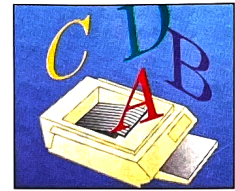


THIS WEEK

PC Week Poll: PostScript Laser Printers

QMS, Apple Garner High Praise, While Buyers of TI, NEC Are Less Satisfied.

See Page 110.



'PM Lite' Could Be IBM Alternative To MS Windows

By Gina Smith and Daniel J. Lyons

IBM is developing a pared-down version of the OS/2 Presentation Manager graphical interface that will run under DOS, sources close to and inside the company said last week.

Referred to by some sources as PM Lite and by others as DOS-PM, the software is designed to bring graphical multitasking to low-end DOS PC users. The environment comprises a subset of OS/2 Presentation Manager (PM) programming calls and will run existing DOS applications without modification, but developers will have to rewrite applications in order to tap PM Lite's graphical capabilities.

The environment may serve as

See 'LITE' Page 8

FIRST LOOK

Compaq LTE/286 Worth Its Weight For Power Users

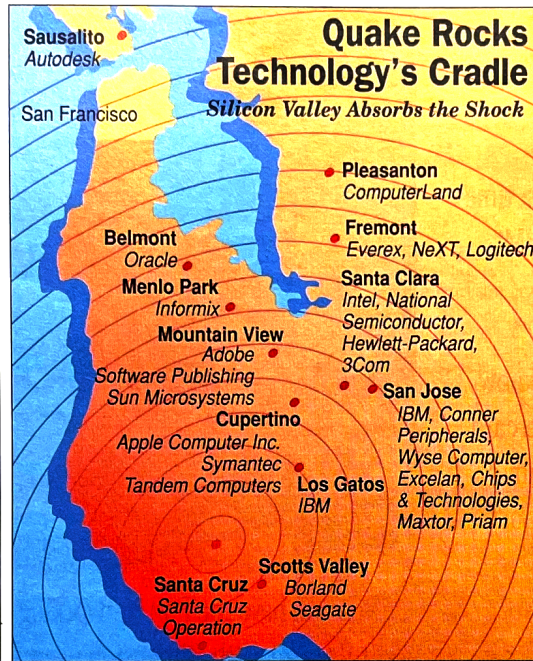
By David Strom

Users on the go who work with numbers and run a lot of software will find a boon companion in Compaq Computer Corp.'s new notebook-sized LTE/286. Those who use little more than word-processing and communications programs, however, won't need the LTE's power and may be better off with the NEC UltraLite or the Zenith MinisPort.

While it is available in an 8088 version, the LTE's price and weight make it suitable for more

See FIRST LOOK Page 8

In Software: Market Heats Up For High-End Forms Design. See Page 41.



Dozens of industry-leading firms somehow escaped disaster when the Bay Area suffered its worst earthquake in 83 years.

Industry Mainstays Intact In Wake of Historic Quake

By Juli Cortino and Kathleen Doler

SILICON VALLEY, Calif.—With a few notable exceptions, the most powerful earthquake to rock Northern California since 1906 left the heart of the computer industry here largely unscathed.

Damage sustained at a handful of companies during last week's temblor, which measured 6.9 on the Richter scale, will climb into the millions of dollars. And though most vendors closed down their facilities for 24 hours to assess the damage and keep employees off fragile roadways, the computer industry for the most part barely skipped a beat.

Regional service companies and manufacturers such as Hewlett-Packard Co. (HP) and IBM took extraordinary measures to bring customers back on line. Even so, the extent of the earthquake's damage on individual data centers in the area was not known by week's end as many

corporations remained idle.

Of the two dozen computer makers polled and inspected by PC Week, Apple Computer Inc., Borland International Inc. and HP appeared hardest hit.

Although no lives were lost or serious injuries reported, structural losses will likely total millions of dollars. Officials from the companies did not expect the damage to cause any product delays.

Located in Scotts Valley, Calif., just a few miles away from the earthquake's epicenter in Santa Cruz, Borland was temporarily shut down. Collapsed ceilings and ruptured water pipes damaged the company's Digital Equipment Corp. VAX minicomputer and many PCs.

Interior destruction was "fairly widespread, with things falling and breaking," said Richard Schwartz, Borland's chief technical officer. "Fortunately, we have earthquake insurance. By Mon-

See EARTHQUAKE Page 6

LAN Manager Players Seek Common Ground

More Interoperability in the Works

By Jane Morrissey

Microsoft Corp. and its LAN Manager OEMs are combining their network-system strengths with a series of product announcements designed to integrate more closely all LAN Manager-based networks, according to sources close to the companies.

In what one vendor dubbed "LAN Manager week," Microsoft will unveil a new release of its LAN Manager operating system during the week of Nov. 6, and IBM and 3Com Corp. will follow suit with new versions of their LAN Server and 3+Open net-

works, respectively. Compaq Computer Corp., Hewlett-Packard Co.'s (HP's) Apollo Division and Digital Equipment Corp. (DEC) are also expected to lend support to LAN Manager that week.

IBM, 3Com and other LAN Manager OEMs are standardizing on a common set of application programming interfaces (APIs) and core functions designed to ensure that applications written to run on one LAN Manager version will work on all. The move—particularly IBM's involvement—could spur development

See LAN MANAGER Page 6

EISA, MCA Arrivals Set Stage For Comdex/Fall Bus Battle

Olivetti EISA PC To Feature 486, Room for RISC

By Evan O. Grossman

Ing. C. Olivetti & Co. staked out its EISA ground last week with the first EISA machine to feature both a 486 chip and a socket for a RISC coprocessor.

The Italian manufacturer implemented the Extended Industry Standard Architecture (EISA) bus in a high-performance configuration designed to challenge minicomputers as departmental computing servers, industry analysts said.

In its efforts to boost system

See EISA Page 8

MCA Clones Face Fight on 2 Fronts For Market Share

By Tara Sexton

While manufacturers of the first EISA machines continue to make headlines, vendors readying computers compatible with IBM's Micro Channel architecture (MCA) are gaining strength in numbers as they prepare to battle not only EISA but IBM for market share.

Normerel Electronique, American Mitac Corp., Memorex Telex Corp. and startup First Class Systems Inc. are expected to announce by Comdex/Fall a bevy of

See MCA Page 8

REVIEWS

Hands-On, Side-by-Side Product Comparisons

In Hardware: 3 Color Scanners, Page 30

In Software: 7 Programs That Replace or Enhance The Macintosh's Finder, Page 53

In Connectivity: 3 Data Switches, Page 81

In Application Development: 4 Advanced Language Processors that Extend dBASE, Page 91

CONNECTIVITY

Saros Readies Tool Kit For File-Sharing System

By Steve Higgins

Saros Corp. is readying a set of development tools designed to open up its FileShare network file-sharing system to the vast base of standard PC applications, according to sources close to the company.

The new tool kit could broaden the currently limited appeal of Saros' SQL Server-based program by letting users take advantage of its sophisticated search capabilities without exiting a word-processing, spreadsheet or other application, the sources said.

FileShare, which was released last summer, incorporates SQL Server's Structured Query Language features to let DOS or OS/2 workstation users locate files on an OS/2 LAN Manager-based network without knowing the file's name or location.

The program includes a series of pop-up menus that guide users through searches for documents created with third-party word processors, according to Saros officials.

Many observers say the system is limited, however, because it is expensive and does not support existing applications.

"It's a very pricey product, not something everybody wants," said one source who uses a similar document-sharing program, Reference Point, from LAN Services Inc. in New York. Reference Point does not feature Saros' transparent file-search capabilities.

FileShare, which Saros officials said is available for LAN Manager networks with DOS Windows workstations and will support OS/2 workstations next year, is priced at about \$450 per user, and about \$10,000 for a 25-user system.

"I think they're targeting a very narrow segment of the market," the user said, adding that the basic package appeals mostly to law firms or companies that process many large documents.

The release of the tool kit, expected by year's end, could change the perception that FileShare is limited by allowing applications developers or in-house programmers to add FileShare support to their programs, sources said.

"By releasing a tool kit, they're encouraging word-processing, spreadsheet and database com-

See SAROS Page 66

ADS Bringing Windows Line to OS/2

Menu System Set For LAN Manager

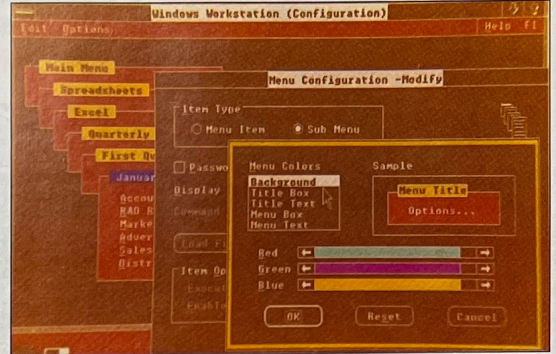
By Jane Morrissey

Automated Design Systems Inc. (ADS), maker of the Windows Workstation LAN menuing system for Novell NetWare networks, is gearing up to release its first OS/2 products: a port of its current line to Microsoft Corp.'s LAN Manager, and a network file-organization package for both NetWare and LAN Manager networks, company officials said last week.

Windows Workstation is a conglomeration of three Microsoft Windows-based packages—Windows Workstation Menu, Print Manager and Extensions for LANs—that currently run exclusively on NetWare.

ADS chose to port the Windows Workstation line to the OS/2-based LAN Manager because it found OS/2 was a much more attractive development environment, and because it wanted to exploit the ability to tie into LAN Manager's naming, printing and communications services, according to Stan Levine, vice president of the Atlanta-based company.

"We can do more on LAN Manager than any other operating



Automated Design's menuing system, currently designed only for NetWare, will soon be available to users of LAN Manager.

system," Levine said, "especially when it comes to client/server communications."

Automated Design Systems aims to have the Windows Workstation line for all LAN Manager versions, such as 3Com Corp.'s 3+Open and IBM's LAN Server, ready in time to demonstrate at Comdex/Fall and generally available by the end of the year, according to Levine.

One of the features within the Windows Workstation Menu system, Secure Station, could help shore up at least one of LAN Manager's well-document-

ed security gaps, according to Levine. ADS also plans to offer a module that exploits LAN Manager's Application Programming Interface (API) for creating software-metering applications, he explained.

Sold separately, the Windows Workstation for NetWare packages range in price from \$595 to \$695. All three are available together for \$1,195.

ADS is currently designing a separate Windows-based network file-organization system, in the

See ADS Page 63

ANALYSIS

All-In-1 Phase II Falls Short Of Integrated Desktop Ideal

By Paula Musich

Digital Equipment Corp.'s (DEC's) recently announced All-in-1 Phase II, like IBM's OfficeVision, is long on good intentions but short on significant new capabilities.

Earlier this month, DEC became the third major systems vendor, after IBM and Data Gen-

eral Corp., to take a stab at providing a client/server-based office system that offers PC users consistent access to a set of functions integrated with vertical applications running on a multiuser computer.

The initial releases of both OfficeVision and All-In-1 Phase II

See ANALYSIS Page 63

Comparing Office Integration Strategies

Differences Between IBM's and Digital's Approaches

IBM OfficeVision

- Only supports OS/2 EE on the desktop
- Graphical user interface integrates object manipulation across applications
- APIs available to third-party developers who want to create applications and integrate them with OfficeVision

Digital All-in-1 Phase II

- Supports multiple vendors' desktop systems, including Macintosh, DOS and OS/2 Standard Edition PCs, Ultrix and VMS workstations
- Allows no object manipulation between applications
- Tools for integration available as part of Digital's Network Applications Services program

Kelly Hale

Everex, Storage Dimensions Join in NetWare Server Effort

By Evan O. Grossman

Everex Systems Inc. and Storage Dimensions have teamed up to produce a series of NetWare-ready file servers, officials at the two firms said last week.

Based on Everex's top-of-the-line 33MHz 386 computer and Storage Dimensions' LANStar line of Small Computer Systems Interface (SCSI) hard-disk drives and controllers, the systems are certified by Novell Inc. for use with its NetWare network operating system, officials said.

The systems include Storage Dimensions' disk controllers and value-added device drivers, as well as Everex's custom memory-management subsystem and 16.5MHz I/O bus. All of the servers come with a Hercules-compatible monitor and video board, a 5 1/4-inch, 1.2M-byte floppy drive, two serial ports and two parallel ports. The systems' desktop cabinet can support two full-height disk drives, in addition to the half-height floppy drive.

The file servers range in price from \$11,599, for a system equipped with 4M bytes of memory, a 64K-byte cache and a 150M-byte SCSI drive, to \$28,000

for a computer with 16M bytes of memory, a 128K-byte cache and two 650M-byte SCSI hard drives. Available in November, the servers will support up to 16M bytes of system memory and 256K bytes of cache memory.

Options include Storage Dimensions' erasable-optical disk drive, which can store 928M bytes of data on a removable cartridge, disk-mirroring or duplexing controllers, and external disk drives that provide up to 2.6 gigabytes of storage.

The systems will be marketed by Everex under the STEPServer name and by Storage Dimensions as FileMaster. Storage Dimensions, of San Jose, Calif., can be reached at (408) 879-0300. Everex, of Fremont, Calif., can be contacted at (415) 498-1111. ■

Connectivity Review: 3 Switches Target Users of Peripheral-Sharing Devices. Page 81.

MBS Plans To Add SNMP to Ethernet Microwave Link

By J.B. Miles

Microwave Bypass Systems Inc. (MBS) is cooking up network-management and security enhancements for its line of Ethernet-over-microwave connection products, according to company officials.

The company is developing a new member of its interLAN product line that incorporates the Simple Network Management Protocol (SNMP), a protocol used for exchanging management information and monitoring performance over TCP/IP networks. The new product, called Etherwave SNMP, will be available by the first quarter of next year, according to David Theodore, president of the Braintree, Mass., company.

Etherwave SNMP, like the company's current Etherwave Transceiver, lets users join Ethernet LANs in spans of up to five miles without repeaters, at a full Ethernet (10M-bps) bandwidth. The SNMP transceiver will augment, not replace, the

See MBS Page 66

LAN LINES

Laptops on LANs: Not Great, But Not Impossible, Either



DIANE DANIELLE

As chance would have it, Barry Gerber, we too have recently received requests to put a couple of laptops on our network, but we automatically included LAN connectivity in our evaluation criteria.

I admit I'm not thrilled about supporting a different LAN card and shell. After all, the one and only thing I could be absolutely certain of being the same

on every computer connected to the network would be the network interface card. Besides, the laptops themselves struck me as disappointing. We looked at 286-based machines, and the only one I would even consider carrying, the NEC UltraLite, is useless if you don't happen to use the extraordinarily limited software available on its ROM cards. The rest are too heavy and too expensive to suit me.

I suspect that although other network administrators may share your reservations, Barry, you may be overreacting to the request to hook one into your network. Let's look a little closer at your concerns.

As for someone hooking up and walking off with lots of confidential data, I know you use NetWare, and its security is pretty good. Still, anyone with a valid LAN ID and an available machine can copy data.

Software piracy, I agree, is a real problem, and portable hard disks do make it easier. But unless these things get awful cheap, I don't think they're gonna breed like bunnies.

As for space, what's so hard about having a couple of spare desks and connections around? There's no law saying you've gotta provide a parking spot for every car. If the lots are full, cars have to wait.

I can't quite agree that hooking up laptops constitutes a new form of networking, Barry. A laptop is a PC. Granted, most of them aren't PS/2s, so network administrators with your point of view may have to expand their horizons, but we're supporting at least 10 different makes and models of computers (with an amazing assortment of innards), and I'd be happy to offer some tips based on our experience.

As for the prospect of 50 or 100 students trying to simultaneously download a 2M-byte file, I wouldn't worry, Barry. Your Token-Ring can handle a few downloads.

Moments of anxiety about the possibility of portables users with the same internal ID number? Those of us who use Ethernet never have to worry about unique ID numbers.

And as for network licensing, I don't buy software licensed per physical workstation. Perhaps you have no choice, but if Texas school boards can dictate the content of high-school textbooks, surely the University of California can get a few bad vendors to do right.

I hope I've helped allay some of your worries. Now I need some help. You see, we've had this very nice identification system for our DC600 tapes (with labels on the box edges and tapes for identifying and tracking backups), but these 2.2-gigabyte cartridges are a bit tiny for useful labels. Any ideas? ■

Diane Danielle manages an extensive LAN for one of the country's largest bank holding companies.

Low-End Network-OS Expands User Support

By Jane Morrissey

Low-end network vendor CBIS Inc. is trying to break into the big leagues with the latest release of its Network-OS LAN operating system, which supports as many as 255 users while retaining a bargain-basement price as low as \$10 per node, company officials said.

The NetBIOS-compatible operating system previously supported only 30 users. CBIS officials claim its functionality rivals that of Novell Inc.'s NetWare LAN operating system, which can cost three times as much per node.

CBIS originally designed Network-OS to support 255 users, but placed an artificial ceiling on it to target the low-end LAN operating-system market, according to Laura Muller, product manager

for the Norcross, Ga., company. Because the line between low-end and high-end networks has begun to blur, CBIS lifted the user restriction in version 6.3B in an attempt to end the "perception that we were not able to stand up to Novell," she said.

The peer-to-peer Network-OS can be installed in less than 30 minutes, officials said, and offers security, wide area bridging and administration features similar to NetWare. The officials acknowledged, however, that Network-OS performance will not match that of NetWare when both have a full complement of 255 users.

Network-OS version 6.3B costs \$320 for a two-user system, with additional nodes priced at \$160 each. An eight- to 80-node network license costs \$1,480,

and an 81- to 255-user license is \$2,550, bringing the cost down to \$10 per user. Upgrades start at \$70.

Networks of various topologies can be bridged using the company's \$160 Network-OS Bridging software.

CBIS also announced that its CD Connection software, which previously ran only on Network-OS LANs, can be used with NetWare networks. The software manages up to 14 CD ROM drives per file server and 240 servers per network.

The company has also unbundled the software from its CD Server CD ROM system, so users can run the package on existing CD ROM drives. CD Connection costs \$895 for as many as eight users, and \$1,595 for nine to 100 users.

CBIS can be reached at (404) 446-1332. ■

Brown Bag Upgrade Offers Remote-Comm Options for Portables

By Tara Sexton

Brown Bag Software Inc. hopes to keep up with the increasing communications needs of portable-PC users with a recently enhanced version of its file-transfer software that includes new remote-communications features.

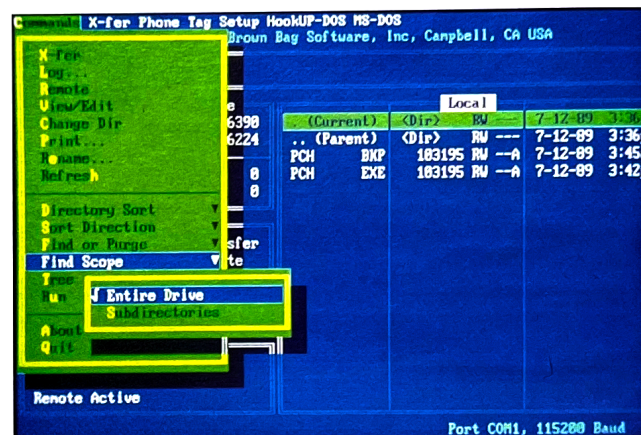
PC HookUP 2.0 not only lets users download files after a trip, but allows them to communicate remotely with the office while on the road, said Sandy Schupper, chairman of the Campbell, Calif., company. "Laptop users were telling us that direct connection just wasn't enough," Schupper said. "They wanted to communicate."

The new software's remote-control feature lets users configure and operate their home-office PCs from a remote location, according to Schupper.

Telecommunications support has also been added, enabling users to transfer files via modem, he said.

In addition, a new "chat" window lets users communicate with home-office colleagues, Schupper said.

As with the earlier version, users can



PC HookUP 2.0 provides users with a variety of options, allowing them to access their PCs remotely, for example, and perform local file transfer.

operate the program using the combination serial/parallel wire connector to download information onto another PC up to 100 feet away, he said.

PC HookUP 2.0 incorporates point-and-shoot technology, pull-down menus and context-sensitive help screens, he added.

The new release, available now, costs \$129 and includes copies for the remote

and home-office PCs. Users of the previous version, PC-Hooker Plus, can upgrade for \$29.95. Brown Bag is also offering a \$40 rebate on PC HookUP for users of competing products such as Traveling Software Inc.'s LapLink or Rupp Corp.'s FastLynx, Schupper said.

Brown Bag Software can be reached at (800) 523-0764. For California residents, the number is (800) 323-5335. ■

MBS \ Etherwave Gains SNMP

Continued from Page 61

Etherwave Transceiver, Theodore said, and it will cost about \$1,500 more than the existing \$4,700 transceiver, he said.

"Buyers who want full-functioning Ethernet LAN connections over microwave can still use the Etherwave Transceiver for 10M-bps throughput, but the new product with SNMP will provide more network-control and security features," he said.

SNMP is an important addition to a technology—Ethernet over microwave—that many users say is faster, more dependable and more cost-efficient than more traditional connections such as T-1 lines.

"I want SNMP on all my links," said Kent England, director of network systems engineering at Boston University, which uses MBS' microwave Ethernet links. "It provides the key to network ef-

fectiveness, which is to be able to test equipment remotely, run loopback tests, and check voltage and noise levels."

Boston University is part of the New England Area Regional Network (NEARNet), which uses MBS products to link Boston University with Harvard University, the Massachusetts Institute of Technology, Mitre Corp., Bolt, Berneke & Newmann and others with the supercomputer at the John von Neumann Center in Princeton, N.J.

MBS is a leading supplier of microwave technology for joining Ethernet LANs. Its turnkey systems include a duplex LAN microwave radio with two antennas, two Etherwave Transceivers and two LAN-Link 1000 data-link layer bridges for a price of about \$43,000, including Federal Communications Commission licensing and installation.

MBS can be reached at (617) 843-8260. ■

Saros \ Tool Kit Could Broaden FileShare Appeal

Continued from Page 61

panies to modify their applications and become an intelligent partner in the [FileShare] network," said one source close to the company.

One analyst lauded the program, but said the company has not positioned the product well. "[Saros] is doing what everyone has been saying we've needed," said Peter Francis, managing editor for Andrew Seybold's Outlook on Professional Computing in Santa Clara, Calif. "But it may be great software without a great push. And that's why it may be less significant."

Saros officials declined to comment. The Bellevue, Wash., company can be reached at (206) 646-1066. ■