

# COMPUTERWORLD

## Net management matures

Distributed enterprisewide support becomes a reality

| LAN management growth                  |        |        |
|--|--------|--------|
|  | 1992   | 1993   |
| Total worldwide installed base (units) | 17,820 | 33,530 |
| PERCENTAGE OF WORLDWIDE INSTALLED BASE |        |        |
| SunConnect SunNet Manager              | 40.7%  | 35.9%  |
| Hewlett-Packard OpenView               | 20.5%  | 22.5%  |
| NetLabs NetLabs Manager                | 8.5%   | 9.0%   |
| Cabletron Spectrum                     | 6.3%   | 7.4%   |
| IBM NetView                            | 1.8%   | 4.1%   |
| Other                                  | 22.2%  | 21.1%  |

Source: International Data Corp., Framingham, Mass.

By Stephen P. Klett Jr.

At long last, networking vendors are starting to make good on stale promises to deliver cost-effective distributed management capabilities.

Today, for example, Cabletron Systems, Inc. in Rochester, N.H., will unveil support for distributed management in the third iteration of its object-oriented enterprise management platform, Spectrum 3.0, which will ship in July. Spectrum uses artificial intelligence to distribute management capabilities across multiple servers throughout the enterprise.

### Rival systems

Last week, Tivoli Systems, Inc. announced that it will deliver similar capabilities in its Tivoli Management Environment Version 2.0, which will ship in the third quarter [CW, April 11].

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## Licensing stymies users

By William Brandel

As software piracy persists at corporate sites, vendors are redoubling their efforts to enforce license compliance. But users trying to comply say they are frustrated by the software community's lack of guidance and paucity of tools.

The recent high-profile bust of a student at MIT in Cambridge, Mass., underscores that software vendors will not tolerate illegal copy-

ing of their products. Piracy costs vendors billions of dollars a year worldwide — almost \$1.6 billion in the U.S. alone, according to the Software Publishers Association in Washington.

The SPA estimates that one-third of all software in the U.S. is pirated, and that 95% of those thefts take place at corporate sites. It contends that less than 5% occur on bulletin boards or in acad-



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### On-line strategies

## IBM pitches single E-mail box for access

By Michael Fitzgerald and Lynda Radosevich

■ A set of services and software soon to be announced by IBM will give business users a single electronic mailbox for accessing incompatible E-mail networks, on-line services and even voice mail and faxes.

Code-named In-Touch, the service is targeted at a range of users, from mobile professionals with personal digital assistants to deskbound workers with dumb terminals. IBM's goal is to give users seamless access to incompatible networks, enabling them to

send messages to disparate E-mail systems, pagers and even cellular phone users. Alternatively, a user could configure In-Touch to poll another person via E-mail, fax, pager or telephone until it is able to connect.

### Heavyweight competition

The service is also expected to become IBM's entry into the brewing battle to provide intelligent agent-driven, on-line personal and business services [CW, Dec. 20, 1993]. It will compete with AT&T's PersonalLink, announced in January, and with a joint AT&T/Lotus Development Corp. service as well as

IBM, page 14

## Hyatt offers IS guns for hire

By Ellis Booker  
CHICAGO

Hyatt Corp. made news four years ago when it became the first major hotelier to move its central reservation system to a Unix platform running a relational database. Last week, the Chicago-based hotel giant again took the lead, spinning off its information systems group to market its systems and services to other hospitality companies.

"This was always something we planned on doing," said John Biggs, previously senior vice

Direct competitors may be reluctant to give Hyatt access to their strategic reservation systems.

president of hotel accounting and administration at Hyatt Hotels Corp. and now chief operating officer of the new division.

Hyatt formed the division, Regency Systems Solutions, Inc., after its negotiations to sell the operation to Houston-based BSG Consulting, Inc. broke off late last year. The RSS system, a customized version of Hyatt's Spirit reservation system, was tested in October and November and went live the first week of January.

Also disclosed last week was the company's Hyatt, page 14



## ARCHITECTURAL DIGRESS

SEE MANAGEMENT PAGE 119.

At a time when IS architecture should be more important than ever, daily pressures make it tougher than ever to craft and carry out distributed computing plans. First Boston's Jim Swanson and others carry on.

CHARLIE SAMUELS

Newspaper

## The Microsoft investigation Users hold key to antitrust battle

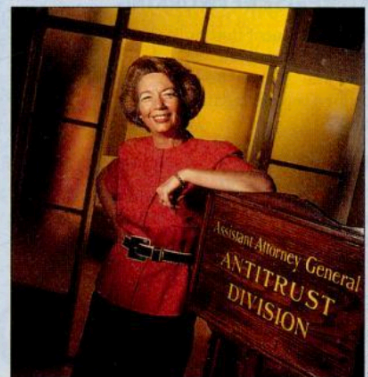
By Mitch Betts, Stuart J. Johnston and Ed Scannell

As the U.S. Department of Justice enters another phase in the effort to chase down antitrust complaints against Microsoft Corp., the key issue that it must prove is whether Microsoft's business practices have harmed PC software buyers.

That point is critical because the U.S. Supreme Court has ruled that antitrust laws were designed to protect competition and consumer interests — not to settle feuds between competitors.

"The government has to show consumer injury," said Susan G. Braden, a Washington attorney who worked on the IBM antitrust

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The Antitrust Division's Anne K. Bingaman's involvement suggests case won't fade away

# New ISDN products show promise

But high cost of upgrading may limit their appeal

By Ellis Booker

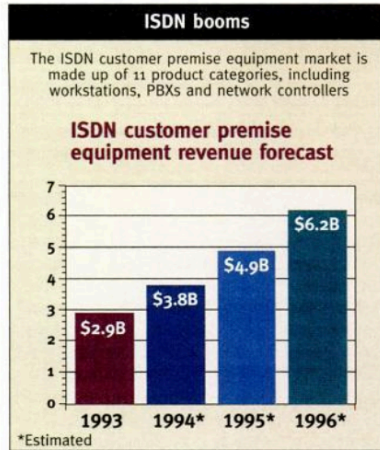
ISDN — for years the butt of jokes and a disappointment to users — is finally poised for real growth, according to two recent reports. But some customers dispute those findings, saying high costs will preclude its adoption for a while.

Last month, The Yankee Group's Communications Planning Service issued a white paper revealing that regional carriers, notably Southwestern Bell and Pacific Bell, are speeding up their Integrated Services Digital Network (ISDN) deployments. Meanwhile, major suppliers such as Intel Corp. and Microsoft Corp. are introducing ISDN-based products or putting the digital public network technology to work in their own operations.

The Yankee Group report predicted that the ISDN market will more than double each year for the next two years and then settle into an annual growth rate of 25% to 50% for three more years.

## Concurring view

Also forecasting significant growth is Frost & Sullivan, Inc. in Mountain View, Calif., which says sales of ISDN equipment to be located on customer premises will more than double, from \$2.9 billion last year to \$8.2 billion in 1997. Leading the overall compound annual growth rate of 28% will be medical and work-at-home end users, who will increase their purchases by 35% and 34%, respectively, the survey revealed.



Frost & Sullivan's report asserts that the ISDN market will focus on four major application and technology areas: telecommuting, LAN interconnectivity, multimedia and videoconferencing.

## Old problems

However, calls to several telecommunications managers around the country did not reveal a groundswell of interest in ISDN. For many managers, the old problems — the cost of upgrading to compatible private branch exchanges (PBX) and end-user equipment and the cost of carrier services — continue to outweigh the technology's benefits over

dedicated and dial-up facilities.

For example, Bob McLean, supervisor of telecommunications at Tower Federal Credit Union in Annapolis Junction, Md., considered an ISDN-based call-accounting package. "We've thought about it, and we've talked to [Bell Atlantic and AT&T] . . . but the benefit wasn't great enough to justify the cost," he said.

Other users said they see some attractive uses of ISDN, even if they are not prepared to pay extra.

"The only use for ISDN that might get me interested is video teleconferencing," said Reuben Sherman, a senior telecommunications analyst at National Life Insurance Co. of Vermont in Montpelier. Frost & Sullivan predicted the market for ISDN-based video systems will grow eight times over four years — from \$165 million in 1993 to \$1.3 billion in 1997.

Sherman uses five channels on a T1 line from the home office to connect, via 56K bit/sec. multidrop leased lines, to eight of the insurance company's largest remote offices. The remaining 40 or so smaller offices and field agents use 10 dial-in lines to reach the company's mainframe.

In fact, ISDN's biggest potential may be for the work-at-home market, not corporate settings, said Steven A. Taylor, president of Distributed Networking Associates, a consultancy in Greensboro, N.C.

"An ISDN Basic Rate Interface, at 64K bit/sec. to 128K bit/sec., may not be fast

enough for a corporate infrastructure if you're talking about LAN internetworking," Taylor said, noting that ISDN was developed for a "host-centric" computing model. "Remember, to send one megabyte of information — say, one Super VGA screen worth of data — we're talking about two minutes at 64K bit/sec."

## Limited features

Even work-at-home and ISDN-based videoconferencing are limited by what Taylor calls ISDN's "still spotty" availability.

But it seems clear that carriers, after taking years of abuse over ISDN, are once again pushing the switched digital technology.

"The carriers are calling us all the time," observed Terri Frost, telecommunications manager at A. W. Chesterton Co., a maker of maintenance products in Stoneham, Mass. But while Chesterton might like ISDN as a way for its sales department to use automatic number identification, the company has not decided whether it should upgrade its PBX to support it.

In fact, The Yankee Group report enthusiastically noted that Pac Bell had committed to installing four Basic Rate Interface ISDN lines into each of 7,400 public schools and libraries. This would "seed" the market for additional users.

"[For] every line that Pac Bell installs for free, it will get five subsequent orders from fee-paying customers," the report said. These added lines will come from private schools, pioneering students and multiline homes, the report said.

# School district goes wireless to link remote schools

By Stephen P. Klett Jr.

California's Desert Sands Unified School District wanted to standardize on a cutting-edge educational application but could not afford to connect its remote sites via traditional T1 or fiber-optic lines. So it turned to an old, familiar technology for its campus connection: microwave radio.

The district has installed seven wireless Ethernet LAN links from Microwave Bypass Systems in Braintree, Mass., and expects to install 15 more by June to connect its 19 remote school sites over a 10-mile radius with its centralized administrative office in Indio, Calif. These links consist of Microwave Bypass' Etherwave LAN Radio, Etherwave Transceiver and LAN-Link 1000 bridge, which provide wireless point-to-point links for roughly \$30,000 per connection.

This will cost the district more than \$500,000 — a hefty figure considering it has a 10-year information systems budget of \$5 million. However, the district estimates the microwave network will cost roughly one-tenth the cost of a fiber-based network and one-third the amount of leased lines, according to Glenn King, computer systems specialist.

Desert Sands' campus network lets each school in the district access the same Unix-based administrative and financial application to perform myriad applications. These include tracking student registration and demographics, attendance, scheduling and grading, purchasing, accounts payable and warehouse information.

The LAN radio can span single hop distances of up to 15 miles at full 10M bit/sec. speeds, and greater distances can be achieved through the use of repeaters, according to Microwave Bypass. Alternative wireless technologies, such as spread spectrum and infrared, are typically limited to distances of 4.3 miles and data transmission rates of roughly 2.5M bit/sec.

"It works real slick — we're getting full Ethernet speeds out of it," King said. "It actually performs better than our existing Ethernet networks."

## Microwave benefits

Microwave Bypass' system is also scalable. For example, the company recently announced a full-duplex bridge, the LAN-Link 1000D, that supports bidirectional 10M bit/sec. Ethernet data transmissions between sites for an aggregate bandwidth of 20M bit/sec.

Well-known in radio circles, microwave technology was initially developed for the military and has been applied to campus networking applications only in the last 10 years or so. While it has a standards and familiarity advantage over competing wireless technologies, it is by no means a household name to network administrators.

Microwave's drawbacks, when com-

pared with infrared and spread spectrum, fall mainly in the area of security. Because it uses standard radio frequencies for data transmission, microwave is more susceptible to "eavesdropping" than its competitors.

Douglas Gold, vice president of strategic development at Microwave Bypass, acknowledged this shortcoming. "We recommend that our customers use encryption, but for most, security isn't a chief concern," he said. However, he added that Microwave Bypass does have several government sites, including NASA and Edwards Air Force Base.

