for it at INTEREX'93 during Response Time, the replacement for the Management Roundtable. So it's good to see some action.

OFFICIAL ORATIONS

From Glenn Osaka, general manager of HP's Commercial Systems Division and Pat Adamiak, product line manager for the HP 3000: 20 percent of HP 3000 buyers are new customers to the HP 3000. The mainframe alternative program has been successful and HP sees continued opportunity there.

Although the HP 3000 has not been aggressively marketed in Europe (primarily because of xenophobia in the European community), Europe has a strong pre-disposition to UNIX (in part as a backlash against IBM). But the HP 3000 is very strong in selected vertical markets and will continue to be pushed where application software drives the sale.

There will be no PA-RISC replacement for the Micro/3000. The Micro/3000 was a successful product, but due to the huge memory requirements of MPE/iX, HP is unable to bring in a 9xx at the same price point. This is a problem that will limit the HP 3000.

Finally, Osaka and Adamiak said forget about SoftBench on the HP 3000. And a C++ compiler? Very unlikely. That's a mistake. HP and the industry talk about software availability on a particular platform determining its future. Remember the NeXT machine?

During his State of the Product Line speech, Rich Sevcik commented, that SoftBench is "the future of application development." So, I guess that means that no serious application development is going to be done on the HP 3000. Hell, even IBM has committed to putting C++ on the AS/400 and already has a variant of Smalltalk/V for the AS/400, called Envy/400.

HP-iX instead of MPE/iX? Absolutely, positively — NOT! A name change for MPE is not planned. Forget the rumors. — *Burke's Internet address:* burke@cardinal.com

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UNCOMPROMISING INTEGRITY?

During his keynote address at INTEREX'93, Lew Platt, president, CEO and newly elected chairman of the board of HP, talked about "balancing continuity and change." To manage change, "you have to have an anchor." In HP's case, that anchor is its core values — the "HP Way." One core value: "We conduct our business with uncompromising integrity."

Imagine my surprise when several weeks later I tuned in CBS' 60 Minutes and saw Leslie Stahl chasing a very uncomfortable looking Lew Platt down a hallway, asking him to comment on HP's use of foreign programmers, supplied by unscrupulous "bodyshops." It appears that immigration and labor laws were violated, taxes were not paid and the programmers were forced by the bodyshops to sign contracts giving them only a fraction of what a U.S. citizen would receive for the same work.

HP, and the other companies in the report, had the all important deniability, contending they were dealing with an independent contractor and had no idea how the programmers were being paid or treated. HP also contended it paid the equivalent of $60,000 per year per programmer to the bodyshops, less than 300 people were involved and, oh yes, HP was doing it to generate "goodwill" in India.

If HP wanted to earn goodwill with India, it should have worked with the Indian and U.S. governments to set up a program. Also, HP should have paid more attention to who they were dealing with. HP did nothing illegal, but clearly should be embarrassed.

Worse even than HP's performance in this instance was the total lack of concern or interest expressed by the business/financial community. The story wasn't covered until an anti-immigration group in California filed a lawsuit naming HP and the Indian bodyshop as co-defendants. To the walletheads, it's just good business.

However, HP wasn't making some venal attempt to save a few bucks, it was just participating in a new industry paradigm: eliminate as many employees as possible, contract everything out.

Ironic, that given another of HP's core values is "trust and respect for the individual." — JPB

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new Products

Lucas Management Ships Client-Server Version

Lucas Management Systems announced the availability of I/CSCS 3.0, a client-server version of its earned value-based, cost and schedule control system.

I/CSCS 3.0 allows users to tap a broad range of processing power sources, from PC workstations to minicomputer servers — all from a Windows-based client PC. I/CSCS' open architecture facilitates enterprise-wide project reporting and control by allowing multiple users to access information stored on relational databases from any point in the network.

Using I/CSCS, project and financial managers can estimate, budget, collect cost and analyze project performance data on single or multiple projects.

I/CSCS includes the Artemis Presents! graphics editor which allows users to assemble and edit reports using any HPGL graphic generated by Lucas' applications for third-party software packages.

The application's client machines require a 386 PC or higher with 4 MB of RAM running Microsoft Windows 3.1. I/CSCS 3.0 supports Oracle, Ingres and SQLbase on a standalone PC, LAN, UNIX or VMS server.

Prices range from $3,000 to $25,000 depending on the number of concurrent users and configuration.

Contact Lucas Management Systems Inc., 12701 Fair Lakes Circle, Ste. 350, Fairfax, VA 22033-4914; (703) 222-1111.

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Innovus Announces NetWorker For HP 9000

Innovus Inc. announced that NetWorker software from Legato Systems Inc. will be available for HP 9000 PA-RISC servers.

Legato NetWorker is an enterprise-wide software application that protects files on network servers and desktop systems allowing easy recovery when a needed file is destroyed or damaged.

NetWorker for HP 9000 includes support for a wide range of UNIX clients, including HP-UX, SunOS, AIX/6000, SCO UNIX and DOS. Novell NetWare also can be backed up as NetWorker clients. All HP and Exabyte backup devices are supported, as well as jukeboxes. A Motif GUI is provided for accessing files and directories for backup and restore.

Contact Innovus Inc., 200 James St. S., Ste. 204, Hamilton, ON L8P 3A9; (905) 529-8117.

Circle 398 on reader card

DB-Vision Monitors Oracle Performance

Aston Brooke Software released the latest version of DB-Vision, an Oracle RDBMS monitor.

DB-Vision now allows administrators the ability to monitor an unlimited number of Oracle databases anywhere on the enterprise network from a single workstation. Real-time data is viewed on the configurable GUI while background processes collect information through DB-Archive, a highly compressed performance history database.

Emerging performance problems trigger DB-Alert to notify support staff, based on configurable thresholds.

Prices vary depending on operating systems and number of users.

Contact Aston Brooke Software, Plymouth Meeting Executive Campus, 610 W. Germantown Pike, Plymouth Meeting, PA 19462; (215) 834-3960.

Circle 395 on reader card

HP Announces Revision 2.0 Of HP PE/SolidDesigner

HP announced HP Precision Engineering/SolidDesigner Revision 2.0, a new release of its 3D product-modeling design system.

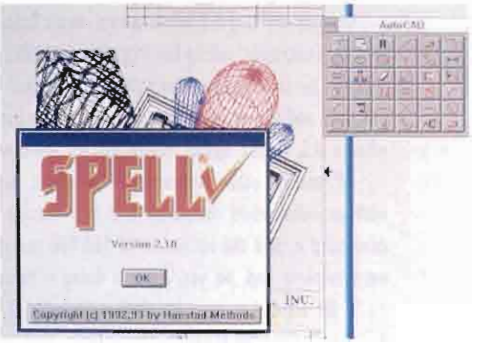
Based on object-oriented solid-modeling technology, HP PE/SolidDesigner provides high-precision algorithms for free-form solid modeling and comprehensive parts blending, supporting the needs of the electromechanical and industrial-machinery industries.

The new system includes 3D labeling, which can be used for model documentation and modification. HP PE/SolidDesigner also includes a stereolithography module, which enables designers to build an actual product model using a photosensitive polymer and a laser.

Revision 2.0 offers compatibility with HP's PE/Advisor, which is a software module that acts like a resident manufacturing expert, providing guidance by flagging possible manufacturing design flaws as well as providing specific cost information.

It also has a Motif-based user interface to help users solve complex design problems because it doesn't require that they use hard-to-understand and hard-to-predict CAD-constrained methodologies.

Price is $7,500.



CADmagic SpellCheck runs with AutoCAD for DOS or Windows.

Haestad Methods Releases CADmagic SpellCheck V2

Haestad Methods announced CADmagic SpellCheck version 2 for AutoCAD DOS or AutoCAD Windows. It provides a rapid and thorough check and correction of your entire AutoCAD drawing. Any suspect words are

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CADmagic SpellCheck V2 costs $95.

Contact Haestad Methods Inc., 37 Brookside Rd., Waterbury, CT 06708; (800) 727-6555.

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Infrared Interface Provides Point-And-Shoot Printing

Extended Systems developed a high-speed, infrared printer interface for HP's OmniBook 300 notebook computer. JetEye provides "point-and-shoot" printing to HP LaserJet, DeskJet, DeskJet portable and other Centronics printers. Data is transferred from the OmniBook to the printer via an infrared beam, eliminating the need for cabling.

The JetEye also provides printing to the entire line of HP Vectra XM PCs and the HP 100LX palmtop.

JetEye receives data at 115K baud which is six to 12 times faster than normal 9600 or 19.2K baud serial communications. Print jobs are then transferred to the printer at parallel speeds.

JetEye ESI-9510A is priced at $159.

Contact Extended Systems, 5777 N. Meeker Ave., Boise, ID 83704; (800) 235-7576.

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SETCIM 4.0 Available For HP-UX, VMS And AIX

SETPOINT Inc. released SETCIM 4.0, a real-time information system for HP-UX, VMS and AIX platforms. SETCIM is used as a process monitor, historian and controller in a variety of industries.

New features include enhanced disk history, single data point compression, min-max manual-entry checks, GCS interfacing enhancements and easy trending modifications. The DBMT Phase II record manager, folder manager and security manager enhancements also are included. Changes to the disk history subsystem include online backup, data archiving, subsystem status monitoring, crash recovery, improved operating efficiency and accidental deletion recovery.

SETCIM 4.0 is available for HP PA-RISC computers running HP-UX and DEC systems running VAX/VMS and Ultrix.

Contact SETPOINT Inc., 14701 St. Mary's Ln., Houston, TX 77079-22995; (713) 584-1872.

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Bluestone Announces UIM/X-Based Tool

Bluestone Inc. announced a software development environment for building OSF/Motif graphical client-server applications for RDBMSs. The UNIX-based database tool, db-UIM/X, incorporates the core front-end technology of UIM/X. Initially, db-UIM/X supports Sybase SQLServer on HP, Sun and IBM platforms.

Price is $6,000 for db-UIM/X and UIM/X, and $2,250 to upgrade UIM/X with db-UIM/X.

Contact Bluestone Consulting Inc., 1200 Church St., Mount Laurel, NJ 08054; (609) 727-4600.

Circle 389 on reader card

Racal-Guardata Offers Host Security Subsystem

Racal-Guardata released the Host Security Subsystem (HSS) for the HP 3000 RISC community. The HSS consists of HP software and an external hardware security processor that provides data encryption, authentication and access control services to application programs.

HSS implements the ANSI standards for encryption (X9.23), authentication (X9.9), access control (X9.26) and key management (X9.17) using the ANSI Data Encryption Standard (DES). HSS includes a secure transport protocol for data interchange modelled on the ANSI EDI standard (X12).

It is a full-feature security subsystem that includes an API, a security administration facility for system management and a Key Management Agent (KMA) for the automatic distribution and management of keys with other secure sites. A menu driven utility allows features of the HSS to be used without programming.

Contact Racal-Guardata Inc., 480 Spring Park Place, Ste. 900, Herndon, VA 22070; (800) 521-6261.

Circle 384 on reader card

SCSI Switch Enables Local And Remote Switching

Applied Concepts announced the SCSI Switch Model ACI-2012, an electronic switch that provides local and remote switching of SCSI computers and peripherals. The ACI-2012 enables imaging laser printers, page scanners, RAID arrays, tape backup systems and CD-ROMs on independent SCSI buses to be connected and exchanged electronically, without reconfiguring cables or bus terminators.

The SCSI Switch supports Fast SCSI (10 MB per second), computers and peripherals in asynchronous and synchronous mode. The SCSI Switch conforms to ANSI X3.131 and X3T9.2 specifications for single-ended devices.

The model ACI-2012A comes with 50-pin Centronics connectors, the model ACI-2012B with 50-pin flat ribbon connectors, and the model ACI-2012C with 50-pin high-density connectors. They cost $1,375, $1,325 and $1,425, respectively.

Contact Applied Concepts Inc., 9130 SW Pioneer Ct., Wilsonville, OR 97070; (503) 685-9300.

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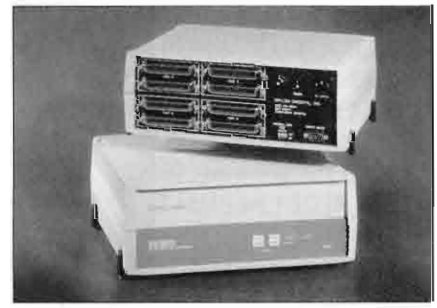

The SCSI Switch model ACI-2012 provides local and remote switching.

SYMIX Solution Assists Discrete Manufacturers

Symix Computer Systems Inc. introduced version 2.7 of The SYMIX Solution, a comprehensive manufacturing control and financial management software system for discrete manufacturers.

Version 2.7 includes a windows environment, pull-down menus and mouse control; custom menus and accelerator keys that allow users to accomplish work more rapidly; 132-character wide, on-screen report browser that saves time and minimizes the need to print reports; and client-server flexibility with support for Windows and UNIX X.11 workstations.

Broadened human resource features include the ability to track skills inventories, performance and salary history, employment history within the user's organization and recruiting.

Additionally, version 2.7 adds a translation database which allows languages to be added, changed and modified, and a parametric tax system which allows users the flexibility to customize how taxes are calculated, defaulted and displayed for customer or purchase orders.

Contact Symix Computer Systems Inc., 2800 Corporate Exchange Dr., Columbus, OH 43231; (614) 523-7000.

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JYACC Announces JAM Version 6

JYACC announced JAM Version 6 featuring visual programming and codeless transaction management.

JAM 6 is a complete rewrite of JYACC's application development toolset, integrating its database and graphical components into a new product for building complex, distributed applications.

The four significant technologies underlying JAM 6 include visual programming, repository-driven development, object-orientation and high-performance transaction management. At the core of JAM 6 is the Visual Object Repository which stores pictorial representations of application objects. JAM 6 is built on object-orientation principles that permit developers to take advantage of multiple levels of inheritance, data abstraction and encapsulation.

Pricing starts at $2,000.

Contact JYACC Inc., 116 John St., New York, NY 10038; (212) 267-7722.

Circle 379 on reader card

NSSI Supports UnixWare 1.0

Network Security Systems Inc. (NSSI) announced version 2.0 of its LanSafe II for UNIX network power management software. The new version provides support for UnixWare 1.0. Additional platforms supported include HP-UX, SunOS, Solaris, Ultrix, IBM AIX, SCO and Interactive.

NSSI UPSs and LanSafe II software work in tandem, providing network power monitoring and orderly shutdown capabilities for heterogeneous UNIX networks. LanSafe II for UNIX can communicate to any other LanSafe II for UNIX supported platform on the network. This enables system administrators to obtain and control the status of local and remote power conditions independent of the UNIX operating system being used.

LanSafe II for UNIX 2.0 costs $149.

Contact NSSI, 9401 Waples St., San Diego, CA 92121; (619) 587-7950.

Circle 378 on reader card

Seiko Instruments Ships High-Speed Color Printers

Seiko Instruments USA Inc. announced a new series of video color printers. The VSX series printers include connectivity for remote terminal/printer sharing, high-speed printing and multi-image tiling capabilities.

The Seiko video interface provides a direct connection from the monitor to the printer, allowing high-speed printing and platform independence while eliminating concern over data access, file crashes and cumbersome software routines.

Once the print command is given, the image is captured and output begins in four seconds. In the multi-image tiling features, the VSX printers support tiling options of 2, 4, 6, 9 or 12 images on a single page. Also, with a flexible connectivity architecture using a daisy-chain topology, the printers enable up to 16 terminals and two printers to be seamlessly connected for seamless printer sharing.

The Professional ColorPoint VSX costs $10,999, and the ColorPoint VSX costs $7,499.

Contact Seiko Instruments USA Inc., 1130 Ringwood Court, San Jose, CA 95131; (408) 922-5840.

Circle 399 on reader card

ChiWriter 3 Available For HP 100LX Palmtop

Horstmann Software Design Corp. announced a version of its ChiWriter 3 scientific word processor for the HP 100LX palmtop.

The product consists of two executables, one for the palmtop and one for a companion PC. Both allow full-text editing. An HP LaserJet or PostScript-compatible printer is required.

The program allows WYSIWYG word processing on the palmtop, with accurate display of all fonts and mathematical structures. Special screen fonts and keyboard maps are provided.

ChiWriter 3 costs $99.95 for new users or $49.95 for existing ChiWriter users.

Contact Horstmann Software, 10 S. Third St., Ste.. 350, P.O. Box 1807, San Jose, CA 95109; (408) 298-0828.

Circle 396 on reader card

Ready-to-Run Software Supports HP 9000/700

Ready-to-Run Software Inc. announced the availability of its ReadyPak line of software products on HP 9000/700 workstations running on HP-UX 9.0, and Sun SPARC Solaris 2.1 and Solaris 2.2.

ReadyPaks are collections of UNIX software that address several workstation tasks and requirements including: language and software development tools, office utilities, text management software, general utilities, X Windows, FAX and communications products.

Contact Ready-to-Run Software Inc., Rustic Trail, Groton, MA 01450; (508) 448-3959.

Circle 393 on reader card

Falcon Systems Announces Fast And Wide SCSI Disks

Falcon Systems announced a disk storage subsystem for HP-based computer systems.

Data transfer is made over the SCSI-2 Fast & Wide bus, providing burst data transfer rates at up to 20 MB per second.

Configurations include one, two, four or eight drives. With eight drives, the subsystem has a maximum (unformatted) capacity of 27.2 GB .

Contact Falcon Systems Inc., 1417 W. North Market Blvd., Sacramento, CA 95834; (916) 928-9255.

Circle 392 on reader card

Softool Offers CCC/Harvest

Softool Corp. announced CCC/Harvest providing configuration management in a client-server environment. Harvest is object-oriented and features an open architecture to streamline integration with other tools and utilities. It also works in conjunction with widely-available RDBMSs.

CCC/Harvest provides change and version control for all software components, support for all phases of the life cycle, turnover and migration management, impact management and cooperate with a common interface across all platforms.

Contact Softool Corp., 340 S. Kellogg Ave., Goleta, CA 93117; (805) 683-5777.

Circle 391 on reader card

Insight Development Ships PrintAPlot Pro

Insight Development Corp. announced PrintAPlot Pro, the new release of PrintAPlot plotter emulation software. PrintAPlot Pro is being called the AutoCAD release, and incorporates an ADI (protected mode) driver that enables users to plot to more than 1,200 laser, inkjet, PostScript and dot matrix printers, at resolutions from 75 to 600 dpi while still inside AutoCAD.

All CAD and graphics software users can now convert HPGL/2 as well as HPGL files, preview each plot before printing (including tiled output) and print continuous long plots. In AutoCAD, PrintAPlot works entirely in the background.

With MicroStation, CADKEY and other CAD software applications, users can pop up PrintAPlot Pro over the application as a TSR, run in DOS under Windows or in standalone mode.

PrintAPlot includes support for 255 pens, with any pen being able to select from a palette of 255 AutoCAD of HPGL/2 colors.

PrintAPlot costs $199.

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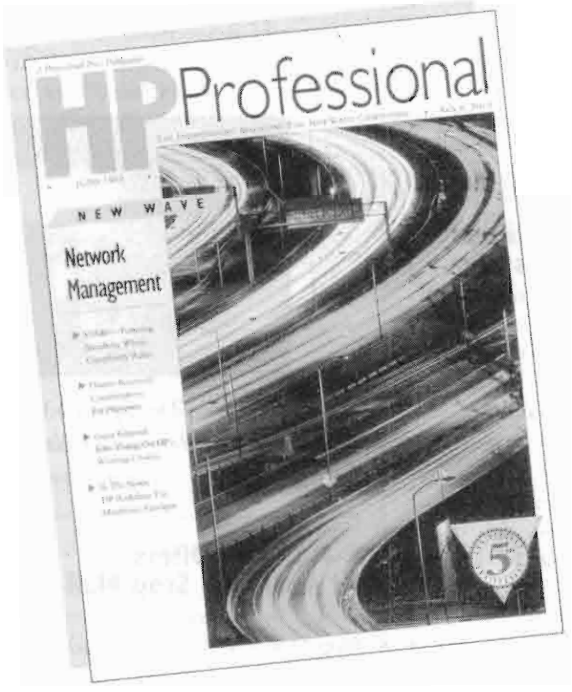

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(215) 957-1500, FAX (215) 957-1050.

Contact Insight Development Corp., 2420 Camino Ramon, Ste. 205, San Ramon, CA 94583; (510) 244-2000.

Circle 385 on reader card

Bristol Group Provides UNIX Fax Services

The Bristol group released IsoFax/Win, a fax software solution providing the reliability of UNIX fax services to PC clients running WinFax PRO.

After integrating IsoFax/Win with WinFax PRO, users experience no change in their fax interface. Faxable documents are created in Windows-compatible applications, then faxed to WinFax PRO. Actual delivery of the fax is by IsoFax on remote servers. WinFax PRO keeps a status log of all outgoing faxes.

In addition to manual routing of received faxes to PC and UNIX clients, IsoFax/Win offers an option to automate routing.

System requirements include: DOS/Windows 3.x, WinFax PRO 3.0, PC/NFS or other networking solution providing UNIX file services to PC users, IsoFax with the IsoFax/Win option.

Contact The Bristol Group Ltd., Larkspur Landing Circle, Ste. 200, Larkspur, CA 94939; (415) 925-9250.

Circle 387 on reader card

Applications Shared Across HP, Sun, IBM and SGI

InSoft announced InSoft SHARE (Shared Application Resource Environment) allowing users to share standard applications in real-time during a Communique! conference across supported workstation platforms.

The underlying architecture of Communique! and all InSoft products is Digital Video Everywhere (DVE), which allows for complete hardware independence from video and audio. It also provides true interoperability between supported work-stations and video boards, and runs across Ethernet and leading data communications services such as ATM, Frame Relay, ISDN and SMDS.

Communique! integrates real-time video technology with fully interactive, point-and-click groupware conferencing tools such as a shared whiteboard.

Price for a node-locked version of InSoft SHARE is $595 per seat. Communique!'s cost starts at $2,495.

Contact InSoft Inc., Executive Park West I, Ste. 307, 4718 Old Gettysburg Rd., Mechanicsburg, PA 17055; (717) 730-9501.

Circle 388 on reader card

XP100 Series Offers High-End Performance

Tektronix Inc. announced a new line of X terminals, the TekXpress XP1000 Series. These RISC-based X terminals are well suited for commercial applications such as OLTP, CASE, and electronic publishing and imaging.

The XP100 Series is based on the LSI Logic 33020 GraphX RISC processor, which incorporates advanced graphics coprocessing capabilities to improve display performance.

The XP100 terminals features Flash Boot ROM, allowing system administrators to update the terminals across a network. Total RAM support has been increased to 20 MB for the XP100s (4 MB are standard).

Six different models are available with prices ranging from $1,495 to $4,695.

Contact Tektronix Inc. 26600 S.W. Pkwy., P.O. Box 1000, Wilsonville, OR 97070-1000; (503) 685-2840.

Circle 376 on reader card

Lightwave Communications Announces VDE/200 System

Lightwave Communications announced a Video Display Extender that is fully compatible with HP Apollo 9000 Series 700 workstation family. It is able to transport high-resolution RGB video and HP-HIL desktop peripheral signals over distances ranging from up to 3,000 feet.

The VDE/200 operates by transmitting high-performance workstation video in real time to remote displays through a fiber optic cable.

Complete transparency to users and operating system software is maintained because of the VDE/200's simple connection scheme. The VDE/200 Receiver fits directly beneath monitors weighing up to 150 lbs.

The VDE/200 Model 160 costs $3,765 when fully configured for the HP Apollo 9000 Series 700 workstations.

Contact Lightwave Communications Inc., 84 Research Dr., Milford, CT 06460; (203) 878-9838.

Circle 381 on reader card

RGB Spectrum Introduces SynchroMaster 100

RGB Spectrum announced the SynchroMaster 100 to interface head-mounted displays with a variety of workstations, scene generators and simulators.

The head-mounted displays used for simulation and training in critical military, medical and industrial applications must offer high-resolution and wide-angle views to achieve a credible virtual reality experience. The miniature monitors have a single electron gun which must be fed RGB signals sequentially rather than in parallel as with larger monitors. A synchronized mechanical or electronic shutter in front of the monitor provides the appropriate color to the specially formatted input signals.

The SynchroMaster 100 is a standalone scan converter that accepts a broad range of graphic input signals up to 1,280 x 1,024 pixels and outputs the requisite field sequential signals.

The SynchroMaster 100 interfaces with workstations from HP, Silicon Graphics, Sun, IBM and DEC as well as scene generators and simulators from General Electric, Evans & Sutherland and CAE Link.

Contact RGB Spectrum, 950 Marina Village Pkwy., Alameda, CA 94501; (510) 814-7000.

Circle 377 on reader card

The SynchroMaster 100 interfaces head-mounted displays with various workstations.

E-Mail Inc. Offers V1.4 Of One Stop Mail

E-Mail Inc. announced version 1.4 of One Stop Mail which allows greater connectivity along with the ability to define security more effectively with the touch of a button.

New features include: the ability to forward mail to other user groups with the option to add text to mail; a Gateway/3000 availability field for restricting gateway access among local users; an alphabet scan to list specific users in Directory; ability to define security from any field except Security and Notify in Mail Central; ability to page up and page down in your In & Out baskets; an undelete message feature; and the option to receive an error message if you try to create a group that already exists.

Also, interoffice communication has been made even easier with the new Bulletin Board (BBS) and Personal Information Manager (PIM) features available with version 1.4

Contact E-Mail Inc., 1111 S. Arroyo Pkwy., Ste. 470, Pasadena, CA 91105; (818) 403-1999.

Circle 375 on reader card

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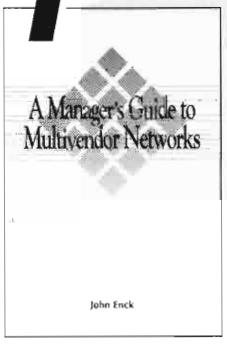

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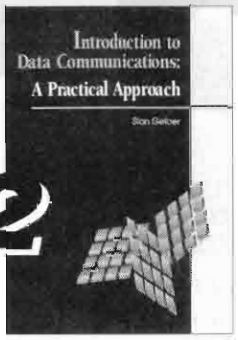

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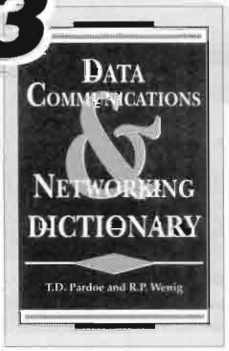

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Linx 3.0 allows manufacturers to develop shorter master production and distribution plans

Linx 3.0 Allows Shorter Planning Times

Numetrix released version 3.0 of Linx supply chain planning software which now allows manufacturers to develop master product and distribution plans with horizons as short as two to three months, and periods as small as one week. Linx 3.0 also features an add-on module that allows users to extract data easily from Linx models, view that data in a spreadsheet-like environment and edit data directly on the screen. Linx 3.0 is a decision support tool for synchronizing production and distribution planning in a manufacturing enterprise. It helps manufacturers decide the quantities of each product that should be made, at which site or on which processing lines, and how it should be moved to the distribution center, storage site or customer location.

Information is presented in the form of tables, graphs, reports and an interactive map that shows suppliers, plants, warehouses and other facilities.

Linx runs on HP 9000, IBM RS/6000 and DEC platforms.

Contact Numetrix Inc., 401 Merritt 7, Norwalk, CT 06851; (203) 847-3452.

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CIRCLE 267 ON READER CARD

Dataram Enters RAID Marketplace

Dataram Corp. entered the RAID marketplace with the DATARAID family of disk array storage subsystems for HP, DEC and Sun Microsystems markets.

The DATARAID family includes: the DTM 900, a dedicated hardware-based RAID 1 (disk mirroring) system with 1 to 6 GB of usable storage; the DTM 1000, a midrange system which offers users selectable RAID 0, 3 and 5 functionality and up to 14 GB of storage capacity; and the DTM 4000, the high-end member which features additional fault tolerance, higher levels of data availability and additional host interface connectivity, and has storage capacity up to 112 GB.

DATARAID is a StorageWorks-compliant RAID storage subsystem. It has a cableless enclosure design that uses a midplane to plug-connect all components. The DATARAID family includes models ranging from one to eight ranks with four to seven disks per rank, which yield RAID subsystems with storage capacities ranging from 4 GB to 56 GB.

DATARAID provides effective I/O rates with a proprietary Cascading Cache Architecture (CCA). CCA can eliminate I/O bottlenecks associated with traditional storage by locating the most requested data in main system memory and closest to the CPU.

Contact Dataram Corp., P.O. Box 7528, Princeton, NJ 08543-7528; (609) 799-0071.

Circle 374 on reader card

Librarian/iX 2.0 Supports HP-UX

Operations Control Systems (OCS) announced LIBRARIAN/iX 2.0, which supports MPE/iX and HP-UX. LIBRARIAN/iX is a version control and change management system that protects application integrity, automates repetitive tasks and ensures consistent rollback to previous versions.

LIBRARIAN/iX 2.0 is a client-server application that provides comprehensive change control in a heterogeneous environment of MPE/iX and HP-UX machines.

Pull-down menus eliminate the need for new and occasional uses to memorize LIBRARIAN commands while the command line mode acts as a shortcut for power users. Other new functions include branch, merge and delta management.

Contact Operations Control Systems, 560 San Antonio Rd., Ste. 106, Palo Alto, CA 94306; (415) 493-4122.

Circle 373 on reader card

Genoa Debuts Phantom 32i

Genoa Systems Corp. shipped Phantom 32i, a 32-bit Windows/CAD interleaving graphics accelerator based on the Tseng Labs ET4000 W32i chip.

This product is designed to be used on 32-bit VESA local bus systems and conforms to all current video standards. Additionally, it uses memory interleaving technology to deliver the highest performance available in 2 MB DRAM-based accelerators.

The Phantom 32i is offered in two versions: the Model 8900VL-20 comes standard with 2 MB on-board; and the Model 8900VL-10 offers 1 MB DRAM and is upgradable. The extra 1 MB provides 65,000 colors at 1,024 x 768 and 256 colors at 1,280 x 1,024, as well as a 40 percent increase in performance.

An additional feature of the board is Genoa's proprietary FlickerFree technology, which eliminates screen flash and flicker providing a stable image display.

Phantom 32i Model 8900VL-20 costs $349 and the Model 8900VL-10 costs $269.

Contact Genoa Systems, 75 E. Trimble Rd., San Jose, CA 95131; (408) 432-9090.

Circle 372 on reader card

MiniSoft Introduces NetPrint92

MiniSoft Inc. announced a software package for host-based printing to LAN printers from the HP 3000. NetPrint92 operates as a background task on the HP 3000, transparently spooling output to network print destinations. It handles carriage control

conversion and supports HP environment files and bannering.

NetPrint92 allows HP 3000 spoolfiles to be printed on a wide variety of network printers in various configurations. Combined with MiniSoft's existing PC-to-host printing technology, NetPrint92 supports HP 3000 NetWare-based printers, TCP/IP direct printers (Jet Direct and other cards) and Novell LAN-based printers.

NetPrint92's functionality comprises three categories: Direct, NetWare and UNIX printing. Price starts at $995.

Contact MiniSoft Inc., 13617 State Hwy. 9, Snohomish, WA 98290-8721; (206)668-5187.

Circle 371 on reader card

LXE Develops Wireless Modems

LXE Inc. announced a new generation of portable and industrial wireless modems. This allows many types of office and industrial devices to be integrated into wireless networks, including laptops, wireless printers, process control equipment and scales.

Through the LXE RF backbone, the 5420 and 5460 can connect to a host application over a TCP/IP/Telnet or asynchronous link. LXE's RF backbone uses Ethernet or Token-Ring to interconnect the various backbone components.

The LXE 5420 and 5460 are compatible with either frequency-hopping spread spectrum or frequency synthesized narrow-band radios in LXE's RF networks.

Contact LXE Inc., 303 Research Dr., P.O. Box 926000, Norcross, GA 30092-9200; (404) 447-4244.

Circle 370 on reader card

Cobra Systems Provides Bar Code Printing

Cobra Systems announced bar code and label print modules for use with regular ASCII dot matrix and laser printers — the ME27P for parallel and ME27SX for serial connection.

Bar code modules interpret print commands sent to the printer from simple character sequences in virtually any program environment (HP, IBM, DEC, DOS or UNIX). In these environments, bar codes can be easily applied to existing programs and documents without a need for new software or dedicated hardware.

Cobra provides PCE-CAD, a Windows-based utility to simplify the design of bar codes and labels.

The modules also include variable height and reverse image label fonts with a line and box draw features.

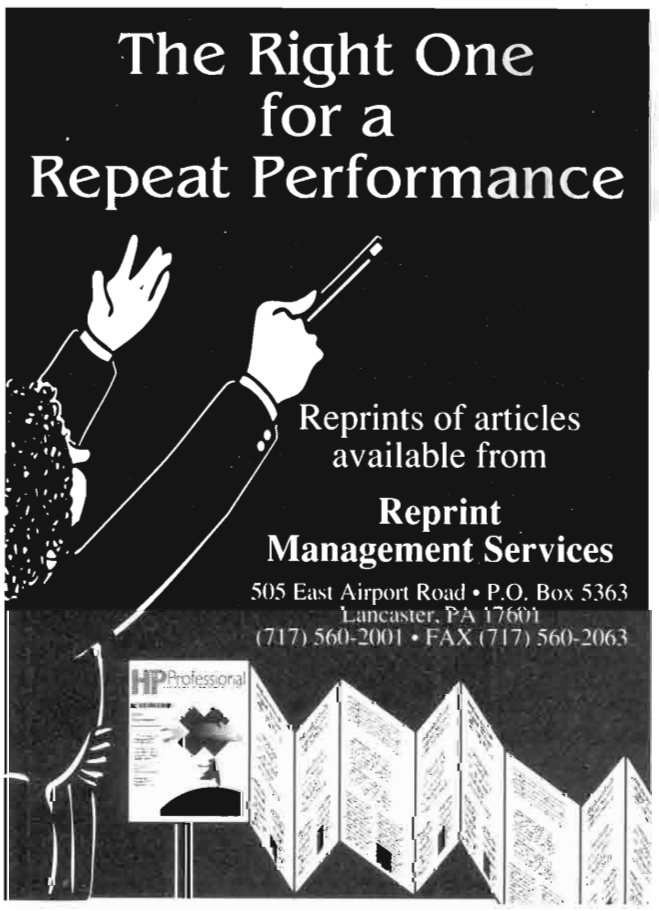
Contact Cobra Systems Inc., 2555 E. Chapman Ave., #216, Fullerton, CA 92631; (714) 525-2092.

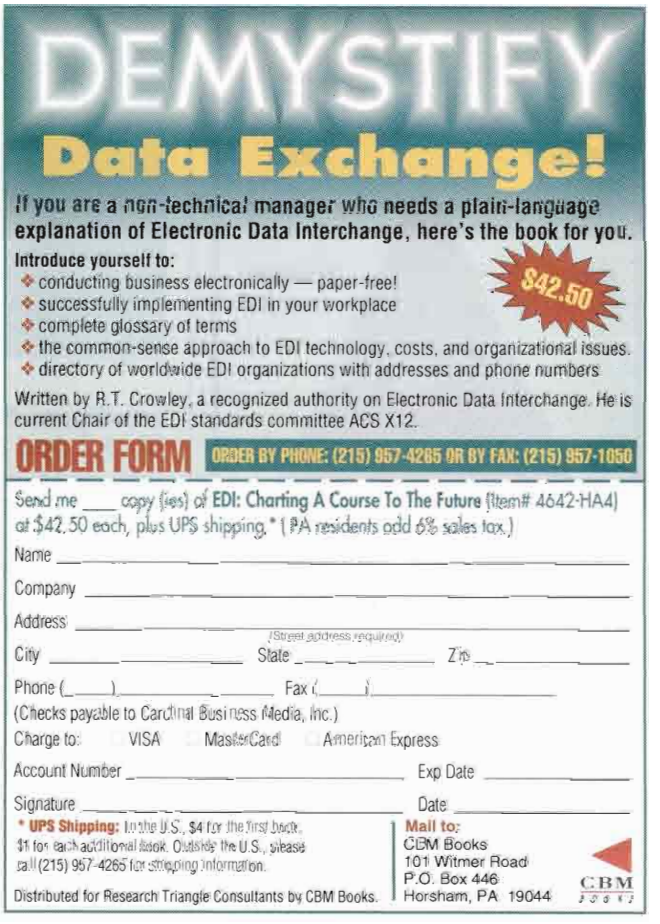
Circle 369 on reader card

TSS Offers TSSnet For HP 9000s

Thursby Software Systems Inc. (TSS) announced TSSnet, which allows users of the HP 9000 series workstations to have easy-to-use and cost-effective access to corporate data and legacy applications located on DEC VAX/VMS systems.

TSSnet for the HP 9000 is a software-only connectivity solution that runs on HP 9000 workstations, providing access to VAX/VMS systems or other TSSnet configured systems.





CIRCLE 133 ON READER CARD

TSSnet provides an HP 9000 with transparent access to VAX/VMS systems with no alterations to the VAX systems or the existing DECnet environment.

TSSnet allows the HP 9000 to participate in networks as a full DECnet end node and offers network terminal and printer support under the LAT protocol.

TSS brings a comprehensive File Transfer Utility to the HP 9000, allowing for complete, bi-directional, single or multiple file manipulation between remote and local nodes on a network. TSSnet also ties the UNIX, VMS and Apple Macintosh mail system together with a transparent mail gateway.

Price for TSSnet for the HP 9000 begins at $1,995.

Contact Thursby Software Systems Inc., 5840 W. Interstate 20, Ste. 100, Arlington, TX 76017; (817) 478-5070.

Circle 368 on reader card

CIRCLE 203 ON READER CARD

Synergy Communications Offers File Express

Synergy Communications Inc. announced File Express for Windows, which can send or receive live, ready-to-edit files via modem anywhere in the world without the hassles normally associated with error-prone, bit-mapped fax transmissions. File Express automates file exchange into a simple, error-free routine.

With File Express' simple and intuitive interface, you can view your own directories and files side-by-side with the remote computer's directories and files. You can copy or move whole directory branches or files between two computers as easily as moving or copying between a floppy drive and a hard drive.

A single copy costs $149.

Contact Synergy Communications Inc., 5276 Hollister Ave., Ste. 405, Santa Barbara, CA 93111; (805) 964-1755.

Circle 367 on reader card

Intelligent Modem Debuts SA19.2 And IM19.2

Intelligent Modem Corp. (IMC) introduced two 19.2 Kbps, full-duplex dial-up modems with compression speeds of up to 75,000 bps.

The standalone SA19.2 and the internal IM19.2 feature the ability to modify the modems to future CCITT or other de facto standards via an on-the-fly software upgrade. Both modems support all other existing industry standards for data compression and error control, as well as fallback speeds ranging from 16,800 bps to 300 bps.

Standard features include: echo cancellation to sort incoming data from the modem's own signal; line equalization to improve performance over low-quality phone lines; autodialing and auto-answering; pulse or tone dialing; call progress monitoring; and a comprehensive supervisory tone-detection system. On-board diagnostics include power-up and loop-back self tests, as well as local analog and remote digital tests.

The SA19.2 costs $995 and the IM19.2 costs $945.

Contact Intelligent Modem Corp., 435 W. Universal Circle, Sandy, UT 84070; (801) 561-8080.

Circle 366 on reader card

Frank Solutions Announces Quicklink

Frank Solutions Inc. introduced their Quicklink family of interactive voice response (IVR) products for the HP 3000 and HP 9000. IVR enables callers to access information from a HP host computer through a touchtone telephone. Quicklink provides full connectivity to the HP host for a real-time source of data and transactions.

The Quicklink voice system is designed using WRQ's Reflections software to access the HP host data. As a workstation running Reflection, Quicklink sends requests to the host for data which are converted into a voice responses that can be retrieved by the caller.

Contact Frank Solutions, 9250 E. Costilla Ave., Ste. 100, Englewood, CO 80112; (303) 792-5500.

Circle 365 on reader card

3k Releases NetMail/3000

3k Associates announced a new release of NetMail/3000 (A.05), a SMTP (Internet Mail standard) and MIME (Multimedia Internet Mail Extensions standard) E-mail system for HP 3000 business systems.

NetMail/3000 lets any HP 3000 system communicate with any Internet compatible E-mail system without any dedicated hardware. NetMail/3000 offers full networking capability, as well as compatibility with POP2 clients on any Macintosh, PC, UNIX system or workstation (including ShareWare clients).

Commands are available via function keys, command line, execute/macro files or floating button palettes for WRQ Reflection for Windows users.

An optional module includes a SMTP-to-HPDesk E-mail connection, giving HPDesk users access to Internet compatible mail systems.

Contact 3k Associates, P.O. Box 5812, Springfield, VA 22150; (916) 622-0630.

Circle 364 on reader card

Oregon Digital Computer Offers HP Vectra Upgrade

Oregon Digital Computer Products announced an upgrade designed for the HP Vectra RS/16, RS/20, RS/20C and RS/25C PCs. The RT-486DX2-66T is a user-installable motherboard replacement for the RS towers.

The Intel i486DX2-66 processor is mounted in a ZIF socket providing an upgrade path to Pentium in the future. The backplane features two 32-bit VESA local bus slots and 8 SIMM sockets.

The board supports from 4 to 64 MB of RAM. Other features include: 256K cache, AMI BIOS, OPTI Writeback chip set, on-board battery and password security.

Contact Oregon Digital Computer Products Inc., 855 N.W. Grant Ave., Corvallis, OR 97330; (503) 753-5554.

Circle 363 on reader card

Pacer Software Upgrades File And Print Servers

Pacer Software Inc. released upgraded version of its PacerShare and PacerPrint file and print severs for HP 9000 Series 700/800 computer systems. The new release has an easy-to-use Macintosh-based administration and management, enhanced integration with other HP-UX-based file server products and improved performance.

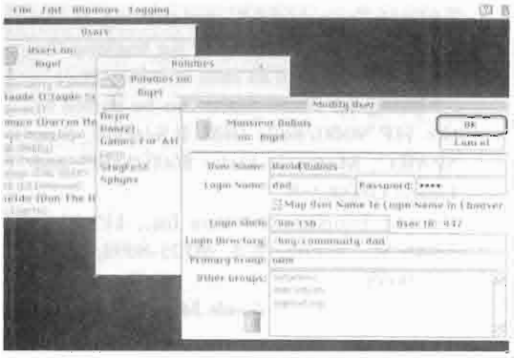
PacerShare lets Macintosh users mount and use HP-UX volumes and directories as if they were Macintosh disks. PacerPrint integrates Macintosh and HP-UX printing resources by allowing Macintosh users to print directly to HP-UX print queues as if they were LaserWriters. PacerShare and PacerPrint also are available for Sun SPARC and DEC RISC Ultrix systems.

The upgraded PacerShare and PacerPrint ship with PacerAdmin, a Macintosh application that lets system managers add, modify and delete HP-UX users and groups.

Pricing is based on the number of simultaneously connected users, starting at $3,000.

Contact Pacer Software Inc., 7911 Herschel Ave., Ste. 402, La Jolla, CA 92037; (619) 454-0565.

Circle 362 on reader card



PacerAdmin lets system managers add, modify and delete HP-UX users

FourGen Introduces Enterprise Fixed Assets

FourGen Software announced the release of its Enterprise Fixed Assets application, a mainframe replacement and tracking system developed for Fortune 1000 corporations.

Features include the ability to fully track and report on both simple and complex assets. Complex assets are defined through depreciable sub-asset components which

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facilitates "parent/child" asset tracking. It also features a Location FlexKey for tracking the physical location of an asset or sub-asset.

Enterprise Fixed Assets can be ported to the HP 9000/800, IBM RS/6000, Sun SPARC, Motorola Delta 8000/MPC and Unisys U6000/65.

Contact FourGen Software Inc., 115 N.E. 100th St., Seattle, WA 98125-8098; (206) 522-0055.

Circle 361 on reader card

The RT/DT1700 provides scanning capabilities in harsh industrial environments.

RF Terminal Available For Harsh Environments

Norand Corp. introduced the environmentally-sealed RT/DT1700 Radio Data Terminal, a modular and ergonomic industrial radio frequency (RF) terminal line. It is designed for harsh industrial environments.

The RT/DT1700 offers batch, ultra-high frequency (UHF), spread spectrum transmission (SST) and scanning capabilities simply by changing modules. The RT/DT1700 gives you wide choices of integrated scanning options including CCD, laser, long-range and VIN capabilities.

The RT/DT1700 terminal features 21 row by 26 column display. A backlight provides illumination in dark environments. Wide temperature ranges are accommodated by automatic contrast adjustment.

The 1700 has a dedicated scan trigger. The trigger, positioned on the keyboard, allows you to operate the terminal like a TV remote control. The terminal also includes scanning triggers on each side of the terminal, an RS/232 port and another port for tethered scanning.

Contact Norand Corp., 550 Second St. S.E., Cedar Rapids, IA 52401; (319) 369-3100.

Circle 360 on reader card

HP Introduces Compact Printers

HP introduced personal inkjet printers with desktop functionality, color capability and portability: the HP DeskJet 310 printer for notebook PCs and the HP DeskWriter 310 printer for Macintosh PowerBooks.

The DeskJet 310 and DeskWriter 310 can be powered by either a battery or an AC adapter; offer 300 dpi resolution for black or color, text or graphics; and use HP-developed thermal inkjet technology.

The devices can print more than 3 ppm of black text and a color page in about 4 minutes. To switch from black to color printing, the user simply swaps the black print cartridge with a color one.

The DeskJet 310 printer has a Centronics parallel interface. The DeskWriter 310 printer has an RS-422 serial and an AppleTalk interface.

The printers are about half the size of a notebook PC and weigh about 4 pounds. Each printer costs $379. They are also available with a cut-sheet feeder for $455.

ADAMS V7.0 Enhances Virtual Prototyping

Mechanical Dynamics Inc. (MDI) released version 7.0 of its ADAMS (Automatic Dynamic Analysis of Mechanical Systems) software product line. This enhancement will enable users to more quickly and easily model "virtual prototypes" of mechanical systems and to simulate the operating behavior of such systems.

Version 7.0 responds to requests from aerospace, automotive, electronics and general machinery manufactures for features which automate the study of parametric design changes.

ADAMS provides the ability to simulate a wide range of design options for a given mechanical system. It also enables manufacturers to "institutionalize" simulation as a quality assurance and design verification measure in their product development process.

Manufacturers can customize the GUI for the purpose of automating the design and simulation of a specific type of mechanical system.

ADAMS version 7.0 is supported on: UNIX workstations from HP, DEC, IBM, NEC, Silicon Graphics and Sun; PCs; and mainframes and supercomputers from Convex, Cray, Hitachi, IBM and NEC.

Contact Mechanical Dynamics Inc., 2301 Commonwealth Blvd., Ann Arbor, MI 48105; (313) 994-3800.

Circle 359 on reader card

LPI-COBOL Optimized For Pentium Processor

Liant Software Corp. announced LPI-COBOL version 7.0, a COBOL compiler optimized for Intel's new Pentium processor.

LPI-COBOL 7.0's new features include 45 new ANSI defined intrinsic functions. Other features include installation improvements and a command line driver that invokes both the compiler and the linker, reducing the commands needed to generate executable files. LPI-COBOL 7.0 also has an integrated debugger, CodeWatch.

It is a true 32-bit, ANSI-standard COBOL compiler for Intel x86 and Pentium platforms running UNIX SVR3 and SVR4.

LPI-COBOL is available on the HP 9000 Series 700 running HP-UX and Sun platforms running Solaris 1.x and shortly on Solaris 2.x. Price is $1,295.

Contact Liant Software Corp. 959 Concord St., Framingham, MA 01701-4613; (508) 872-8700.

Circle 358 on reader card

Mail*Hub Supports X.400, X.500 Standards

Control Data Systems announced that Mail*Hub, their electronic mail integration solution, now supports the 1988 CCITT X.400 Message Handling System (MHS) standard in addition to X.500 standards.

Also announced was Mail*Hub for Sun Microsystems' SPARC systems running SunSelect's Solaris 2.

Important additions include: an expanded X.400 address set; distribution lists; automatic downgrading; and the ability to accept and create both 1988 and 1984 mode network connections.

Mail*Hub now features a number of X.400 and SMTP-based administrative tools including LookupX400Route, a mail network administrator.

Price varies depending on the number of users and the type of services required.

Contact Control Data Systems Inc., 4201 Lexington Ave. N, Arden Hills, MN 55126-6198; (612) 482-4319.

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Reader Information

This month's issue contains many advertisements for hardware and software products available for your HP systems. Your investment in these products today could mean a more lucrative future for your company. Use the information below to learn more about the advertisers' offerings, then use the reader information card to initiate your direct link to valuable information about these advertisers' products.

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New Products

APC Releases SurgeArrest Version

American Power Conversion announced the introduction of three new advanced multi-stage surge suppressor product families: Personal Series, Professional Series and the Network Series SurgeArrest.

Personal Series SurgeArrest features six models designed to protect home and office electronics including PCs, printers and TVs.

Professional Series SurgeArrest includes three models designed for more advanced protection of the office environment such as computer systems, fax machines and high-end audio and video equipment.

Network Series SurgeArrest consists of four models designed for advanced business and network systems including workstations, internetworking hardware, phone systems and hard disk arrays.

All series include a dual fuse, a catastrophic event protection that enables the models to disconnect themselves from the utility line in the case of an emergency, a site wiring fault indicator and optional seven-outlet floor models and three-outlet wall models.

Prices range from $24.95 to $99.95.

Contact American Power Conversion, P.O. Box 278, 132 Fairgrounds Rd., West Kingston, RI 02892; (401) 789-5735.

Circle 338 on reader card

Young Minds Develops Mass Storage Solution

Young Minds Inc. (YMi) developed a mass storage system for TCP/IP network environments. The Ultra Capacity system allows transparent network access to CD-ROM jukeboxes, towers and disk changers, as well as to the CD Studio recording system. It uses a caching scheme and transparently loads and unloads disks to satisfy I/O requests.

Ultra Capacity provides the flexibility to use a high-performance YMi server or adapt an existing UNIX host (HP, DEC, IBM, Sun, NeXT or Univel) into a complete Ultra Capacity server. It fully supports all UNIX and Macintosh TCP/IP networks and all MS-DOS and Windows clients through NFS.

It allows complete customized solutions with scalable and modular growth.

Contact Young Minds Inc., P.O. box 8130, Redlands, CA 92375; (909) 335-1350.

Circle 332 on reader card

RTV Toolkit Enhances Performance

Parallax Graphics announced RTV Toolkit, a high-performance software for integrated audio and video that expands the capabilities of video-enabled workstations. The RTV Toolkit can store and playback digital video at 30 frames per second in full size (640 x 480 pixels), with true 24-bit color. The integrated audio presents CD quality sound to accompany this high-quality image.

The RTV Toolkit contains two pieces: RTVdisk, a fully-featured application for performing advanced video editing; and an extensive API which includes source code for RTVdisk and allows developers to write custom applications. RTV Toolkit works with 32-bit frame buffer cards from Parallax that include JPEG compression.

The CueList provides a simple mechanism for saving and collating clips into preferred sequences. Annotations of graphics and audio over video help users use sophisticated effects in movies.

Cost is $995. It requires either the XVideo or PowerVideo 32-bit frame buffers from Parallax.

Contact Parallax Graphics Inc. 2500 Condensa St., Santa Clara, CA 95051; (408) 727-2220.

Circle 335 on reader card

I-Kinetics Announces I-Bridge Software

I-Kinetics Inc. introduced I-Bridge, a family of software products that allows Windows applications to directly access databases, programs and files on UNIX servers. The initial release includes adapters for Excel, as well as Ingres, Oracle and Sybase SQL Server databases. UNIX adapters are available for HP and Sun.

I-Bridge puts information directly into a Windows application, without the user having to manually locate, transfer or convert it. I-Bridge Windows clients communicate with different UNIX data sources, including different databases, through a single driver with automatic data conversion.

I-Bridge gives Windows applications direct access to data in flat files or directly output from UNIX programs without intermediate file storage.

A starter system, including a UNIX server module and two Windows client modules is priced at $995.

Contact I-Kinetics, 19 Bishop Allen Dr., Cambridge, MA 02139; (617) 661-8181.

Circle 336 on reader card

ANSYS/ProFEA 5.0/11 Available On HP 9000/700

Swanson Analysis Systems Inc. shipped ANSYS/ProFEA 5.0A which is completely integrated with Revision 11 of Pro/Engineer mechanical design automation software from Parametric Technology Corp.

ANSYS/ProFEA is a design tool that provides design optimization in a CAD environment. ANSYS/ProFEA 5.0A will support the newest release of Pro/Engineer software, Revision 12. It is available on the HP 9000 Series 700 systems. ANSYS/ProFEA is available on various media including CD-ROM, and also runs on DEC Alpha, IBM RISC, Silicon Graphics and Sun workstations.

Contact Swanson Analysis Systems Inc., Johnson Road, P.O. Box 65, Houston, PA 15342-0065; (412) 746-3304.

Circle 333 on reader card

Phase X Introduces Low-Cost X Terminals

Phase X Systems added new features to its X11R5 server software and reduced prices of its CA X Terminals by up to 15 percent. The CA series offer monochrome and color, and medium to high-resolution X terminals. They support HP, Sun, IBM, DEC and SCO UNIX server systems.

The CA X Terminals have an AMD-29000 RISC processor, and an ASIC chip running at 64 MHz as a graphics accelerator. The CA series offers over 65,000 X-Stones in graphics performance.

The 19CA1 is a 19-inch, monochrome 1280 x 1024 resolution model that costs $1,395. The 15CA1 is a 15-inch, 1024 x 768 resolution model that now costs $1,495. The 17CA1 is a 17-inch, 1024 x 768 resolution model that now costs $1,795. The 20CA2 is a 20-inch, 1280 x 1024 resolution color model that now costs $2,595.

Contact Phase X Systems 19545 N.W. Von Neumann Dr., Beaverton, OR 97006; (503) 531-2400.

Circle 334 on reader card

Cincom And Q-CIM Form Software Partnership

Cincom Systems Inc. announced a newly formed strategic partnership with Q-CIM Inc.

Q-CIM is integrating Cincom's SUPRA DBMS with its family of manufacturing software solutions. Q-CIM plans to offer its process manufacturing ERP solutions in the Cincom SUPRA DBMS environment on all HP-UX platforms.

Contact Cincom Systems Inc., 2300 Montana Ave., Cincinnati, OH 45211-3899; (513) 662-2300.

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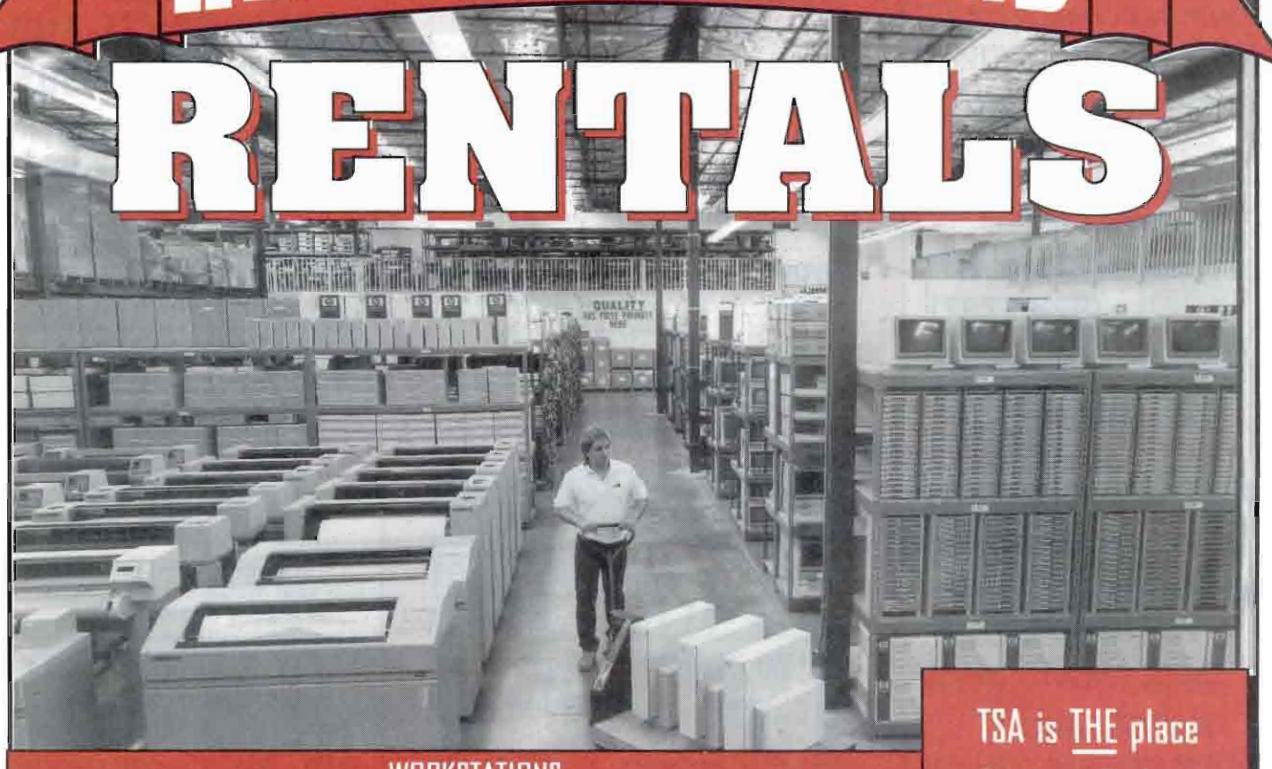

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A Once And Future King

Did *60 Minutes* Tarnish 'The HP Way'?

By Bill Sharp

"My sainted Mother!" bellows an outraged Sir Dinadan in the opening line of Camelot, reacting to the end of a tradition. It hurts to have your myths and expectations dashed before your very eyes.

Those watching the CBS News program, *60 Minutes*, on October 3, 1993, saw and heard that HP as well as other companies in the computer industry hire contract workers from third-world nations to work in the United States, displacing American workers at programming jobs by providing labor at reduced rates. A rather poor picture for a company generally thought of as the "white knight" of the high-tech business world.

Is it true that HP hired foreign nationals on U.S. soil and paid them the equivalent of $20,000 per year for a job that would pay an American much more? Could this seemingly slanderous story be truthful, or a tainted tale spun by a modern-day Mordred of network news? Could Camelot be crumbling before our eyes?

Foreign nationals hired by HP as well as other computer firms (this is evidently a widespread practice) are, in fact, paid by contract labor firms located in their home country. HP and the other companies paid those firms for the contract help. What those firms, in turn, paid the workers here was not under the control of the companies involved.

Marlene Somsak, manager of HP corporate press relations, who is the official spokesperson for HP on this subject, says HP paid its foreign contract firms roughly $5,000 per month, or about $60,000 per year for each employee. However, HP does not know how much was actually then paid to the workers by the contract firms. So, it is possible that workers were paid about $20,000 per year while working for HP.

HP maintains it is the only firm to disclose what it is paying to the contract firms, so other companies may be paying less, and some may have evaded taxes. Evidently, HP pays all appropriate taxes, has correct visas for the workers and plays by the rules, such as they are.

H1 visas used for this employment are intended to allow foreign nationals with *unique* talents to work in the United States for brief periods of time. HP and other companies have used these visas to bring *typical* software programmers here for extended periods, with the intention of saving lots of money over hiring U.S. citizens.

By hiring contract help, HP avoids all the overhead costs associated with full-time employment, a hefty tab within HP that likely reaches the equivalent of 33 percent of employees' wages. And HP engineering employees earn a lot once they've been around two or three years.

HP assures us that its newly revised contracts now insist that contract firms prove how much they are paying their workers. Because HP will now want to prove that workers are getting the prevailing wage to avoid further embarrassment, the contract firm will run up its total charge to HP so that it continues to make a profit on the deal. This will drive up HP's costs, making it less enticing to buy cheap labor this way. HP has several reasons now to halt this practice, and the program will likely whither. Somsak admits the program now has a new manager.

"I wish we had known that some of the programmers were not getting what they should have from the contract companies," says Somsak. "One of our goals is to have them go home and feel good about HP. If they feel they've been given short shrift, they won't be good supporters of our products, and that would be counter to our goals." HP says that its program is intended to spawn new software developers around the world to stimulate the sales demand for HP products.

HP maintains that *60 Minutes* ignored some of the data HP delivered to them documenting its payments to contract firms and that those payments actually exceeded HP's internal payment for the same work.

However, like the TV folks, I requested, and was denied, a chance to discuss this issue with an HP executive outside the press relations staff. So, I hope, HP, that you strive to repair your knightly image. I'd hate to see someone mournfully bemoaning the fate of a once and future HP. ■

— *Sharp's Internet address: sharp@.cardinal.com*

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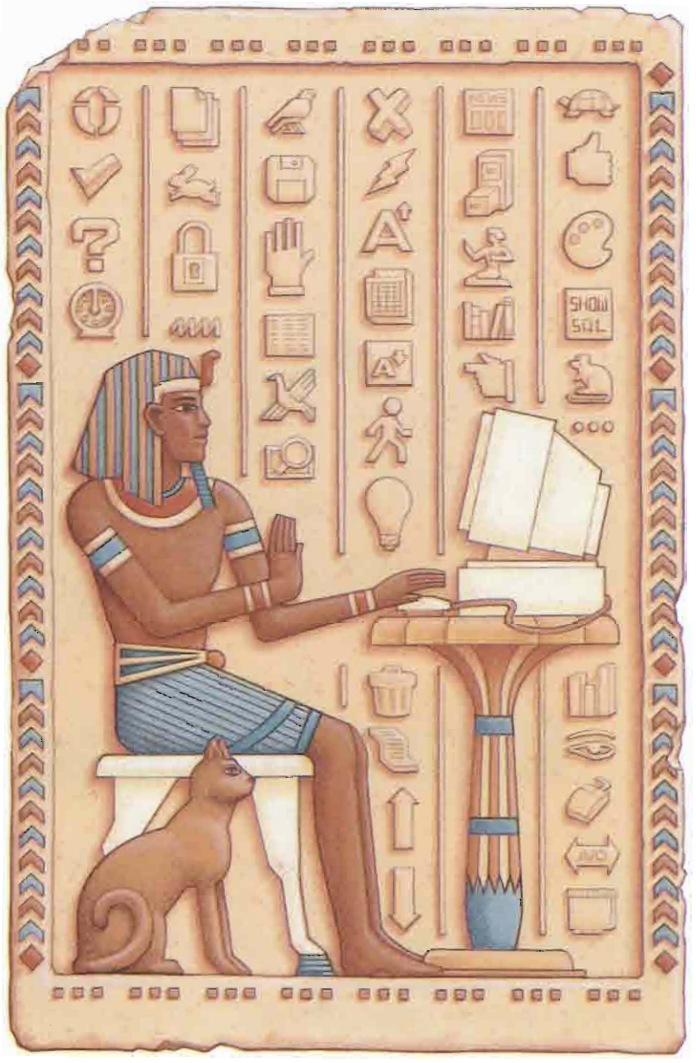

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