

# NETWORK WORLD

The Newsweekly of User Networking Strategies

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## Plan for N.Y. ISDN center moves ahead

By Tom Smith  
New Products Editor

ROCHESTER, N.Y. — Two members of the North American ISDN Users' (NIU) Forum are spearheading an effort to open an ISDN technology transfer center here that would be supported by major users and vendors.

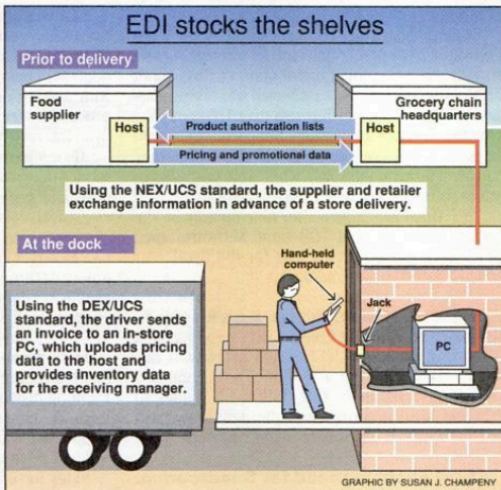
The center, which could be built by January, would aid users and vendors in the development of Integrated Services Digital Network products and applications as well as interoperability testing, said Alan Stewart, secretary of the NIU Forum's Application, Demonstration and Testing (ADT) Working Group.

Stewart and Don Berteau, a top official of the NIU Forum's Users Workshop, are pushing for development of the center.

Success of the effort hinges on the support of some major companies in the Rochester area that have expressed interest in the project but have not yet committed to it.

The grass roots effort grew out of a National Institute of Standards and Technology (NIST) plan unveiled in January to create regional ISDN technology transfer centers for public use. That plan stalled because NIST, sponsor of the NIU Forum, lacks the federal funding to create the centers, Stewart said.

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## Grocers put stock in EDI to streamline deliveries

New electronic data interchange systems offer a wealth of benefits for retailers and suppliers.

By Wayne Eckerson  
Staff Writer

After successful pilot tests last year, several leading grocery chains are ready to roll out EDI systems that dramatically reduce the paperwork, data-entry errors and billing problems associated with direct store deliveries (DSD).

The electronic data interchange systems, based on an emerging grocery industry EDI standard, enable retailers and suppliers to exchange data on

shipments and pricing with greater speed and accuracy.

Most grocery chains allow suppliers of certain perishable or high-volume products to stock shelves without a formal order from the store. DSD accounts for about 25% of all grocery sales but generates a disproportionate amount of paperwork and data-entry activity.

The standards-based EDI systems let stores keep an accurate count of goods delivered in DSDs

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## British Tel snaps up Tymnet, other assets

Will pay \$355m for McDonnell Douglas net unit with E-mail, EDI groups; users voice concern.

By Jim Brown  
Senior Editor

SAN JOSE, Calif. — McDonnell Douglas Corp. last week said it reached a preliminary agreement to sell its Network Systems Co. division, which includes the profitable Tymnet public data network, to British Telecommunications PLC for \$355 million.

Under the agreement, McDonnell Douglas will sell its private network customer base and the technology needed to build Tymnet's line of packet switches, which are called Engines, to British Telecom.

In addition to the Tymnet packet-switching network, British Telecom is acquiring McDonnell Douglas' OnTyme electronic mail network; McDonnell Douglas Payment Systems Co., a credit card authorization and transaction processing operation; EDI\*NET, an electronic data interchange network; and a 25% stake in Network Information Service Co., Ltd., a Japanese value-added network operator.

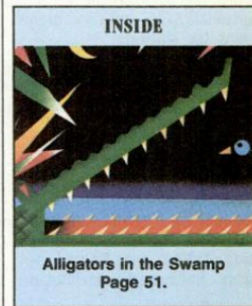
McDonnell Douglas plans to funnel proceeds from the sale back into its aircraft manufacturing operations, which have been strapped for cash, analysts said.

British Telecom said the purchase is in line with its strategy to expand its U.S. operations ("Brit-

ish Telecom to drum up U.S. business," NW, July 24).

Some Tymnet users are apprehensive about how Tymnet and the other businesses will be folded into British Telecom.

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## NetWare 386 wins praise at test sites

By Laura DiDio  
Senior Editor

Two beta users of Novell, Inc.'s NetWare 386 last week gave high marks to the next-generation network operating system, praising its performance and saying the product has worked without a hitch.

The users, Martin Marietta Data Systems Corp. and Oregon State University, said NetWare 386 runs much faster and provides improved security and printing capabilities compared to earlier versions of NetWare. The beta users also said NetWare 386 made it easier to reconfigure the net and reported no problems during several months of extensive testing.

Depending on the application, the users said NetWare 386 was two to four times faster than earlier versions.

"It's a screamer as far as performance goes. NetWare 386 is the fastest on the market, and the installation is a breeze," said

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### NETLINE

**AT&T SHOWS OFF** its Accumaster Integrator net management tool for users. Page 2.

**IBM GETS SET** to unwrap new PBX products, including a new low-end switch, at a briefing this week. Page 2.

**PHASER SYSTEMS** unveils NetWare for MVS and NetWare

for VM, and announces a partnership with IBM. Page 4.

**GTE EMERGES VICTORIOUS** in its hard-fought legal battle with Home Shopping Network. Page 4.

**TIMEPLEX GOBBLES UP** T-3 mux maker Broadband Telesystems. Page 4.

### FEATURE

## Users connecting LANs face complex choices

By John Hunter  
Contributing Editor

Network managers charged with buying routers must be scratching their heads. What used to be a simple exercise has become quite complex due to the variety of products now on the market.

To further complicate things, bridge vendors have become aggressive in the connectivity market

and are now offering products that feature protocol routing and intelligent routing — capabilities that were once solely a router's domain. And many bridge vendors are pricing their products well below routers.

Judging by *Network World's* survey, router, routing bridge and brouter vendors haven't been anywhere

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NEWSPAPER

# AT&T gives users a look at Integrator on the job

Demonstrates internal use of net control system in managing carrier's voice and data networks.

By Paul Desmond  
Senior Writer

MAITLAND, Fla. — AT&T last week gave users a close-up look at its Accumaster Integrator network management tool, which is being beta-tested at the carrier's Corporate Network Management Center (CNMC) here.

AT&T demonstrated Accumaster Integrator working with a variety of net management tools, showing off the product's graphical user interface and correlation feature, which determines the most likely cause of a network problem.

In addition, the carrier discussed efforts to link Accumaster Integrator with net control systems on its IBM and Amdahl Corp. mainframes using recently installed AT&T and Cincom Systems, Inc. software.

AT&T conducted a tour of the CNMC, a central management site for AT&T's internal data and voice networks, for a group attending Cincom's annual Cinter-Act conference in nearby Orlando, Fla.

AT&T and Cincom jointly developed the Systems Network Architecture Management Application (SMA) and Unified Network Management Architecture

(UNMA) Interface Application software, which together give Accumaster Integrator an interface to SNA environments.

Accumaster Integrator is the keystone product for UNMA, which is AT&T's blueprint for managing multivendor networks ("AT&T offers crown jewel in UNMA plan," *NW*, Feb. 6).

Accumaster Integrator uses a Sun Microsystems, Inc. workstation to display a graphical representation of a network. Accumaster Integrator is designed to enable users to monitor and control various vendors' net management products from a single console.

According to Steve Shipp, an AT&T technical briefer, the CNMC has configured Accumaster Integrator to monitor and control a host of AT&T net management systems. They are: the AT&T DataPhone II System Controller, which manages AT&T modems, multiplexers and data service units; the Starkeeper Network Management System for Datakit Virtual Circuit Switches (VCS) and Information System Network (ISN) switches; the Accumaster Trouble Tracker, which manages a variety of private

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# IBM to offer upgrades, new products for 9751 CBX line

Announcements to include new low-end switch.

By Bob Wallace  
Senior Editor

NEW YORK — IBM is expected to announce the finalization of its private branch exchange deal with Siemens AG and a series of new products and enhancements for its 9751 CBX line at a press conference here tomorrow.

IBM is set to introduce switch software that facilitates development of PBX-to-host applications and boosts the performance of the 9751, along with an upgrade program designed to help users migrate to the new package. In addition, according to analysts briefed by IBM, the company will unveil Integrated Services Digital Network Primary Rate Interface support for IBM and Rolm Corp. PBXs.

IBM will also announce modifications for the IBM 9751 CBX, including a new common control — the switch's main CPU and system memory — that make the switch more efficient and easier to administer. The vendor will also roll out a less expensive, low-end version of the IBM 9751 CBX.

IBM stepped back from the

PBX business last December when it announced plans to sell to Siemens the development and manufacturing assets of its Rolm Systems Division and team with the West German firm to market and service Rolm PBXs. Analysts said this week's enhancements to the IBM 9751 CBX are intended to underscore the vendor's commitment to the switch.

"IBM's intention is to show users what they plan to do with the 9751 in the future and to prove that the switch is here to stay," said Richard Kuehn, president of RAK Associates, a consulting firm based in Cleveland.

IBM/Rolm launched the 9751 in October 1987. The original four models ranged in size from 100 to 20,000 lines.

Analysts said IBM has revamped the 9004 software used in the original models of the IBM 9751 PBX. The new 9751 CBX software, dubbed 9005, will let IBM roll out future enhancements to the switch more quickly.

In addition, 9005 will enable IBM and software developers to

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# Briefs

**Analyst reports 3+ Open woes.** There was a flurry of activity in Novell, Inc. stock last week after securities analyst Richard Edwards released a report indicating Novell's NetWare is outperforming 3Com Corp.'s 3+ Open in the marketplace.

Edwards, of Robertson, Stephens & Co., advised investors to buy Novell shares and sell those of 3Com.

Edwards based his recommendations on a nationwide survey of 33 retail stores representing seven national or regional distribution chains. About 75% of the respondents said Novell was taking market share from 3Com, while less than 10% said they saw the reverse happening. Similarly, 63% said sales of Novell's NetWare were stronger than they had been three months ago, while 46% said sales of 3Com software rose over the same period.

"3+ Open is a failure after nine months on the market, and Egghead [Discount Software, Inc., which recently reported a loss for the fiscal year ended June 30] has abandoned it."

**Big Mac attack.** Excelan, Inc.'s Kinetics division, based in Walnut Creek, Calif., is rolling out a token-ring version of its FastPath gateway at this week's Macworld Expo in Boston. The current version of FastPath links AppleTalk work groups to Ethernet local networks, and the new model will provide a similar gateway to token-ring nets.

**ISDN event planned for Supercomm.** A North American ISDN Users (NIU) Forum task force has recommended the group hold its 1991

ISDN interoperability event at Supercomm '91. The object of the event will be to test interoperability among vendors' ISDN services and equipment, according to Alan Stewart, secretary of the NIU Forum's Application, Demonstration and Testing Working Group.

**Microsoft plans E-mail debut.** Microsoft Corp. this week will announce an electronic mail software package that enables users of DOS-based personal computers on local nets to swap E-mail with Apple Computer, Inc. Macintosh users. The product, Intermail, is based on technology acquired from Interactive Network Technology.

Also, Microsoft last week launched an on-line service that provides users with support for applications and systems software. The OnLine Plus service, which costs \$9,500 per year, includes support of system-level networking products such as OS/2 LAN Manager and SQL Server. Microsoft sells those products through OEM channels. The announcement is rekindling rumors that Microsoft is considering selling LAN Manager directly to users.

**MCI shaves long-distance rates.** MCI Communications Corp. lowered rates for its basic 1+ long-distance service last week by an average of 1.5%. The company said the move keeps MCI's rates competitive with new AT&T rates implemented as a result of price cap regulation.

Rates for commercial users will be lowered by 0.4%, and residential and MCI Card rates will drop by 1.9% and 1.0%, respectively.

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## Telecommunications

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## Data Communications

Visa is moving ahead with its \$5 million effort to merge its credit card authorization and automated teller machine networks into one network. **Page 17**

## Local Networking

Sun Microsystems' TOPS division is broadening the market for its TOPS local network after several months of upheaval within the company. **Page 21**

## Management Strategies

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# PRODUCTS & SERVICES

THE LATEST OFFERINGS FROM VENDORS AND CARRIERS

## Worth Noting

**N**ext week: A *Network World* Industry Focus will explain how the airline industry is being shaped by its use of Computerized Reservations Systems.

## First Look

### Mitek adds 5250 pack to OpenConnect

Mitek Systems Corp. has announced that it is adding IBM 5250 terminal-emulation software to its OpenConnect/Telnet Server 3270.

The software will enable Mitek's OpenConnect server to establish 5250 emulation sessions with attached devices, off-loading the terminal-emulation processing from back-end hosts, including IBM System/36s, System/38s and Application System/400s.

With the 5250 support, OpenConnect/Telnet Server will provide simplified keyboard mapping and unified help screens. It will also reduce the number of keystrokes needed to invoke functions.

The server with 5250 emulation supports IBM 3270 terminal emulation. The OpenConnect/Telnet Server 3270 with 5250 terminal-emulation software ranges in price from \$2,185 to \$5,450.

Mitek will provide upgrades free of charge to customers whose servers are under Mitek's maintenance contract.

Mitek Systems Corp., 2033 Chennault Drive, Carrollton, Texas 75006; (214) 490-4090.

### Gateway lets 3+ Mail, Unix E-mail users talk

Management Systems Designers, Inc. recently announced an electronic mail gateway that enables users to send electronic messages between 3Com Corp.'s 3+ Mail system and Unix-based E-mail systems. Called **Promulgate**, the microcomputer-based

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## PCI bolsters X.25 wares with SDLC

By Tom Smith  
New Products Editor

CALABASAS, Calif. — Protocol Computers, Inc. (PCI) recently upgraded its SmartNet X.25 Series software to allow networks to simultaneously run X.25, asynchronous and IBM Synchronous Data Link Control traffic.

SmartNet Release 7.0 software packetizes asynchronous and SDLC traffic so it can run on the same communications line with X.25 data.

The software runs on the company's SmartNet X.25 Series product line, which includes asynchronous packet assembler/disassemblers, asynchronous switching PADS, switches/concentrators, Systems Network Architecture switching PADS and multiprotocol switching PADS.

SmartNet Release 6.0 had supported asynchronous and X.25 traffic, but not SDLC running si-

multaneously with the other two data types.

The product can be used to give asynchronous and SDLC traffic access to a packet-switched, T-1 or other backbone network, or it can perform its own network functions, such as switching and routing, according to Samir Stavro, vice-president of PCI.

Residing in a SmartNet X.25 Series asynchronous PAD attached to an asynchronous device via an RS-232 port, the software reformats asynchronous data into X.25 format for transmission across a packet-switched network.

SmartNet will then place a call over a virtual circuit, with the call going through another SmartNet X.25 asynchronous PAD to the host addressed in the data packet header.

At the receiving end, a SmartNet asynchronous PAD strips the X.25 packet from the data stream and presents the asynchronous data to the host.

Release 7.0 supports SDLC traffic along with X.25. The SmartNet software reformats SDLC into X.25 format for transmission. At the receiving end in

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## Dynatech software uses AI for data compression

By Tom Smith  
New Products Editor

WOODBRIIDGE, Va. — Dynatech Communications, Inc. recently released data compression software using artificial intelligence to compress data by up to 90%.

SofCram/Net Version 4 Release 2 operates independently of network hardware, transmission media and communications protocols because it compresses data before the communications application is run, according to Dale Graver, senior product manager for Dynatech.

Versions of the software run on IBM mainframes and any DOS-based personal computer. SofCram/Net is primarily used for host-to-host and host-to-personal computer transmissions, Graver said. There will also be a version for personal computer-to-personal computer data compression.

The software's artificial intelligence consists of two components: knowledge bases and a decision maker.

Knowledge bases resident in the software are used for compressing various types of data; new knowledge bases can be created as applications crop up. In response to customer demand, for example, Dynatech recently developed a knowledge base for

digitizing X-rays.

The decision maker decides which knowledge base or bases will be used on a given block of data, eliminating memory- and time-intensive tables used in data compression algorithms.

Because they are optimized for a specific type of data, such as binary, data compression algorithms are less adaptive to different data structures.

SofCram/Net boasts average compression of 75% to 80%, with a maximum of 90%, thereby increasing the effective bandwidth of the network, Graver said. By contrast, most compression algorithms compress data by only 35% to 40%.

"This is the first major breakthrough in terms of data compression since the original algorithms were developed," he said.

SofCram/Net captures data from personal computer or host memory in 2,000-byte increments. The decision maker selects the knowledge bases to use for compression. It is more efficient than algorithms because it can employ multiple bases to compress each 2,000-byte block of data.

Data compression algorithms, by contrast, capture an entire file, store it and scan it. They then reassign bit codes, eliminating

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## Microwave Bypass upgrades LAN-Link

At 30% less than the price of its predecessor, Ethernet bridge gains net management features.

By Laura DiDio  
Senior Editor

BRAINTREE, Mass. — Microwave Bypass Systems, Inc. recently introduced an enhanced version of its data-link layer Ethernet bridge that has net management capabilities and costs 30% less than the older model.

The LAN-Link 1000 is capable of sustaining data transmission speeds of 10M bit/sec on Ethernet local networks. It replaces the older LAN-Link Ethernet bridge, which — because it used a slower speed microprocessor — was susceptible to bogging down during peak loads and delivering only partial throughput, according to Microwave Bypass President David Theodore.

The LAN-Link 1000 is a stand-alone unit that contains a Motorola Corp. 68000 microprocessor and on-board software. As many as 512 personal computer and workstation users can tie into the interface over a variety of media, including baseband and broadband cabling, shielded and unshielded twisted-pair wiring, fiber-optic cable and microwave transmitters.

Enhancements to the LAN-Link 1000 over the prior LAN-Link Ethernet bridge include an increase in the clock speed of the microprocessor from 10 MHz to 16 MHz, which provides users with increased throughput during peak network loading times, the company said.

The fast clock speed ensures users that the Ethernet interface can handle heavy data traffic during peak usage hours. With a slower speed chip, the interface could bog down, resulting in error transmissions and requiring data packets to be retransmitted, Theodore said. "By increasing the clock speed to 16 MHz, we're ensuring that the bridge can handle high volumes of data traffic more easily than the older bridge," he added.

The LAN-Link 1000 has also been enhanced to provide four times more software code than the earlier version. This means the bridge will be able to accommodate future software enhancements without sacrificing packet-forwarding performance.

Another new feature of the LAN-Link 1000 is its ability to receive all future software upgrades by dialing in to the supplier and having the upgrades downloaded to it. This will save users the time and trouble of having to ship the

bridge back to the factory to be upgraded, Theodore said.

### Built-in net control

The LAN-Link 1000 also incorporates new network management capabilities that enable network administrators to monitor the status of both local and remote Ethernets from their net management workstations. The net management software provides network administrators with statistics such as the number of packets transmitted and received, faulty network nodes, packet errors and collisions, and the functional status of the bridge, Theodore said.

The LAN-Link 1000 features both fixed and automatic packet filtering, which gives the user the

**T**he LAN-Link 1000 provides four times more software code than the earlier version.



option of assigning network addresses automatically or manually, he said.

In automatic packet-filtering mode, the bridge learns the network addresses on all remote Ethernets. This feature makes it easier for network administrators to manage the networks.

The fixed packet-filtering mode lets network administrators manually add or delete network addresses. Using the fixed filtering mode, net administrators can limit the number of devices that can send packets across the bridge.

This is especially important for users concerned about network security, Theodore said. The fixed packet-filtering mode lets network administrators selectively add or delete network addresses in order to restrict access between devices.

The LAN-Link 1000 is available now and costs \$4,750. That price is 30% less than the \$6,995 tag for the now-obsolete LAN-Link bridge.

For more information, contact Microwave Bypass Systems by writing to 25 Braintree Hill Office Park, Braintree, Mass. 02184, or by calling (617) 843-8260. □