ON THE DES
Oracle readies low-end d
for Windows, NetWare, Ma
PAGE 55

IBM plans consumer focus, corporate future for Warp

OPERATING SYSTEMS Client, Server versions to follow

BY ANDY PATRIZIO
AND JOHN DODGE

AUSTIN, Texas—IBM this week will introduce OS/2 Warp, an entry-level product designed to gain a foothold in the home market while serving as bait to lure corporate customers to a fuller version due next year.

IBM's Personal Software Products Division has five versions of OS/2 planned, Wally Casey, director of marketing at PSP, said at a briefing here last week. This release of Warp installs over a current Windows environment.

Sources said the street price of OS/2 Warp, due in stores by the end of this month, will be about $80. Recent buyers of Version 2.1 received coupons for $50 off the next version. IBM is also offer-

See WARP, PAGE 134

OS/2 WARP VS. WINDOWS 95

Function	OS/2 Warp	Windows 95
Multiprocessing	NO*	NO
Multithreading	YES	YES
Runs 16-bit Windows apps	YES	YES
Internet access	YES	YES
CompuServe front end	YES	YES
TCP/IP built-in	YES	YES
Peer-to-peer	NO	YES
NetWare requesters	NO**	YES
Win32 support	WIN32S ONLY	YES
Multitasking	YES	YES

* Available in OS/2 SMP **Available in forthcoming Enterprise version

GROUPWARE

Coming soon to your desktop: Workflow-enabled applications

BY ERICA SCHROEDER

A raft of workflow-enabled applications due in the first half of 1995 could have a major impact at corporate sites looking to revamp their business processes.

Vendors ranging from Lotus Development Corp., Novell Inc., and Microsoft Corp. to tiny PC Docs Inc. and Watermark Software Inc. are integrating support for workflow engines directly into their mainstream applications (see chart, Page 135).

The coming generation of workflow-enabled E-mail, finan-

cial, database, and other applications should help IS managers more easily link users in a workgroup. Because the workflow features are built into the applications, IS shops won't have to work as hard to add workflow capabilities to off-the-shelf software.

"Our current system is a major time-consumer. We could probably save a couple of days" using workflow software, said Jeff Capeci, advanced manufacturing engineer for Norden Sys-

See WORKFLOW, PAGE 135

Lotus and Apple forge enhanced messaging links

BY PAULA ROONEY

Lotus Development Corp. and Apple Computer Inc. are working on tighter bonds between Lotus' Notes groupware package and Macintosh clients in an effort to ease communication among users.

According to sources, the work to strengthen those links is focused on three areas: products coupling Apple Open Collaboration Environment client/server E-mail and groupware packages with Notes; PowerPC versions of Notes 4.0 and cc:Mail; and an upgrade of the Macintosh client for Notes 4.0 that will bring it up to snuff with its Windows sibling.

The two companies are also considering bundling Lotus' Notes Express client with some Power Macintosh systems, said sources from both companies familiar with the talks.

The groupware enhancements should go a long way toward making it easier for IS

See MESSAGING, PAGE 139

Post-PReP sta will unify Pow

RISC IBM could also build Power

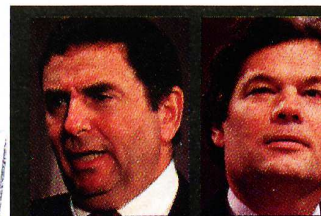BY STEPHEN HOWARD,
MACWEEK STAFF,
AND NEAL BOUDETTE

Where there's smoke, there's fire.

Amid speculation last week that Motorola Inc. might buy—or invest in—Apple Computer Inc., the purveyor of the Macintosh was deep in negotiations with its other PowerPC partner, IBM, to hammer out a unified RISC hardware platform.

IBM, which with Motorola has embraced PReP (PowerPC Reference Platform), and Apple, which has stuck to its own RISC architecture, are back at the bargaining table to discuss not only the common platform, but also the possibility of IBM building

Power Mac
The pair
Comdex
PReP stan
AIM (for A
which would
ences betw

based on th
be availab
said.
Jim Can
vice presid
developmen
at Apple he

Happy anniversary? After three years, IBM and Apple have fallen far short of their goa in some areas, while making progress in others. **Page 12**

Novell pricing gets wake-up call: NT per-

BY ERIC SMALLEY

The per-node pricing model Microsoft Corp. introduced with the release of Windows NT Server 3.5 is forcing Novell Inc. to step up its plans to move to a similar scheme.

"Microsoft's [pricing] is compelling," said Richard King, executive vice president of Novell's NetWare Systems Group, in Provo, Utah. "It'll probably move us forward more rapidly than we had planned."

Novell offers per-node pricing to some larger users through an option to the company's Master License Agreement, but for less than 10,000 nodes, the price is higher than

standard NetWare licenses. Novell is weighing how to bring per-node pricing to the entire product line, King said.

LAN OPERATING SYSTEM PRICE COMPARISON

USERS	5	10	25	50	100	
NT Server 3.5	898.75	1,098.50	1,697.75	2,695.50	4,694.00	1
NetWare 4.02	1,395.00	3,195.00	4,695.00	6,295.00	8,795.00	1
LAN Server	1,045.00	1,295.00	1,980.00	3,045.00	5,295.00	1
VINES	NA	2,995.00	NA	7,995.00	9,995.00	1

List prices, in $. Discounts vary depending on reseller and are not nec
operating systems.
*includes required Symmetric Processing add-on

year. Novell
additive lic
ers can co
censes to fo

In the near term, Novell will add a measure of flexibility to its current pricing with the introduction of NetWare 4.1 late this

even if th
count is ou
dard increm

multimedia PC would increase your productivity? Look no further than VocalChat to help you present a strong argument.

Anyone guilty of leaving yellow sticky notes affixed to other peoples' computers

LABS LAB NOTE

VocalChat 2.0 is an updated and improved version of the already powerful, network-based intercom and voice-messaging software for Windows. Available now in a 10-user license for $239 (site licenses are available), VocalChat

groups, and other popular network operating systems supporting the IPX, NetBIOS, TCP/IP, and NetBEUI protocols.

In addition to VocalChat's expanded network support, Version 2.0 offers a network-based post office in which to store

EASY A

PC Week Labs install a variety of 386 and a NetWare 3.12 serv equipped with Sou cards, which used phone for voice input ers for voice output Tec's CAT portable accommodates a m setup or a telephon We used AT&T Corp.

Installation and g Chat were easy. We w simple, intercom-sty between users (eac speaking and listenin cast voice messages t on our NetWare ser real-time, bidirectio (such as with a teleph ble—due to a limit cards, not of VocalCh

When a user was u

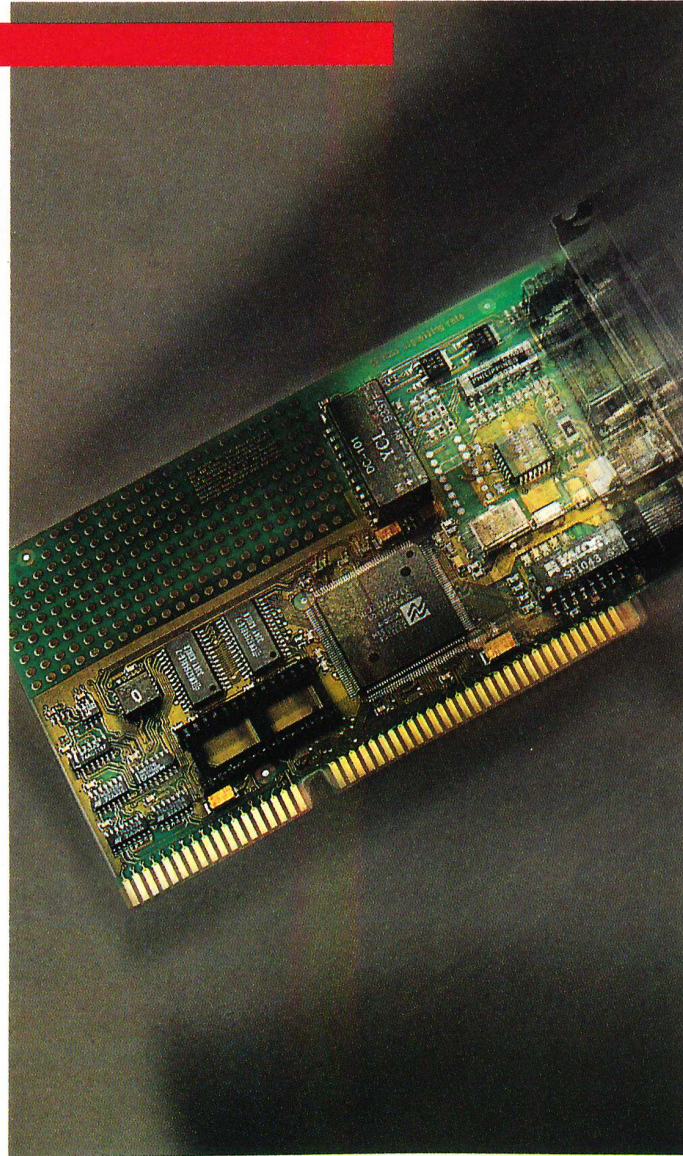# ACCELERATED ETHERNET

ETHERCOM ADAPTERS

Introducing the second generation of EtherCom™ ISA Network Interface Cards (NICs). Incorporating **Parallel Processing** in the adapter increases performance 50% over previous Olicom Ethernet card offerings.

This increase in performance was achieved while still retaining full compatibility with the NE2000 and NE2000+. The adapter also adheres to the IEEE 802.3 Ethernet standards.

The new EtherCom ISA/II card features Olicom's new improved software driver that utilizes a Parallel Processing technique and features SNMP Desktop Agent for full desktop management including drivers for DOS, Windows and OS/2. We also include support for all major network operating systems including Novell Netware, Microsoft LAN Manager, IBM LAN and Windows/Workgroups.

If you run NE2000 or NE2000+ and are ready to shift into high gear, then the EtherCom ISA Network Interface Card is for you.
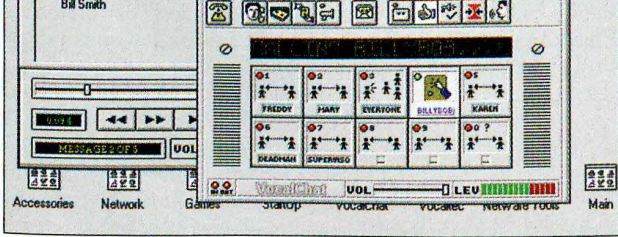
Call Olicom today. 1-800-2-OLICOM.

1-2 PUNCH

VocalChat 2.0's telephone messaging combines the convenience of an answering machine with the efficiency of a PC.

folders on the server typical voice-mail fun

In addition, VocalC messages, using stand trols for recording a sages. We could then sages to multiple user

VocalChat also per tation system. After message (or other WA priate people, their sage as they worked i sor (or any other Wi User-defined hot keys trol over message pla fast forwarding, and Unlike typical dictati ist had no pedals to the desk and no pil strewn about the desk

SOLID WINDOWS

VocalChat makes go dard Windows Help age questions, few as software, were all read

Performance was 20MHz 386SX system Chat application uses kilobytes of RAM, lea minimized (even on shouldn't be a proble

VocalChat messag corded (sampled) as or 11KHz, and are sa WAV format to ensur

yes
It runs with NetWare

olicom
THE NETWORKING COMPANY
1-800-2-OLICOM (265-4266)

ly offered proprietary 13-bit recording at 8KHz, which made noticeably better-sounding vocal recordings in files of approximately the same size as standard 8-bit recordings. With typical sound cards, the difference in perceived quality between 8KHz and 11KHz was not enough to justify the extra disk space or network traffic generated by the higher sample rate.

The VocalChat software goes one step further to minimize its impact on network traffic by using Adaptive Delta Pulse Code Modulation to compress voice when communicating in real time across the network. We noticed slightly less than the 2-1 compression ratio claimed by Vocal-Tec in our testing, but the bottom line is that workgroups and small offices should not incur any noticeable performance hit to their network once users start sending voice messages.

Although VocalChat's overall sound quality wasn't as good as our telephone-based voice mail, testers didn't have any complaints.

If you're looking for a cool multimedia application that helps you see where the future interaction between telephony and personal computing is headed, you may want to check out Vocal-Chat. But until such software can service your outside telephone system, it won't suffice as an adequate replacement product.

Small offices or workgroups lacking a voice-messaging system may find all the voice-mail features they need in VocalChat, and if your office has employees who are still using tape-recorder-style dictation systems, you're a likely benefactor of VocalChat's capabilities.

VocalTec, of Northvale, N.J., can be reached at (201) 768-9400. ☐

ning, one of the main administrative tasks entails monitoring the size of the databases: Pruning databases of old material can free up valuable disk space on the server and improve system performance.

Some of the newer systems, among them Collabra Share and OpenMind, have taken more proactive steps to limit the size of databases by allowing managers to restrict the size of messages or attached files that users can submit.

In addition, most of the systems on the market provide a mechanism for automatically "aging" material and purging it from the database after a period of administrator-defined time.

Indexing exerts one of the biggest impacts on system performance. Indexing, a mechanism that lets users quickly search and retrieve specific items, can consume a lot of processor time and disk space. For instance, Lotus officials estimate that indexing 20M bytes of text can take as long as an hour, depending on document length. In fact, the indexes themselves can eat up a sizable chunk of space: Depending on the amount of information indexed, the index of an 8M-byte file can be nearly 75 percent of the original file size.

To minimize the impact of indexing, administrators should limit the amount of information that is indexed. Rather than indexing the full text, only key words should be indexed, such as title, author, and company or product name.

Compared with OpenMind and Collabra Share, Notes has the most extensive administrative controls over indexing. Administrators can run indexing continuously, on an hourly basis, or on an administrator-chosen schedule. In contrast, OpenMind and Collabra Share expect that indexing will always be operating.

Using these indexing and aging utilities will ensure that the conference database is always being turned over, with fresh information taking the place of older material.

EARLY TOOL AGE

Managers must make sure discussion information is properly stored, archived, and distributed to remote offices and workgroups. But the tools used to administer conferencing systems not only vary considerably but are also in the early stages of evolution.

than simply deleting it.

THE NEED FOR ARCHIV

Unfortunately, conferencing pro to come up with a satisfactory m ing old messages. Old data is c from the system or archived to a and archiving material to a b makes the data unavailable to u for information.

What is needed are links to H cal storage management) system data is automatically moved, or i a server's hard disk to off-line o tape libraries. Long used in ma now moving into L chitectures, HSM te for leaving a shado that automatically res inal file once a user r grated file. Such an be very useful for larg and attached files, j conferencing system ented toward docum ment.

Managing a confe base would be difficu were confined to onl But as context-orien systems find new life as documen and workflow-automation system throughout an organization, req ers to synchronize information t distributed systems.

Lotus Notes and some of its co as OpenMind, solve this problem information between servers, wi tors determining which databases chronized and how often sy should occur. OpenMind has a tailed replication scheme that al to determine which subsections have greater priority in replicatio

SHORTCOMINGS TO ADD

Replication, though powerful, is s evolutionary process. While Note specialized servers that can be de lication services, there is no m dealing with communications fa servers that prevent replication. are mechanisms that automatica alternative communications path between servers.

Notes officials suggested that establish redundant links betwee ers to ensure that material is rep of the links should fail.

Administrators also need the age remote servers easily. Most s them to log on to each server indi form management tasks. Though devices and direct dial-in asynchr make this possible, a central man sole that can monitor all of the be an option.

Desktop conferencing systems ter monitoring functions. Toda server fails, no alarm or alert info of this calamity. Finally, vendors conferencing systems into such agement services as SNMP ☐

WinView

ing independent Web servers at the same time.

None of our users had an IP address of their own, and none of them had TCP/IP software installed on their PCs.

WinView is also a dial-up applications server, which means that remote users can dial in to the network via Citrix's Remote Link software and connect to the Internet.

Because only screen-redraw information is transmitted across the phone line, remote control of an applications server should provide users with better observable performance than if they used a remote IP solution, such as PPP or SLIP. We did not test this scenario to determine if this theory was correct.

A FINE SOLUTION FOR SOME

If you have been considering adding a WinView application server to your network, or you already have one, TCP/IP for WinView is an option you won't want to be without.

For companies that want to provide services

via the Internet, WinView allows the development of customized Windows application-based solutions that look and behave noticeably different from those on typical Web servers. The fact that these services can be accessed by PCs with slow CPUs and limited memory is a terrific bonus.

Although most network administrators would still prefer users to have individual IP addresses to make complete use of Internet- or TCP/IP-based tools, Citrix's solution may suffice in many instances.

For example, the TCP/IP for WinView offering is a solid choice for those who don't want to deal with the hassles of configuring multiple network protocol stacks on client PCs, those who want to provide remote users with Internet connectivity, or those who can't afford to buy TCP/IP software for everyone on the network.

For additional information about WinView, Citrix, of Coral Springs, Fla., can be reached at (800) 437-7503. ☐

Scott Kahn is a project leader at ZD Labs.