

Tandem Tells Users: Anything Goes

New software package connects a variety of machines, hosts

Tandem Computers Inc. is now in the race to provide users with a philosophers' stone that will turn leaden, incompatible data into easily transferred information.

Tandem's offering is Information Management Technology. IMT is a set of software products that run on Tandem processors and connect a variety of terminals, personal computers, workstations, and facsimile machines to Tandem and non-Tandem hosts through Tandem-based networks.

The product also represents Tandem's ongoing effort to expand beyond the niche market that it helped create: fault-tolerant transaction processing. Though still lucrative, that market has seen companies fail, and Tandem has had new competition from Stratus Computer Inc.

Tandem, Cupertino, Calif., now joins major computer and office suppliers and a host of other firms that analysts say push their medium-scale computers as providers of "anything-to-anything" compatibility and connectivity. Users say they require such machines because of their installed multivendor equipment base.

IMT is based on Transfer, Tandem's 2-year-old software package for infor-

mation movement. The Transfer package has been installed by 90 of Tandem's nearly 1,000 customers, says Kathryn J. Weiner, director of product development.

The first release of software under the IMT rubric comprises five packages. Four run on Tandem processors: PS Mail for electronic mail, PS Text Edit and PS Text Format for editing and formatting, and Faxlink for handling facsimile data. One, PC Link, runs on IBM PCs and compatible personal computers as well as on Tandem's Dynamite PC. All the products will be available in the third quarter.

PS Mail is free for Transfer users who use it from Tandem terminals and PCs using PC Link. PS Mail for 3270 and teletype-terminal users sells for \$2,000 plus \$200 per month. PS Text Edit and Text Format are \$500 plus \$50 per month. PC Link sells for \$495 per IBM PC or compatible and is free on Tandem Dynamite PCs. Faxlink, which includes a hardware controller, sells for \$12,500 plus \$200 per month.

The next step in IMT will be support of industry-standard communications protocols, Tandem says. Within a year, Tandem software will support

IBM's Document Interchange Architecture, Document Communications Architecture, Systems Network Architecture Logical Unit 6.2, and the Institute of Electrical and Electronics Engineers' 802.3 local-area network standard (encompassing Ethernet and AT&T's Starlan).

Within two years, Tandem says it will add support for X.400, the electronic-mail standard proposed by the International Telegraph and Telephone Consultative Committee, for IBM's Disoss information-exchange standard, and for AT&T's Digital Multiplexed Interface standard for PBX-to-mainframe connections.

As soon as possible, Tandem says, Sytek Inc. will supply it with LocalNet LANs for its processors and PC Network hardware compatible with the PC Network that Sytek already makes for IBM.

Jerri Edwards, a Tandem products manager, says the new IMT products are already popular among the dozen users who have tried them. A firm in the Pacific Northwest is putting 5,000 users on electronic mail, she says. And a national retailer will use its existing Tandem system to send price-change information to branch stores.

"We feel IMT complements transaction processing," says Edwards. "The data being gathered is the data customers need to write memos or fill spreadsheets. Customers can use these products as the cornerstone of business processing."

Tandem designed IMT on the basis of customer requests and believes that, while it will appeal primarily to existing Tandem customers, some new-business prospects may decide to buy a Tandem system because of the extra features now available. It doesn't seem likely, company officials say, that anyone will buy a Tandem system just for information transfer.

So agrees analyst Omri Serlin, president of ITOM International, Los Altos, Calif. He says current Tandem users are the best prospects for IMT, adding that the new products give Tandem a serious presence in information handling, "an area where they had little to offer before."

There is no question users are demanding systems that make information transfer between incompatible systems easier. The question is whether they will believe Tandem can be a reliable, full-service supplier of such systems.—Paul E. Schindler Jr.



JERRI EDWARDS AND KATHRYN WEINER OF TANDEM COMPUTERS

Tandem pledges long-term network standards support

By Jeffry Beeler
CW West Coast Bureau

CUPERTINO, Calif. — In addition to introducing five software packages that promote the interchange of documents within its own network [CW June 10], Tandem Computers, Inc. recently disclosed its long-term intention to support a broad assortment of communications standards.

On the local network side, the company promised to support the IEEE

802.3 standard, which would permit Tandem networks to be interconnected with Ethernet-type networks. On the gateway side, the firm promised support of IBM LU6.2 protocol, which would enable Tandem mainframes to link to IBM hosts running IBM's Distributed Office Support System and X.400, the interface for hooking systems into public electronic message nets recommended by the Consultative Committee on Interna-

tional Telephony and Telegraphy.

Tandem also announced the start of internal projects to develop support for IBM's Document Content Architecture and Document Interchange Architecture, which translate the format differences between dissimilar word processors and thus enable them to exchange information.

In addition, the company disclosed a recent agreement that makes it a licensee for AT&T's Digital Multiplexed Interface standard, which enables host processors to be connected to private branch exchanges.

Tandem also announced it had signed licensing agreements with Sytek, Inc., a Mountain View, Calif.-based supplier of broadband local networks. One of the agreements calls for Tandem to support Sytek's protocols for IBM's Personal Computer Network, providing for interconnection of IBM micros with Tandem's mainframes or workstations. Another accord will result in Tandem's support of Sytek's open-architecture Local Net product line.

About half the planned communications support will be made available by the summer of 1985, with the rest slated for readiness sometime within the following year, according to Kathryn Weiner, a Tandem product management director. However, Weiner declined to reveal any additional details about the firm's expect-

ed delivery timetable.

Announcement of Tandem's planned communications support coincided with the christening of the company's Information Management Technology (IMT) strategy, which calls for the use of the vendor's existing facilities to interconnect various incompatible machines and nets.

With the recent introduction of five electronic mail and filing programs, Tandem has already accomplished part of its objective by permitting information to be exchanged among selected multivendor terminals and micros. At present, however, the interconnection scheme applies only to devices that are connected directly to a Tandem net.

The next logical step in the evolution of IMT will be to widen the interconnectivity to ensure that information can be transmitted, not just between users in the same network type but also between different, incompatible networks. Here is where Tandem's plans for supporting a broad range of communications standards enter the picture, according to a company source.

Once support of the 802.3 standard becomes available, for example, a user whose device connects directly to a Tandem network will be able to communicate transparently with someone in an Ethernet or Starnet scheme, Weiner said.

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The city has since dropped its plans for a nuclear power plant, and the property is no longer needed by the electric utility, the city staff said.

entire site at \$3.7 million, based on the original price plus interest over the years.

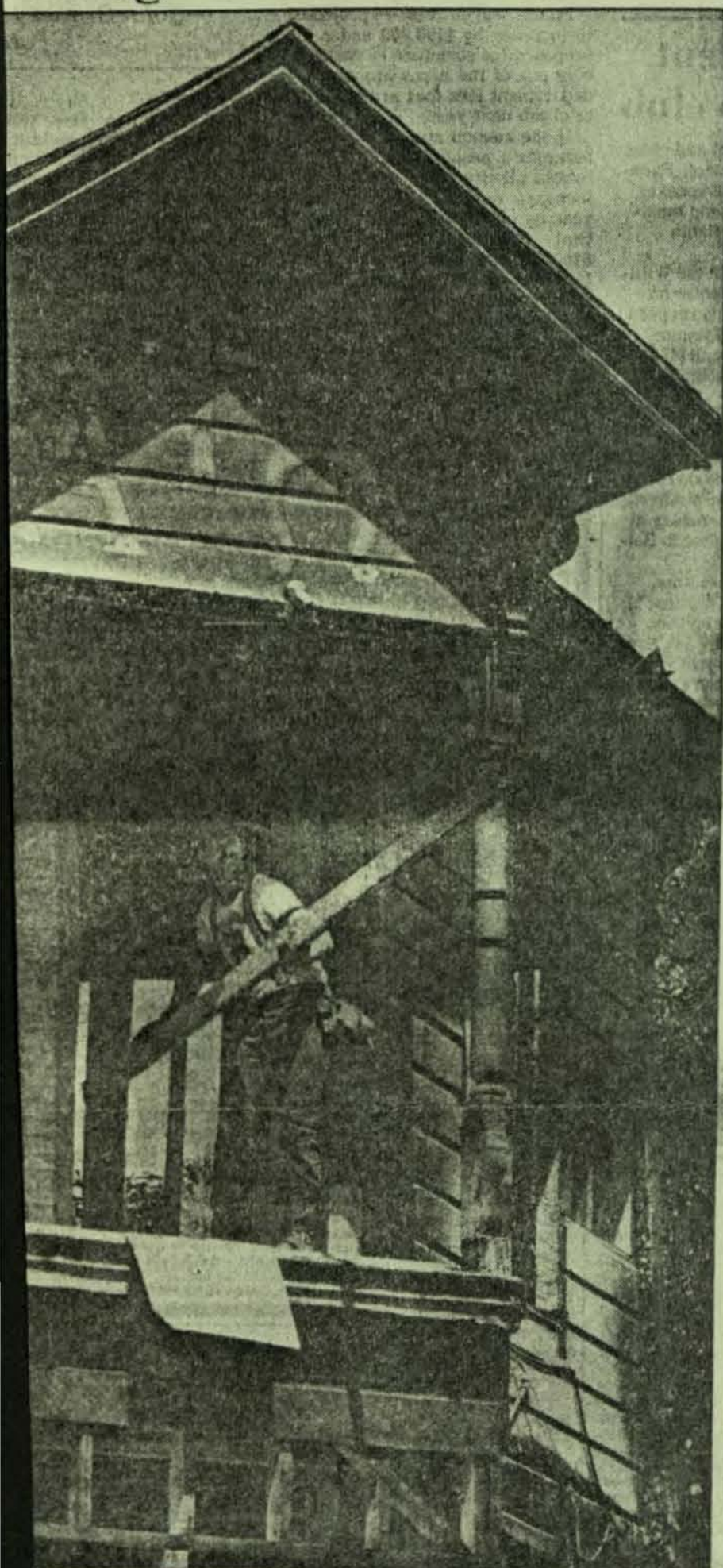
A majority of city council members agreed, approving the transfer last week, 5-2. Council members Auralee Street and

approval to negotiate with unidentified developers for a 300-room hotel on a 5.5-acre piece of the 100-acre property.

Street objected, saying the council should not move forward on such major

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inning



Tom Van Dyke — Mercury News

fraternity house at 11th and San Fernando streets in San Jose. The house was damaged in a March 3 fire in which a San

Jose State University student died. Restoration of the house is expected to cost \$100,000 and will take about 60 days.

Tandem

San Jose Mercury News (morning)

move is

June 4, 1985 p1B

delayed

Coyote Valley plant may be 2 years away

By Chris Kraul

Mercury News Business Writer

Tandem Computers Inc., which was to have led a migration of high technology to the Coyote Valley, has postponed its move by as long as two years.

Tandem was scheduled to begin building a 515,000-square-foot industrial campus in April. The campus was to employ 1,400 to 1,600 people.

David Rynne, Tandem's chief financial officer, cited slower growth in the company's computer markets and protracted development negotiations with the city.

He said Tandem officials expected to have an agreement with the city completed in December, which he said would have allowed the April construction start. Now, he said, "there is no definite date to start construction. It could be one and a half or two years from now."

San Jose Mayor Tom McEnery said that Tandem's decision would delay "certain portions" of Coyote Valley development but that the first phase of the 1,200-acre project — a \$3 million engineering study for construction of streets, sewers, a flood control channel and utilities — would go forward after the city and developers sign a development agreement as expected later this month.

"It would have been very nice if they had put up their buildings, but with companies such as that, internal considerations come first," McEnery said.

Rynne said Tandem's annual revenue growth rate will drop to a 25 to 30 percent increase in fiscal 1985, compared with 35 to 50 percent increases in annual sales in previous years. The company reported sales of \$533 million for the fiscal year ended in September 1984.

Growth in Tandem employees, now totaling 5,300, increased by 7 percent the first quarter this year compared with the 20 percent average growth rate the same period in previous years, Rynne said.

The announcement was the second setback in recent months for development in Coyote Valley, where city officials envision the construction of 13 million square feet of high-quality industrial and corporate headquarters buildings over the next 15 years.

Verbatim Corp., a Sunnyvale-based manufacturer of computer disks, in December killed its plan to build a 300,000-square-foot manufacturing plant in Coyote Valley, where it would have employed as many as 1,200.

Verbatim said higher-than-expected land improvement costs were the decisive factor. With assessments

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e notices

Animal activist speaks in S.J.

Veterinarian attacks abuse in university

Supreme Court to hear drug case involving cop's backyard peeking

Continued from Page 1B

growing marijuana and pleaded guilty in court after the court refused a request to suppress the evidence against him.

"I broke a state law. But they (police) broke a federal law and they should be penalized worse," he said, complaining that the police violated his constitutional right to protection from illegal search and seizure. "The airplane was an invasion of my privacy. It was total misconduct."

Ciraolo is certain the U.S. Supreme Court will agree with California's courts and uphold his reversal,

but the high court leaned the other way last year. In a 6-3 decision, the court reaffirmed the open-fields doctrine by ruling that police in Kentucky and Maine had acted lawfully when they disregarded no-trespassing signs and entered private property to find marijuana plants.

Ciraolo still lives with his family in the same house he had in 1982.

"People tell me I should move out because the police will hassle me," he said. "But they haven't messed with me at all."

Still, Ciraolo hastily adds, all he does in his yard now is sunbathe.

Computer magnate loses bid for retrial

By Michael Dorgan
Mercury News Oakland Bureau

An Oakland judge Monday denied ComputerLand founder William Millard a new trial after standing a verdict that could hit him about \$500 million.

In a one-page ruling, Judge William McCullum of Alameda County Superior Court said that after reviewing court records and listening to the arguments of Millard's attorneys Thursday, he concluded that there was no legal basis for ordering a new trial or reversing the jury's awards.

Two months ago, a jury awarded McCullum's court award of Micro/Vest Corp. 20 percent of the stock in each of Millard's six companies — a percentage Micro/Vest attorneys estimate to be worth as much as \$400 million.

The jury also awarded Micro/Vest \$125 million in punitive damages after finding that Millard had interfered maliciously with Micro/Vest's legal claims against the stock.

ComputerLand President Barbara Millard, who is William Millard's daughter, said in a statement that she and her father would proceed with their appeal. She was confident that the district court's Appeals will agree that the verdict should be overturned.

Micro/Vest's claim on the damages was based on its purchase of a \$250,000 loan from William Millard in 1976.

Tandem delays Coyote Valley move

Continued from Page 1B

estimated at \$182,000 an acre, Verbatim and other landowners complained at the time that they would be paying more than twice the typical assessment fees paid by land developers.

City Public Works Director Kent Dewell said the assessment is appropriate given the high-quality industrial setting landowners agreed to create when industrial uses were approved for the formerly agricultural area. McEnergy

said Coyote Valley developers are shouldering the entire cost of developing the area with minimal use of tax dollars.

Verbatim's financial problems may have played a part in its decision. Before its pullout, Verbatim reported revenue decreases and net losses. In February, the company announced it had agreed to be acquired by Eastman Kodak Co.

Tandem, on the other hand, reported a 40 percent increase in earnings and a 26 percent increase

in sales for the quarter ended Dec. 31 when compared with the same three months the year before that.

Tandem planned to begin construction in April on six buildings. Its distinctive design featured a 10-acre artificial lake. Buildings were to be built on pylons to protect the complex from flooding because Tandem planned to start construction before flood-control improvements.

The Cupertino computer manufacturer would have been the first large high-technology employer moving to Coyote Valley since IBM Corp. built a research center on 1,000 acres it bought in north Coyote Valley in the mid-1970s. Other major landowners in the Coyote Valley area set for development are the Koll Co., Sobrato Development Cos. and Apple Computer Inc.

Animal activist seeks help to end lab abuse

Continued from Page 1B

things are happening at San Jose State University or the University of Santa Clara. A local chapter could find that out, he said.

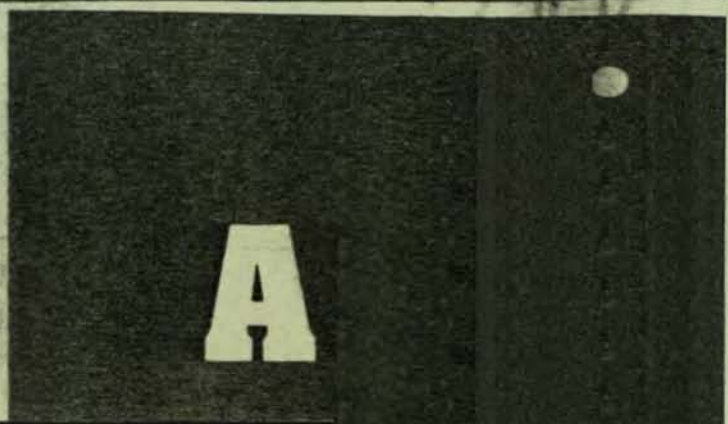
Katz said he had stopped his veterinary practice in 1983 to devote full time to his group after he was told of severe abuse of animals at the University of California at Berkeley. (His findings led him to become a vegetarian as well, he said).

Two subsequent suits were filed and "we have stopped some of the grossest violations under a court threat of a \$500 per day fine if the university assumes such responsibility."

erred at UC-Berkeley was second only to what the Animal Liberation Front found at the University of Pennsylvania.

"The University of California Regents denied to legislators that cruelties were happening," Katz said. "Most of those involved in such research are selfish, greedy and dishonest people — the honest ones are afraid to speak out for fear of being ridiculed."

Katz said that research was being carried on in filthy conditions, that when instruments were dropped on the floor or when hands were covered with dirt from animals, they were not cleaned before



NEWS

Tandem E-mail tools let dissimilar systems swap data

By Jeffry Beeler
CW West Coast Bureau

CUPERTINO, Calif. — Tandem Computers, Inc. today entered a new phase in its long-range product strategy by introducing five electronic mail utilities that reportedly use existing Tandem networks to exchange information among incompatible business machines.

The Tandem communications software utilities are as follows:

■ **PS Mail**, which reportedly allows users of selected models of dissimilar terminals or microcomputers to exchange documents electronically over a Tandem communications network.

■ **PS Text Edit**, which permits

those documents to be written and then edited prior to transmission or following receipt.

■ **PS Text Format**, which aids users in designing and formatting their electronic transmissions.

■ **Faxlink**, which enables images to be sent over a Tandem network, stored in a mainframe, retrieved and then printed out at any CCITT Group III facsimile machine.

■ **PC Link**, which reportedly allows IBM or compatible micros to emulate 3270 or Tandem 6530 terminals and then exchange files with mainframes. A typical application might involve a large retail store chain that needs to download daily price changes from its central office to mi-

cro in the field, according to Jeri Edwards, a Tandem product manager.

The operation of each of the five mainframe-resident or diskette-based software modules depends on Tandem's Transfer, which reportedly moves information, regardless of its source or format, among individuals or applications.

Since Transfer's introduction in 1982, many of its information delivery capabilities have remained largely unused, according to Kathryn Weiner, a Tandem product management director. But the addition of the five information management tools finally permits those capabilities to be tapped, she said.

Tandem's move on the communica-

tions front broadens the selection of business machines that can exchange information over the company's network. In the past, the vendor's own 6530 and Dynamite workstations were the only desktop devices that could send and receive information through Transfer.

With the electronic mail programs, Tandem has expanded the range of Transfer-supported workstations to include TTY-class terminals, 3270s and IBM or compatible personal computers. The products also allow information to be moved over Tandem networks in a variety of forms. Used together, the packages reportedly enable the company's users, for the first time, to send, store and retrieve images either alone or combined with electronic text.

The additions to Tandem's product line mark the debut of the company's Information Management Technology (IMT) strategy, a long-term plan for interconnecting incompatible machines and networks through the firm's existing communications facilities. Ultimately, IMT aims to ensure that Tandem's own networks form the communications backbone for Fortune 1,000 companies, its major target customers, Weiner said.

Scheduled for shipment during the third quarter, the five Tandem electronic mail programs are available for initial license fees ranging from \$495 to \$12,500, with additional monthly charges ranging from \$50 to \$200.

Tandem is headquartered at 19333 Vallico Pkwy., Cupertino, Calif. 95014.

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problem that fits the system."

Still, IBM PC expert systems are finding users. The Chicago office of the accounting company Price Waterhouse has recently purchased KDS to assist some of its accountants in determining what is taxable income for some corporations. "We've even had

people asking about such mundane things as setting up an expert system on how to run a city park," says KDS Corp. president Barbara Wallace.

VAR strategies for the expert system market have already been worked out—in theory. Developers would either be experts or hire experts in a

certain field—say, industrial-chemical analysis or growth-fund stock behavior. They would then purchase an expert-shell package, sit down with the human expert and gradually produce a program that mimicked the expert's thinking when confronted with certain select problems. □

Tandem introduces low-end fault-tolerant system

Mike Seither
Associate Western Editor

Tandem Computers Inc., Cupertino, Calif., the leading manufacturer of fault-tolerant computers, has moved into the low-end of the market with a new, compact system designed for remote transaction processing.

By offering a system that can be installed easily at the department level, the company hopes to garner business, not only from its existing

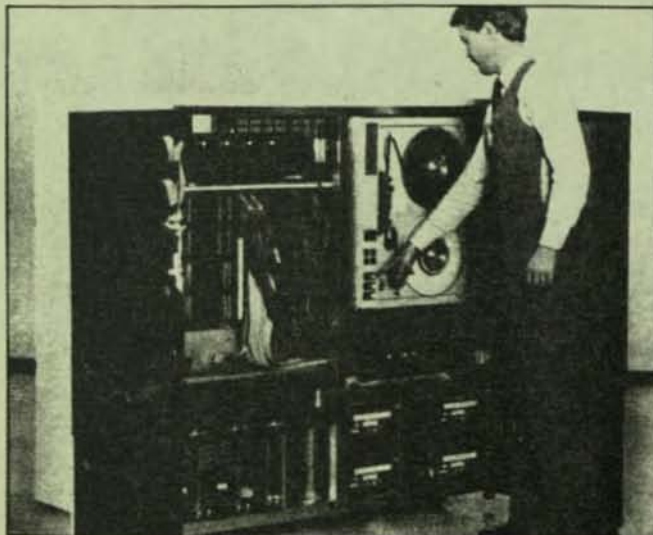
customer base but also from smaller companies that can grow to need bigger Tandem systems.

And to help peddle its new machine—the NonStop EXT—Tandem has instituted a reseller program that will for the first time allow OEMs to sell in the same markets as Tandem's end-user sales force. Tandem officials hope this arrangement will help the company penetrate smaller segments of certain markets, especially retailing and finance, at less than the cost associated

with direct sales.

The EXT, priced at \$120,000 and capable of operating in an office environment rather than in a computer room, is compatible with other Tandem computers and software and can function as part of a large Tandem network, according to the company.

"One of the barriers we've had with our [midrange] NonStop II is that, although it can be priced as low as \$150,000, it still requires a computer room," says Gerald D. Held, Tan-



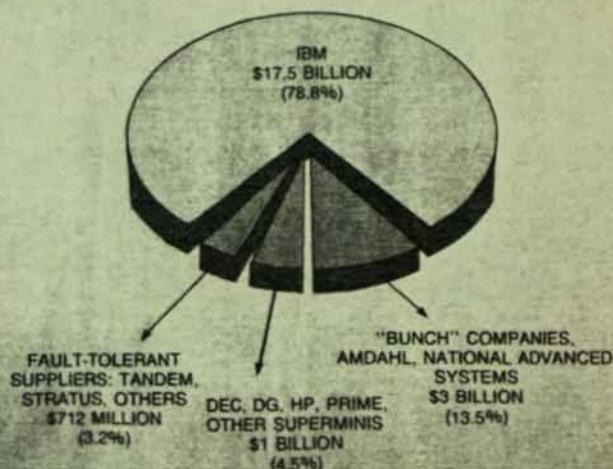
Two Winchester disk drives are standard equipment on the NonStop EXT, but there is room in the cabinet for a total of four, as shown.

Although Tandem is the leading manufacturer of fault-tolerant systems (fiscal year 1984 sales: \$533 million), IBM still controls the lion's share of the transaction-processing market.

THE TRANSACTION-PROCESSING MARKET

(1984 estimations)

TOTAL: \$22.2 BILLION



SOURCE: ITOM INTERNATIONAL CO.

MINI-MICRO WORLD NEWS

dem's director of strategic planning. "Air conditioning, raised floors and special power can add \$50,000 to a system's total cost. The EXT offers customers on-line transaction processing for the cost of only the system itself."

The system comes in a single cabinet that occupies 11.8 square feet of floor space, stands 5.5 feet high and is narrow enough (31 inches) to be wheeled through standard doorways. Processors, disk drives, power supplies, backup batteries and cooling equipment are all inside the cabinet.

Tandem announced the EXT just weeks after IBM Corp. announced System 88, the first fault-tolerant line

of computers to bear Big Blue's logo. The three IBM machines are the offspring of an OEM arrangement between IBM and Stratus Computer Inc. of Marlboro, Mass., Tandem's prime competitor in the fault-tolerant market.

IBM does not say which Stratus computers will make up the System 88 line. They are expected to be available in limited quantities this year. But industry analysts believe they are the low-end Stratus FT200, built with Motorola Inc. MC68000 microprocessors, and the XA400 and XA600 mid- and high-end computers that were introduced last year and use newer 68010 virtual-memory processors.

"It is a misconception that IBM is entering the Tandem marketplace," says Omri Serlin, president of Itom International Co., a Los Altos, Calif., market research company that follows the transaction-processing business. Serlin says it's the other way around. "What's happened is that Tandem has become large enough for IBM to take notice."

Serlin says that IBM had \$17.5 billion in transaction-processing sales in 1984. Tandem's 1984 revenues were \$533 million, up 27 percent from \$418 million in 1983. "That shows you who's leading and who's coming up," says Serlin.

Despite Tandem's healthy growth,

Serlin says the company should be worried about what is happening at the low end. One problem is with Tandem's NonStop I Plus, the original NonStop computer the company refurbishes then resells for as little as \$55,000 after discounts. That machine is not completely compatible with the NonStop II (\$180,000) or the top-of-the-line NonStop TXP (\$300,000). Furthermore, the NonStop I Plus won't run a critical program—SNAX. That's Tandem's interface to IBM's Systems Network Architecture (SNA).

Analyst Peter Lowber of the Yankee Group, a Boston market research outfit, says that more than half of Tandem's customers use the fault-tolerant machines as a front end to IBM database machines for transaction processing.

Lowber says the EXT does not constitute a radical move on Tandem's part. "They're simply repackaging the same NonStop architecture and making it easier to install in smaller operational sites. But it's still good for Tandem to become more competitive with Stratus at the low-end."

The EXT architecture combines multiple parallel processors, a dual inter-processor communications bus and shared power supplies to prevent a single malfunction, or component failure, from disrupting operations.

The basic NonStop EXT comes with two processors and 4M bytes of main memory, which can be expanded to 16M bytes; two 8-inch Winchester disk drives with 168M bytes of unformatted capacity (there is room inside the cabinet for another pair of identical drives); a diagnostic service and operations processor; battery backup to protect the contents of main memory for an hour; a tape drive and controller; synchronous and asynchronous controllers; and a Tandem 6530 terminal.

The EXT comes with three Tandem software packages: the Guardian operating system, Encompass for relational database management and Expand for networking.

Tandem plans to introduce in August a two-processor expansion chassis with 4M bytes of main memory that will sell for \$100,000. That unit will

have the same disk storage capacity as the EXT unit, 16 powered I/O slots, battery backup and connections to the EXT's inter-processor bus and service and operations processor.

However, Serlin doubts that the expansion unit will catch on with customers. "By the time you add it, the price/performance [ratio] goes to pot. You might as well have put in a standard NonStop II from day one," he says.

Seeks smaller customers

Gerald L. Peterson, Tandem's vice president of product management and international sales and marketing, says the NonStop EXT will appeal more to smaller customers than do the company's other products. Tandem's NonStop II and TXP are now used by large banks, stock exchanges, financial institutions, department store chains, oil companies and automobile manufacturers.

"In banking, for instance, we see the EXT opening up a second tier of business in medium-size institutions," Peterson says. "Today we sell to the top 100 banks. The EXT will get us into the next lower level of 200 or 300 banks."

A key part of Tandem's strategy in reaching that lower tier is the company's new reseller program, which will be restricted to EXT sales only.

Under that program, Tandem will work with selected resellers who will be allowed to sell in such markets as communications, manufacturing, retailing and banking, areas now served exclusively by Tandem sales personnel.

"This will be a new channel of distribution that will allow us to get at those markets we haven't been geared up for," says Peterson. But he emphasizes that Tandem will open up the program to only a few OEMs. "We want to feel

comfortable with the solution they are offering," Peterson says, adding that Tandem will continue its present OEM program that allows resellers to market NonStop II and TXP computers in specialized markets not served by Tandem sales personnel.

Tandem faces tough job

Analyst Serlin believes that the EXT will further Tandem's strategy of cultivating "annuity accounts" by getting customers to network in a small way and grow into large systems. "They've landed some big accounts over the last couple of years that can use small remote nodes in their networks," says Serlin. "The EXT was motivated by the demands of large customers."

But Serlin and other observers say Tandem may have its work cut out for it in the transaction-processing market.

"Now that IBM has a fault-tolerant machine, it will have a negative impact on Tandem," says Serlin. "People who might have liked Stratus in the past but passed them up because of corporate credibility may look twice now that the same equipment has the IBM logo."

Exactly how similar that equipment is, IBM won't say, except to point out that some hardware and software enhancements have been made to the Stratus computers.

"Since Stratus is a competitor, both as a manufacturer and an OEM supplier, we don't want to make a point-by-point comparison of the machines," says Paul Neumann, a spokesman for IBM's Information Systems Group in Rye Brook, N.Y.

Strategic planner Held of Tandem doesn't discount the IBM threat. "We consider IBM a competitor in 99 out of 100 deals," he says. "But the System 88 is an old product. We've been competing with it in the marketplace for a couple of years." □

EPSON BUILDS PRINTER FACTORY IN CHINA

Reflecting China's new policy of opening the country to foreign capital, Epson Corp., Hirooka, Japan, is building a \$15 million factory in the Shenzhen Special Economic Zone near Hong Kong. The plant, one of the first wholly owned enterprises permitted in the zone, will be used for manufacturing printer mechanisms. The initial production capacity will begin in July, and production capacity will be 50,000 mechanisms.

NEWS

ors buy g shares

Chairman Clive Richards: "We're not going to market share at the expense of margin. You can't increase profits by 100% every year, our record so far is impressive by any standards." It has been difficult to manage MBS's growth, admits Richards, but both he and the company draw upon their experience of building a business, now owned by EMI.

In addition to its microcomputer business, MBS's main made a deal with EMI to distribute its PC software. This underlines MBS's position as the largest UK distributor, says Richards.

MBS offers training, software support and consultancy, and also provides rental and leasing facilities and turnkey systems for minis and micros.

Managing director Mike Brooke says MBS "is in a totally different league" to the high street traders like Computerland. "We're very much in the business of value-added services. MBS wants the corporate sale to provide those other services."

The company has a network of 27 divisions. Five of those were added last year, including a joint venture with Manufacturing Management



BROOKE... "We're in value-added services."

Systems in Ireland, and a Norwegian subsidiary. However, Richards stresses that less than 25% of MBS's growth is caused by acquisition.

The Norwegian operation provides MBS with an outlet

into Europe. But Richards says: "We'll need to do some corporate planning before taking the irrevocable step" of retailing in Europe, "because if you don't get it right and you withdraw, you're a failure."

June 27, 1985 Tandem P14 plans joint attack on UK brokers

US fault tolerant computer maker Tandem, already a big noise in the City of London, has formed a marketing alliance with two software companies to attack the deregulated UK securities market. It has already won its first order from a UK stockbroker.

The venture is with Denver-based Securities Industry Software Corporation (Sisc) and Admiral Computing of Camberley which will modify its products for the UK environment.

Sisc president Bill Simpson says: "The fiercely competitive environment that deregulation will encourage is forcing UK brokers to look to new technology to help them keep one step ahead."

Leading broker Hoare-Govett has ordered four Tandem processors worth over £1 million. They will form the basis of an integrated market-making, dealing and settlement system.

Tandem is putting a similar system into the New York office of Security Pacific Bank, which holds 29.9% of Hoare-Govett.

At the moment Hoare-Govett uses DEC kit and National Westminster Bank's bureau Centre-file.

Brave EDP makes for USM

by Angeli Mehta

Sheffield-based systems house Electronic Data Processing (EDP) is proving itself a brave company by coming to the Unlisted Securities Market soon. The move follows record interim figures.

EDP specialises in microcomputers running the Pick operating system, and distributes Applied Digital

Data Systems' (Addis) Mentor machines.

Charles Batten, of Broker L. Messel, which will be handling the share placing, says he hopes that "market institutions will view the company as it stands."

EDP is a unique animal; the Pick operating system is rather out of the mainstream.

EDP, which started life as

a bureau, saw profits leap 221% to £330,000 on turnover up 25% to £3 million last year.

This year's pre-tax interim profits are £310,000 on £2.1 million turnover.

EDP's main markets are local government and the health service sector.

Since January of this year, it has been manufacturing the Mentor 2500 minicomputer.

COMPANY BRIEFS

City institutions have invested £600,000 in UK business systems house Financial and Corporate Modelling Consultants for a 20% stake in the company. The investors are pension fund clients of Rowan Investment Managers.

The Wall Street Journal reports that Control Data's efforts to sell its Commercial Credit unit to Security Pacific Bank fell through because the asking price - near the organisation's 840 million book value - was too high. It

ware development division of Denmark's Christian Rosing for £325,000.

Norbain Electronics, the Reading-based group quoted on the Unlisted Securities Market (USM), has formed a new research and development subsidiary, Norbain Technology. And Norbain's founder, John Nicol, has taken the chair of venture capital organisation Technology Management. He assumes control of its software investment unit.

SHARES TABLE

The shares table, which is specially compiled for Computer Weekly, shows selected computer companies that reflect the state of the computer industry.

Previous published index 145.38

27/6/85				Index 145.38				Change -8.81							
Pence		London Stock Exchange		Pence		Pence		London Stock Exchange		Pence					
1985		Stock		Price		Change		1985		Stock		Price		Change	
High	Low			High	Low			High	Low			High	Low		
276	145	ACT	145	-10	152	110	Radio & Music	110	-3	170	125	175	125	-3	
425	310	Adamic Comp	340	+30	180	175	Sherwood	175	-3	245	175	175	175	-25	
283	145 1/2	British Telecom	176	-6	245	175	Synapse	175	-25	115	80	77	80	-3	
595	450	Cable & Wireless	540	+13	330	375	Tech for Bus	410	-50	22	25	22	25	-2	
385	300	Compac	223	-32	530	375	Telecomputing	410	-50						
297	238	Case	242	+4	77	80	Tradex	75	-2						
480	380	DIPCE	380	-30	715	80	Zapal Dyn	28	-1						
185	152	Dataserv	185	-	330	375									
187	254	Estel	245	+12	77	80									
178	135	Ferranti	135	+6	22	25									
218	168	SEC	168	-4											
36	26	Kalamazoo	26	-1											
215	170	Kode	216	-											
385	227	Logica	227	-5	170	125 1/2	Adm Sys	150	-15						
380	278	Marmec	276	-2	151 1/2	42 1/2	Beasdale	42 1/2	-3						
226	117	Micro Bull	117	-	226	180	Tadpole	200	-						
380	240	Micro Focus	245	-15											
275	180	Microgen	210	+20											
275	180	Microgen	210	+20											

market
reception
opportunities for its

OFFICE INFORMATION SYSTEMS

File: Companies
C-ZZZ-249.1
Date: June 26, 1985

Title: Tandem Announces Information Management Strategy

Summary: Tandem's recently announced Information Management Technology strategy features multivendor compatibility and connectivity using Tandem networks as network vehicles.

Tandem Software Utilities

PS MAIL: (Professional Support Electronic Mail System): Supports Tandem 653X and Dynamite workstations, IBM 327X and asynchronous workstations, and IBM PCs as well as compatibles. Messages can be of any length and either image- or text-based.

FAXLINK: Can use Tandem network, running over leased lines, sending facsimile (fax) messages over leased telephone lines. Fax messages can be "packaged" with text messages using PS MAIL. Uses OCR "mark sense" form or PS MAIL to address to fax recipient. Also acts as a remote printer for text documents; format is switched from ASCII to fax code and printed at another location. Uses CCITT Group III fax machine, which is not included in the price.

PS TEXT EDIT (TEDIT): Supports IBM 327X, Tandem 6520 and 653X terminals, and Tandem's DYNAMITE workstations. Uses function keys. Two windows available.

PS TEXT FORMAT: Can be used with TEDIT or with other Tandem editors. For designing page layouts, selecting fonts and for storing customized layouts.

PC LINK: Allows IBM and compatible PCs to have online access to data integration through emulating Tandem 6530 or 327X terminals. Consists of four software utilities: EM 6530PC for emulating a 6530; IXF/PC to transfer files between Tandem host and PC; PCFORMAT to convert files from the Tandem distributed database management system, ENCOMPASS, into Data Interface Format (DIF), Symbolic Link Format (SYLK), BASIC or ASCII formats; and EM3270 to access IBM 3270 host applications.

Delivery is 3Q85 for all five utilities.

Pricing on Tandem Products

	License Fee	Monthly Charge
PC MAIL	\$1K-2K*	\$100-200
FAXLINK	\$12,500**	\$100-200
PC LINK	\$495/PC***	—
PS TEXT EDIT	\$375-500	\$50
PS TEXT FORMAT	\$375-500	\$50

* Free to TRANSFER users with Tandem workstations and IBM PC's using PC LINK.

** Hardware controller and software. Fax machine not included.

*** Free for DYNAMITE workstation.

Tandem Computers (Cupertino, Calif.) has historically offered a line of fault-tolerant computer systems for the online transaction processing (OLTP) market. In an attempt to convince users to use Tandem networks to manage and move information throughout their organizations, Tandem recently announced a long-term strategy, dubbed Information Management Technology (IMT), to provide connectivity between incompatible systems through communications and networking products. IMT will eventually include interfaces to IBM's DIA/DCA, DISOSS, LU6.2, Ethernet and the X.400 electronic mail protocol. IMT is intended to facilitate rapid, easy access to information and resources located anywhere on a given Tandem network, regardless of which vendor's equipment is attached. The first products released concentrate on connectivity at the workstation level and are but the first step in what we anticipate to be a two- to three-year product rollout; follow-on announcements will go beyond the workstation to enhance Tandem's minicomputer and mainframe compatibility options. The IMT products will initially sell into Tandem's existing installed base. In the future, we would expect Tandem to penetrate new accounts, but currently the company has neither the sales nor the support resources to service additional customers beyond an average of 10 per month.

The first products announced in support of IMT consist of five software packages, with a focus on electronic mail (see left). They are designed to facilitate the sharing of various types of information among Tandem network users. These software packages represent Tandem's attempt to convince its customers to use the TRANSFER "information delivery system" software, designed to move information between users or application programs without regard to the format (text, data, image) or the source of the information. Although TRANSFER has been available since 1983, users until now have had to write their own interfaces to work with it, and to date, only 90 of Tandem's 1,000 customers have installed TRANSFER. These five products should allow more uniform, transparent access to utilities and

7/19/85

information resident anywhere on a given Tandem network, as well as the ability to integrate non-Tandem workstations. (Although workstation compatibility options were available previously, these products will increase the level of compatibility.)

The five packages represent a departure from the traditional data processing orientation of Tandem, and an approach to awareness of ease-of-use factors as well as the ubiquitous presence of the IBM PC. One advantage that Tandem has over its non-fault-tolerant competitors is its ability to guarantee delivery of electronic mail anywhere on the network.

The most unique product of the five is FAXLINK, as it allows for image-based documents to be included in electronic mail "packets" with text- and data-based documents. This shows an early awareness on Tandem's part of the importance of image-based information in an office environment. However, while images can be stored online for later delivery, still lacking is the true integration of image into text and data-based documents (i.e., the different data types cannot be combined in one document).

Most important in the IMT strategy are the products yet to come, as the first series of products provide only the rudiments of "anything-to-anything" connectivity. In 1986 Tandem will provide interfaces to industry standard communications protocols, including AT&T's Starlan, the IBM PC Network (through an agreement with Sytek) and Ethernet/Cheapernet. This will be done through a controller on the Tandem network that will be able to link any one of these network types. Also due in 1986 is a gateway to IBM's DIA/DCA, allowing for document interchange between Tandem and non-Tandem systems. This is being through a license agreement with Softswitch (see Research Note K-945-199, 12/12/84 for information on Softswitch). Tandem also is a licensee of AT&T's Digital Multiplexed Interface (DMI) PBX interface, which within two years will be another network vehicle. Tandem also intends to provide DISOSS and X.400 interfaces, but these are not yet in development, with the exception of the LU6.2 portion of DISOSS, providing peer-to-peer communications for IBM hosts running DISOSS (although no delivery dates have been announced). Both are very important products, DISOSS being the long-term strategic product for IBM, and X.400 attempting to be the international standard for public electronic systems in coming years.

on Dance By Burroughs, Sperry

ited by the extent to which the product lines could be integrated, the analysts say. The different operating systems used by Burroughs and Sperry equipment make it unlikely that the two product lines could be thoroughly integrated in the future. It will be extremely difficult, not impossible, to merge the product lines, especially on the mainframe end," Milunovich said. "Burroughs has two options: get the Sperry base to migrate, in which case they lose a lot of it to IBM, or keep two separate lines." Podrasky adds, "It would require a lot of hard work to implement the potential savings. Initially, there would be a lot of duplicate people and functions." While the announcement was a rumor, Podrasky had said, it would be difficult to combine customer bases and it would take a long, long time to integrate the product lines. "I'm sure they would achieve any savings from it."

Integration Is Tough

Crotty said that both companies are well aware that attempts within the computer industry to "rationalize incompatible product lines" have typically been unsuccessful. He cited examples Honeywell's acquisition of General Electric's computer operation and Sperry's acquisition of RCA's computer line. "In the latter," he said, "almost no one thought Sperry to its knees." A second possible reason for Burroughs' interest in Sperry may be a desire to increase penetration of markets where Sperry is strong. Burroughs is strong on the low end of the product line and Sperry

is strong in larger systems used by industry, government and engineering," Podrasky said. "There's good overlap."

A merger "could make them stronger competition in bidding. It could give them a better chance at competing in an IBM world," Podrasky said. He noted another positive overlap as Sperry's strength in terminals alongside Burroughs' strength in disk drives.

Analysts did not appear surprised by Sperry's interest in negotiating with Burroughs.

"They're shopping themselves around. Their management must not believe its own brave plans," Crotty said. Asked what each party stands to gain from the deal Crotty commented, "Burroughs gets into the military and defense markets," and Sperry gets its buyer.

Both Report Layoffs

In addition to the acquisition rumor, both Burroughs and Sperry were in the news last week with announcements of layoffs.

Burroughs said it will close two Florida facilities: a plant in Coral Springs, which manufactures encoding and imaging equipment such as laser printers and low-speed check sorters, and an engineering and development facility in Orlando.

The closings are "part of an ongoing program of consolidation of facilities, started several years ago when it was determined that economies of scale could be realized from centralization," according to Burroughs' spokesman Irving Geller.

The majority of the 580 employees in Coral Springs facility and the 150 in Orlando will be dismissed, Geller said, though some will be transferred to other facilities.

Most of the work which had been done at the two facilities will be moved to a Burroughs location in Plymouth, Mich., while some will be moved to another Burroughs site in Livingston, Scotland.

Analyst Podrasky noted that moving some operations to Europe is probably attractive to Burroughs because of lower labor costs there.

Sperry announced layoffs of 110 production employees at its Jackson, Minn., printed circuit board plant and of 175 fabrication employees at its semiconductor facility in Eagan, Minn. Neither plant will be shut down and the layoffs will leave 800 workers on the job in Jackson and a work force of more than 1,100 in Eagan.

Employees affected by the layoff have been given two weeks' notice and will continue to work throughout that period, a company spokesman said.

Sperry: We're At Capacity

Both Sperry layoffs were due, not to the general industry slowdown, but to a ramping-up of the plants, particularly the one in Jackson, for production of its newest 11/90 computer, according to the spokesman. The Jackson facility is a feeder plant for the Series 1100 computers made at Roseville, Minn., where its boards are put into the systems.

As an illustration, the reduction in the Jackson work force eliminates the third-shift operation. "The production facility has operated at peak capacity since January 1984," the spokesman said. "The addition of the third shift at that time was necessary to prepare for the initial delivery of Sperry's large-scale 11/90 computer system."

The extra shift was required because the 11/90 system was "several months late in delivery due to final testing." "Our quality people would not release the product," the spokesman said. "That quality hold forced backlogs of work to be done. Once you get the green light from quality that the product is ready, then you have a surge in requirement for the system that has been going on all the time."

The spokesman said that, as of the end of fiscal 1985 (March 31), Sperry had shipped more than 90 units of the 11/90 system, which is the largest computer built by Sperry. Bookings for the 11/90 since the end of fiscal '85 total almost 200 systems, he added.

Eagan was also affected by the surge requirement, as it provides semiconductors for Sperry-wide requirements, according to the spokesman.

Statistics for other Series 1100 computers show that, at the end of fiscal 1985, Sperry had sold more than 2,400 of the series, including the 11/60, 11/70, 11/90 and, since the end of fiscal '85, more than 1,900 of 11/60 and 11/70s.

"We have reached the capacity (with the layoffs) that we need to satisfy the very vigorous demand for our new system and no longer need that extra capacity. When a plant is running three shifts a day, 24 hours a day, that's not normal," he said.

Tandem Has 5 Link Pkgs.

By JULI CORTINO

MISWeek
6/19/85

CUPERTINO, Calif.—Tandem Computers has moved a step closer to "vendor compatibility" in the workplace with the introduction of five Information Management Technology (IMT) products.

The new products—"PS Mail," "PS Text Edit," "PS Text Format," "PC Link," and "Fax-Link"—link users of a variety of incompatible workstations, personal computers, terminals, local area networks and facsimile devices to Tandem's systems.

Tandem, a manufacturer of on-line transaction processors, is one of the few vendors that directly challenge International Business Machines Corp. in the marketplace. Other manufacturers have opted for peaceful coexistence or a niche portion of a particular market.

Kathryn Weiner, director of IMT product management, said Tandem had been "thinking about this type of strategy for about two years." Weiner said the capabilities provided by the new products were requested in meetings with Tandem's top 30 customers.

As part of the IMT strategy, Tandem said it has development projects in the works that will support IEEE 802.3 local area networking standards, Ethernet and AT&T's Starlan.

Tandem also signed original equipment manufacturer (OEM) and licensing agreements with Sytek Inc. Under the agreement, Tandem will use Sytek's broadband technology to link workstations and terminals to host computers.

Specifically, Tandem will use Sytek's technology to link IBM's PC Network and Sytek's LocalNet to Tandem systems. LocalNet provides terminal-to-host communications.

Tandem's IMT products let users of IBM Personal Computers and compatibles, IBM 327x and TTY terminals and workstations and Group III CCITT facsimile devices move data, text or graphics through a Tandem network as a single package.

The key to Tandem's strategy is a software product called Transfer, which about one-tenth of the company's users now have installed. Transfer, introduced in 1983, delivers information to any device on the network, notwithstanding the source of the information or the form it comes in.

Tandem's new products, which are designed to make the company's fault-tolerant processors more attractive as general purpose office automation systems, will be available in the third quarter of this year.

PS Mail is free to Transfer licensees for use on Tandem terminals and workstations, and for IBM PCs. PS Mail for 3270 and TTY terminals has a license fee of \$1,000 or \$2,000, depending on what Tandem system it will be used with. A monthly license fee of \$100 or \$200, depending upon the system, will also be levied. PS Mail is Tandem's electronic mail.

SEE TANDEM, PAGE 12

Unit Taken Off Block

last week the auction may try of the unit. ago that it operates. rial lender supply. asing ser- least \$800

Price said e "risks of acceptable to the coming. Comes of con-

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intention to focus attention on its computer operations rather than its financial operations.

Analyst George Podrasky of Duff and Phelps said that Control Data was in the difficult position of needing to get at least book value for Commercial Credit, which is \$800 million, in order to prevent taking a loss on the sale. He said the figure translates into 15 times the unit's estimated 1985 earnings, while Standard and Poor's 500 companies are typically traded at 10 times earnings.

"In the long term, they might put Commercial Credit back on the market, after several years of restructuring and improvement," Podrasky said.

Commercial Credit was more profitable than Control Data's computer operations last year, but compared to other financial company operations its profitability has been low. Control Data's Price said that recent efforts to streamline Commercial Credit's operations have already substantially improved profitability.

Price added that, during the process of trying to sell Commercial Credit, possibilities for further restructuring have been identified.

Commented Morrison, "In going through the exercise of trying to sell Commercial Credit, they (Control Data) learned a great deal about what its potential is. They may have found some pieces they want to hang onto."

Morrison and Podrasky agreed that the six-month effort to sell Commercial Credit had a disruptive effect on the unit's operations and that further disruption would have occurred had sale efforts continued at this time.

for the office marketplace for the International Business Machines Corp. has emerged from the skirmish as the new power behind Apple.

As previously reported in MIS Week, Apple reorganized along manufacturing and marketing lines, instead of along product lines.

Partly due to the upheaval from reorganization, Apple, though already listed on the official exhibitors' roster, will drop out of the National Computer Convention (NCC) July 15-18 in Chicago.

Apple's decision to withdraw, according to an Apple insider involved in events planning, stems from the fact that it is in the midst of restructuring, has no major new products to introduce and is late with its Macintosh file-server.

Apple said its automated Macintosh factory in Fremont, Calif., will become the company's main manufacturing site.

Tandem Has 5 Link Pkgs.

CONTINUED FROM PAGE 8

PS Text Edit and PS Text Format are to be used for editing text and formatting documents.

PS Text Edit has an initial license fee of \$500 or \$375, depending on whether it will be used with Tandem's NonStop II and TXP, or Tandem's new EXT system. A \$50 monthly license fee will be charged.

PC Link, a software package that lets IBM PCs and compatibles communicate with Tandem's computers, is priced at \$495 per IBM PC or compatible. It is free for users of Tandem's Dynamite workstations.

FaxLink, which lets users move printed documents or graphics through a Tandem network using any CCITT group III facsimile machine, is \$12,500 initially. A per-system monthly license fee of \$200 or \$100 will be charged.

Tandem now has projects underway that will let it support IBM's Document Interchange Architecture/Document Content Architecture office automation standards and LU6.2 projects. Tandem also intends to support IBM's DISOSS.

Support for Ethernet and X.400, a message-handling protocol proposed by the CCITT, is also under development.

Tandem offers systems for electronic mail

Computer links electronic mail

By NICK ARNETT

In a significant strategic move, Tandem Computers Inc. of Cupertino last week introduced programs for its computer systems to let customers exchange electronic mail among otherwise incompatible computers, facsimile machines and other electronic devices.

Kathryn Weiner, director of product management for Tandem's Information Management Technology products, said the programs are part of a strategy to let Tandem computer systems translate information among various brands of word processors and local area networks—systems that connect computers at a single site.

Market analyst Aaron Goldberg of International Data Corp.'s Santa Clara office, said the new products would not have a significant direct impact on Tandem's profits, but would indirectly benefit it by making its systems more attractive.

Tandem announced it has signed manufacturing and licensing agreements with Sytek Inc. of Mountain View, which makes International Business Machines Corp.'s personal computer local area network.

Tandem computer systems link large information storage systems. They are frequently used in banking, airline reservation systems and other industries that require networked machines, such as cash registers and automatic teller machines.

Tandem primarily competes with IBM's large computers.

Weiner described the new system as a means for its customers to enjoy the level of electronic communication Tandem has. Nearly all of its 5,400 employees worldwide can send and receive electronic mail within the firm. Tandem officials say the network has been a key to the company's rapid growth.

International Data Corp. analyst Goldberg said the new products help define what customers will expect from large computer systems.

The problem Tandem is addressing—dozens of brands of computers that can't communicate—has plagued businesses ever since computers became small and cheap enough that each department, and later each desk, could have its own.

Tandem has avoided the problem internally by building its network entirely from Tandem equipment. In recent months,



Kathryn Weiner, Tandem's director of product management

Tandem has introduced programs that translate data between its own computers and others.

Weiner said the products were developed during the last year in reaction to customers' suggestions.

She said the customer response to Tandem's solutions has been "overwhelming."

In addition to licensing Sytek's PC Network standards, Tandem has entered into agreements with American Telephone & Telegraph Co. to let the Tandem net-

work connect to its local area networks. Tandem announced it will also support the Ethernet local area network standard, which was created jointly by Xerox and several other leading electronics concerns.

In conjunction with the electronic mail system, Tandem introduced a text editor to create messages.

Licensing fees range from \$12,500 for the facsimile system, which includes some hardware, to as low as \$200 for other packages. There will be an additional monthly fee for the programs.

Federal grand jury indicts 4 people on charges of export conspiracy

By NICK ARNETT

The federal grand jury in San Jose last week handed down indictments against four people, charging them with a conspiracy to illegally export a powerful computer system from Sunnyvale to Czechoslovakia in late 1980 and early 1981.

An official in the U.S. attorney's office in San Jose last week said the indictments are the result of a long-term investigation by the U.S. Commerce Department and Customs Service. He said he could not comment on whether others might be implicated.

Indicted were:

- Marino Pradetto—identified as owner of PBN Electronics of Vaterstetten, West

A summons has been issued for Wolf, who Fisher said shared office space with Fierro and helped locate and do technical evaluations of the computer. Fisher said he did not know Wolf's whereabouts, but said he has been in touch with his attorney.

The three-count indictment charges that Wolf and Fierro negotiated with Pradetto for the sale of a powerful Digital Equipment Corp. VAX computer system for almost \$200,000 in spring, 1980.

On their behalf, International Data Systems of Sunnyvale obtained from the U.S. Department of Commerce, an export license, which stated that the ultimate customer for the computer system was Coles Industries of Haiti, the indictment alleges.

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Tandem In Deal To License Sytek's Broadband LAN

CUPERTINO, CALIF. — Tandem Computers Inc. has become the first company to follow IBM in licensing Sytek Inc.'s broadband local-area-network technology, the same technology used in IBM's PC Network.

Tandem said last week it has signed a multiyear, multi-million-dollar agreement to remarket Mountain View, Calif.-based Sytek's broadband LocalNet/20 and IBM PC Network-compatible communications equipment.

Neither company would disclose financial terms of the agreement.

The Tandem announcements were included in the company's overall local network and computer communications strategy called Information Management Technology.

Tandem said it will offer PC Network-compatible hardware and software for broadband local-area-network configurations.

(Continued on Page 35)

begins to settle down," she said. But two weeks before the reorganization announcement, Apple said it had scrapped its in-house file server project and was looking for an OEM supplier.

When Apple premiered AppleTalk at its annual stockholders meeting in January, a bevy of companies promised to support the network with products of their own. Many of those same companies have slipped in their shipment availability dates, and many others doubt whether it is worth the time and money to develop more AppleTalk products.

Novell Inc., Orem, Utah, al-

Sytek	Local Net interface
Lutzky-Baird	Unix-based file server
Tri-Data	Netway gateway

with its specs," he said.

Roland Bates, president of Tangent Technologies Inc., Cross, Ga., agreed that the organization could spell trouble, at least in terms of people perceive Apple. "I now I'm concerned about public's perception of Apple," said Bates. "The timing,

The Wire:

New Micro-To-Mainframe

The glut of micro-to-mainframe products continued last week, but this time with a different twist. Central Data Business Centers

can be accessed by different personal computers. One-time license fee for the new product will be \$2600; customers can also lease it

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LLIGENT THING ELLIGENT VIDEO.

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s a And the LDP-2000 is more than
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you You can plug it right into your
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purchase it as part of the Sony
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totally-integrated image-processing
system designed specifically for inter-
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P.O. Box 6185,
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Parallel Interface (IEEE488) processes a byte of infor-
mation instead of a bit to allow quick transfer of digital
data from video disc to external computer

With the (RS-232C) serial interface you have excellent
software control over the player and a wide range of
commands, including automatic feedback codes and
player status queries.

Three optional boards can be built in. They permit five
possible player configurations, so you only pay for
what you need.

Rack-mounting kit (Sony RMM-201) provides all the
pieces for easy integration.

Improved audio S/N ratio through the advanced CX™
Noise Reduction System.

Tandem Set To License Sytek's LAN

(Continued from Page 33)
rations of IBM Personal Com-
puters, Tandem Dynamite
workstations and Tandem fault-
tolerant host computers, in-
cluding the TXP and NonStop
systems.

For terminal-to-host com-
munications, Tandem said it
would emphasize Sytek's Local-
Net/20 technology and prod-
ucts to its customer base.

Both the PC Network and
LocalNet/20 equipment will
be available from Tandem
later this year, a spokes-
woman said.

According to Sytek senior
OEM account manager Robert
Lyons, the Tandem agreement
is essential in the company's
drive to add OEM accounts
and to license the PC Net-
work technology.

"With the computer wars
going on, we feel that Tandem
will continue to be hot because
it has selected markets and
offers a full fault-tolerant
line. We think that particular-
ly the PC Network will have
a growing presence in finan-
cial, government and institu-
tional markets. IBM is there
and Tandem is there, too,"
said Lyons.

—Laurel Nelson-Rowe

3rd-Party Cos. Rethink Plans With Apple Net

(Continued from Page 34)
ment, said Baker.

One value-added reseller in
Lincoln, Neb., said Apple's in-
ternal struggles have no bear-
ing on its product line. Health-
Care Communications Inc. sells
a package called DentalMac, a
dental office management pro-
gram that supports AppleTalk.

Jim Schlehuber, marketing
vice-president at HealthCare,
said that the niche market of
health professionals is only in-
terested in getting its commu-
nications and computing needs
met. "The reorganization has
little impact on our market.
Many of these dentists and

cial Products

ng on Corp. value-added reseller, IBS will market EasyTalk as part of a turnkey system, including Ambase, an integrated set of accounting applications from Amcor, running on DEC's line of VAX minicomputers.

According to IBS chief executive William Bird, EasyTalk differs from other natural English data base query systems in that the user does not have to learn a rigid English command syntax to understand how the data is organized in the data base.

The key to IBS' system is meaning-representation technology that came out of Yale University, said Bird. The system has the ability to dynamically deal with requests for information that could reside in different fields on multiple files, he said.

"Other natural-language systems are limited to the number of words that can be understood, and you have to develop your own lexicons to build the applications," said Bird. "It's infinite how many questions you can ask on any subject. Our VAX generated a trillion questions on accounts receivable, and it still wasn't done. If a system is limited to 800 questions and only understands certain key words to generate reports, it's much harder for just anyone to get at the inform

IBS targets it wholesale distributor age configuration 11/730 with thr tions sells for ab said Bird.

—Dan

Verdix Ad For Sun I

(Continued from ment and office s ket, according to

The CCI deal, v proximately \$35 for Verdix to port CCI environment fourth-quarter

said a CCI sp Pricing was not s

"The major des VADS were reac portability," said Zi is structured arou

Computer Systems News June 17, 1985 p33

COMMUN

Local-Area Networks/Modems & M

Tandem Unveils Plan To Support Com Between Its Units & Other Lines

By Kathy Chin

CUPERTINO, CALIF. — Tandem Computers Inc. last week unveiled its Information Management Technology (IMT) strategy, a three-year product plan detailing the company's commitment to support communication between its computers and other vendors' local-area networks, personal computers, terminals and PBXes.

To date, Tandem has signed two OEM licensing agreements, with Sytek Inc. (see story on this page) and AT&T Information Systems Inc., in order to integrate their products into the Tandem network.

"The IMT project came about over a year ago when we asked our 30 top customers what they felt was needed in their office environment," said Kathy Weiner, Tandem director of product management. "From that we sensed that a solution was needed to move information freely between incompatible systems."

The ultimate goal of the IMT scheme is not only to bring as many devices as possible under the Tandem wing but to provide communications products that will tie files and applications together smoothly, regardless of file format.

At the core of the IMT plan is Tandem's Transfer software, an "information delivery system" that carries data from various Tandem equipment. With Transfer, users can send messages and other information to incompatible systems using appropriate interfaces. Until now, users developed their own interfaces to work with Transfer.

(Continued on Page 35)

Appl Reth

By Katl

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An Apple spol it is not yet clea ganization will communications company. "It wi two weeks befo

Tandem Unveils Information Mgmt. Technology Strategy

(Continued from Page 33)

Under Tandem's IMT strategy, the company stated that its upcoming interface products for use with Transfer will support IBM's Document Content Architecture/Document Interchange Architecture (DCA/DIA) protocols and Distributed Office Support Services (DISOSS) software environment via the Logical Unit 6.2 specifications of IBM's Systems Network Architecture (SNA).

Tandem is reportedly co-developing a DISOSS gateway with Softswitch Inc., King of Prussia, Pa. The interface

will provide Tandem Network users access to DISOSS libraries on host mainframes. Softswitch document translation technology enables stand-alone word processors or personal computers to exchange revisable-form documents to and from DISOSS. Such a product will come from Tandem sometime in the next two years, said Weiner.

Tandem announced that within a year it will also provide interfaces to 3Com Corp.'s Ethernet, AT&T's Starlan, and the IBM PC Network. When these products are released, users will

be able to connect different networks to Tandem networks to share information.

To round out its strategy statement, Tandem revealed the recently signed agreements with Sytek and AT&T Information Systems. The AT&T deal makes Tandem a licensee of AT&T's Digital Multiplex Interface (DMI) specification for linking computers to PBXes.

As a licensee, Tandem must pay \$500 for DMI specifications. Tandem will be building a T1 line between Tandem host systems to AT&T-IS PBXes, said Weiner.

Tandem also announced five new software packages, developed for use on the Tandem network. These include: PS Mail electronic mail and filing program; PS Text Edit and PS Text Format for editing and formatting functions; PC Link, a communications link to allow IBM PCs to tap into Tandem distributed networks; and Fax-link, a product that allows users to move images electronically through Tandem systems and facsimile machines.

The five products will be shipped in the third quarter.

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INVESTEXT/COMPUTERS AND OFFICE EQUIPMENT
June 10, 1985

Tandem Computers - Company Report
DREXEL BURNHAM LAMBERT INCORPORATED - Labe, P.
05-07-85 (RN=505292)

TANDEM COMPUTERS (M)
(TNDM - \$20 3/8)

Reducing Estimates Slightly,
Maintain BUY Rating

Rating:	BUY	Shares outstanding:	41.4 million
52-Week Range:	29-13	Dividend:	None Yield None

	From	To	
EPS 1984A:	\$0.80	-	P/E 1984A: 25.5x
1985E:	\$1.25	\$1.20	1985E: 17.0x
1986E:	\$1.75	\$1.70	1986E: 12.0x

Projected 5-year growth rate:	32.7%	Operating return on tangible assets:	16.5%
Market proxy ROR1:	12.5%	Total debt/equity:	5.2%
Company ROR1:	1.3%	Return on equity:	11.4%
Market cycle beta:	2.22	Reinvestment rate:	11.4%

Fiscal Year Ends September.

POINT OF VIEW

Quarter as generally expected, but revenues a bit light. Shaving estimates slightly but consider product positioning now to be quite strong. Maintain our BUY rating.

DISCUSSION

Tandem's operating results for the second fiscal quarter ended March 31, 1985 were released recently. Earnings per share of \$0.16 were in agreement with our most recent expectations, although below our early line on the quarter. We were, however, moderately disappointed with \$146 million in revenues; early on, we had been hoping for \$8-10 million higher.

The revenue picture reflects, we believe, a shortfall in upgrades to the high-end TXP processor and a slow start in the Dynamite series of workstations/terminals in a product sense, and the strength of the dollar and a little bit of weakness attributable to the general computer industry environment. We cannot help but feel there was some shortfall at the NonStop II and low-end product level due to the widely leaked expectations of a new Tandem low-end product; the early April introduction of the EXP system probably held up some orders.

The profit margin picture was affected by a net new hiring of 181 people, the costs associated with new product introductions, and increased advertising expense.

The balance sheet remains very strong, with \$108 million cash, about \$18 million in total debt including capitalized leases, and \$403 million in equity.

Although Tandem no longer releases new customer count, we believe the quarter was strong and above a year ago and the quality of customer was also good.

The hardware product line is now well set with the EXT announcement, with three processor lines and the V8 disk, with appropriate terminals. What remains is the major operating systems software release, which we expect shortly and which should enhance the performance of all Tandem systems. Over the next 12-18 months, the fruits of the third-party software development program begun some 18 months ago should bear fruit in more application software availability. The stage should be well set for growth. We have tried to take account of the current slower spending environment against these positives and have only slightly moderated our forecast for fiscal 1985. We are now at \$670 million in revenue and \$1.20 per share in earnings (versus our earlier estimate of \$1.25).

The company appears to be more cautious and gearing down expenses for a more conservative growth rate, like 25%. We believe a lot of analysts will be gearing down accordingly and probably winding up with \$1.40-\$1.50 per share forecasts. In our view, the company gearing down to lower volume levels is a positive, because all the signs of exceeding the volume target are there while the expenses will be low. We believe revenue can be up close to 30% in fiscal 1986 and are using a figure of \$855 million, with EPS likely to be up over 40%. We are now using \$1.70 per share as a single-point figure rather than \$1.75 as before.

We feel good about Tandem and retain our Buy rating. The stock has over-reacted, in our view. Moreover, we consider the IBM System/88 announcement extremely positive. The more people IBM tells that Tandem has been right for the past 10 years the better, and on the merits, Tandem should have no problems dealing with a fault-tolerant minicomputer.

Last Research Abstract on Tandem Computers: April 23, 1985

(M) DBL makes a market in this security.

**<>>*

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INVESTEXT/COMPUTERS AND OFFICE EQUIPMENT
June 10, 1985

Tandem Computers - Company Report
PRUDENTIAL BACHE SECURITIES INC. - Muratore, C.E., et al
05-13-85 (RN=505433)

Tandem Computers

* Company visit encouraging: management actions constructive.

* Accelerated growth rate and predictable earnings may still be 6-12 months away.

* Rating unchanged at 3-3. E.P.S. estimates \$1.10 for FY85 and \$1.40 for FY86.

TNDM (22 7/8) -- OTC

Earnings Per Share			P/E	Ind.	Yield	Opinion		Shares O/S (mil.)	52- Week Range
Fiscal Year Ending						N	L		
9/84	9/85E	9/86E	1985E	Div.					
\$0.81	\$1.10	\$1.40	20.8X	--	--	3	3	42.2	29-13

DJIA: 1274.18
S&P 400: 184.28

Priced as of the close, May 10, 1985.

Opinion Legend:

N = Up to 6 Months
L = 6 to 18 Months
1 = Aggressive Purchase
2 = Accumulate
3 = Average Performer
4 = Swap
5 = Sell

While we are not changing our 3-3 rating, our visit last week with Tandem management was encouraging. We have been concerned that the steps necessary to regain lost momentum in product introductions and revenue growth were not being taken. Tandem has tremendous value-added in its technology for on-line transaction processing and a happy if small (900 customers) customer base. To take advantage of its still unique strengths in transaction processing, networking and database management, however, Tandem needed to address some basics: broaden the product line; expand applications software library; become more price competitive to gain new customers and maximize revenues from existing ones.

Implementation is still a risk; another 6-12 months may be required for product line and applications software deficiencies to be remedied. We do not think that revenue growth above the current 25%-30% level or more predictable quarterly earnings can be achieved before then. Our earnings-per-share estimates are \$1.10 for fiscal 1985 and \$1.40 for fiscal 1986. We are hopeful that Tandem can become a long-term player as a profitable company. The market potential for on-line transaction processing is largely untapped; Tandem has a solid technology base and is clearly not a "me-too" vendor. Its future will not be market or competitor constrained; it will depend on the company's own actions.

Management appears to be tackling the issues which have been constraining its growth. While it is too early to declare the transition completed, Tandem has made progress identifying areas for action. Their assessment is realistic and their plans appropriate.

Among actions already instigated:

- * Formal financial controls, planning and forecasting, which are described by the company as still at a rudimentary level. Continuing effort is being expended in this area.

- * R&D efforts productized for next two years:

- Low-end, entry-level system: a departmental computer.

- High-end processor.

- Standard interfaces: enhanced SNA, including Document Interchange and Document Content architectures for supporting IBM office systems protocols; European and American local and wide area communications standards; gateways to other vendors; General Motors' MAPS standard for factory automation.

- Network management and control software.

- Additional languages: C, PASCAL, and ADA.

- Data base enhancements for improved system performance.

- Fourth generation languages for easier program creation.

- By June: new release of operating system with improved performance in batch and TMF (fault-tolerant) operations; professional support services software (IBM PC connectivity to Tandem mail and message products).

- * Third-party software houses doubled in last 15 months; expected to double again.

- * Identification of strategic market segments and penetration plans by segment.

* Efforts to improve quality of sales and sales management.

* A constructive focus on competitive pressures.

Tandem will be organizing its product development and marketing efforts around targeted market segments: manufacturing; banking; telecommunications; point-of-sale; airlines; and Federal government. The company is identifying product, marketing and support requirements for each segment. There has been solid progress on elementary level; successful execution is needed over the next year. The new awareness at Tandem headquarters needs to be transmitted effectively to its field organization.

Prudential-Bache Securities makes a primary over-the-counter market in the shares of Tandem Computer.

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INVESTEXT/COMPUTERS AND OFFICE EQUIPMENT
June 17, 1985

Tandem Computers, Inc. - Company Report
DREXEL BURNHAM LAMBERT INCORPORATED - Labe, P.
05-28-85 (RN=505949)

POINT OF VIEW

Tandem is gradually getting its product house in order, both hardware and software, and does not face an exceptional degree of competition. While there will be more spending for the future in the next two quarters, the outlook for fiscal 1986 as the fruition of these programs occur looks good, as well as the longer-term outlook. We are maintaining our BUY rating on the stock.

Hardware

Tandem is today a three product company: the high-end TXP processor, the mid-range NonStop II, and the newly (last month) announced EXT. It is too early to accurately predict the EXT, but there are several multiple-hundred order programs in the mill and we expect very big business from existing Tandem users who could buy these as cheap network nodes. Right now, we feel optimistic on this program. The V8 disk program, announced several months back, has been a major success. The terminal/workstation area seems to be progressing, even though the new Dynamite workstation is probably four months behind plan. The software to work it is now available and we expect better results in the months ahead.

This is a good lineup of products and the entry level EXT is important - both in Europe, which is more price-sensitive, and as a VAR (valued-added remarketer) product here quite apart from the user base.

In early 1986, we expect the first Tandem processor built with gate array technology (some components, like tape controllers, are already implemented in LSI gate arrays) which will help, although a new truly high-end machine appears to be more like 1987.

Software

The most important near-term development expected is the B-double zero release of the operating system, expected to be free of existing customers with prerequisite software and priced in a package for new users, which should enhance Tandem processor performance very significantly in some applications.

We are also expecting over the next several months more office automation software, including remote facsimile support and new electronic mail packages.

In the applications area, several things are happening. The third-party software development program is moving ahead. Six new

software houses were added last quarter and three systems integrators. Tandem now has a total of 68 software houses, 17 OEMs, and three systems integrators in its program. Over the next 12 months, we should be seeing more and more applications packages from this group. The second thing has been that Tandem has focused on lines of business and is making decisions as to what will be developed internally, what externally, and of the external pieces, trying to be selective and select only larger prestigious organizations to do the software writing. These are more readily identifiable to customers and easier to sell.

The two areas where Tandem perceives itself not be fully up to snuff is in application generators or tools, and in gateways in the office environment. The customer wants to know he can interface into Ethernet, Starlan, etc. whether or not he has any present intention to do so. We believe Tandem is moving rapidly to plug these holes but we doubt if these will be in place before fiscal 1986.

Competition

The IBM System 88 so far has not been much of a factor. This is the Stratus FT 250 repackaged and sold under the IBM label. IBM sells it for a higher price than Stratus, and does not claim IBM SNA compatibility. It has been bid, usually as a last resort, by IBM in a few identifiable places so far without success. The IBM agreement adds credibility to Stratus, but Tandem should win competitions on the merits. This was true in the past as well, when Tandem consistently won the bulk of competitions.

The recent announcement of ACI, a major Tandem software house, that it would write programs for Stratus, should not be viewed with alarm but more in the context it would be a prudent thing to do for a software firm specializing in transactions - in case Stratus should be quite successful.

Financials

Tandem is not going overboard on cost controls but is selectively hiring -- what we call "careful hiring." High-growth areas need more people and some modest buildup is needed. Near-term, the key is volume. The company needs \$175 million this quarter to make a consensus-type \$0.30 per share estimate factoring in cost expectations. This would be a nice rebound from the \$0.16 reported last quarter and well up from last year's \$0.23 per share. It is simply too early to make this determination, especially with sluggish conditions throughout the computer industry, but we remain optimistic. We are not making any changes in our \$1.20 EPS estimate for fiscal 1985 nor in our \$1.70 for fiscal 1985.

Stock Performance/Opinion

Tandem stock has rebounded nicely from the excessive lows as last quarter's expectation were reduced. We expect the stock to basically mill around for awhile until the current quarter can be perceived more

clearly, and investors get greater confidence of the prospects for fiscal 1986 and beyond. We are maintaining our Buy rating on the stock.

This article originally appeared in Computer Talk dated May 20, 1985

Last Research Abstract on Tandem Computers: May 7, 1985

(M) - DBL makes a market in this security.

LEVEL 1 - 4 OF 5 STORIES

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June 10, 1985, Monday

DISTRIBUTION: Business Editors

LENGTH: 876 words

HEADLINE: **TANDEM-COMPUTERS; Announces information management strategy; unveils new products and commitments to industry standards**

DATELINE: CUPERTINO, Calif.

BODY:

Tandem Computers Inc. (OTC:TNDM) Monday announced a multi-vendor system integration strategy that will allow its customers to use their Tandem networks to provide company-wide electronic information sharing between users of a variety of incompatible personal computers, workstations, terminals, facsimile devices and local area networks. The strategy, Information Management Technology (IMT), includes five new products and commitments announced today to support the widest range of industry standards. IMT builds on Tandem's proven strength for merging data processing and communications into a single, vendor-independent, geographically distributed network for workplace automation. The new products are PS MAIL for electronic mail, filing and distribution; PS TEXT EDIT and PS TEXT FORMAT for text editing and formatting; PC LINK for integrating IBM PCs and compatibles into Tandem distributed networks; and FAXLINK for moving images and pictures electronically. Together, these new products allow users of IBM PCs and compatibles, IBM 327X and TTY terminals, Tandem terminals and workstations, and Group III CCITT facsimile devices to move any combination of text, data or images through a Tandem network as a single package to any other device on the network. At the heart of Tandem's strategy is TRANSFER, Tandem software that delivers information to any device or application on the network, regardless of the source or information format -- data, text, image -- in any combination. TRANSFER was first delivered in 1983. In support of industry standards, Tandem today announced development projects are underway to support IBM DCA/DIA, IBM LU6.2, host-based MS-DOS file and print servers, IEEE 802.3 local area network (LAN) standards, including Ethernet and AT&T's Starlan, and Sytek's protocols and broadband media for IBM's PC Network. Tandem also stated intentions to provide gateways to X.400 and IBM's DISOSS. Tandem also revealed it has signed an agreement with AT&T to be a licensee for the Digital Multiplexed Interface (DMI) standard for the integration of PBX equipment into the Tandem network environment. DCA/DIA will enable Tandem to provide revisable-form document interchange between the most popular word processors, third party word processing packages and Tandem editors. LU6.2 is a peer-to-peer SNA protocol supported by a number of IBM products, including CICS, System/38, 5520 and Scanmaster. X.400 is the message handling standard proposed by the CCITT for linking into public electronic mail messaging systems. DISOSS support will enable users on Tandem networks to exchange information with users of DISOSS libraries on IBM hosts. Support of IEEE 802.3 LAN standards will allow the integration of workstations with Tandem's NonStop systems. In a separate announcement, Tandem and Sytek today announced the signing of OEM and technology license agreements under which Tandem will market Sytek's broadband LAN technology for interfacing IBM's PC Network and Sytek's LocalNet to Tandem systems. LocalNet provides terminal-to-host connectivity. In conjunction with

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Tandem's new products and its commitments to interface to IEEE 802.3 networks, Tandem users will be able to interconnect IBM PC Networks via Tandem networks with other LANs, allowing users on any of these networks to electronically share information with each other. In making the announcements, Gerald L. Peterson, Tandem vice president of product management, said, "Building on the fundamental strength of our architecture for distributed data bases and peer-to-peer communications, we will be able to provide solutions today that will take most other vendors many years to deliver. "Tandem has done the hard part. We have approached the movement of business information from the top down, supplying a reliable communication network, a relational distributed data base, an information delivery and retrieval system, and links into the multi-vendor world," stated Peterson. All five new products will be available in calendar third quarter. Prices are in U.S. dollars. PS MAIL is free to TRANSFER licensees for use on Tandem terminals and workstations; and for IBM PCs and compatibles using PC LINK. PS MAIL for 3270 and TTY terminals each has an initial license fee of \$2,000 per system (NonStop II and TXP) and \$1,000 (EXT) plus a per system monthly license fee of \$200 for NonStop II and TXP and \$100 per EXT. PS TEXT EDIT initial license fee is \$500 per system (NonStop II and TXP) and \$375 (EXT) plus \$50 per system monthly license fee. PC LINK initial license fee is \$495 per IBM PC or compatible, and is free for DYNAMITE workstations. FAXLINK (includes hardware controller and software) is \$12,500 plus a per system monthly license fee of \$200 (NonStop II and TXP) and \$100 (EXT). Volume discounts are available for FAXLINK and PC LINK. Tandem manufactures and markets computer systems and networks for the on-line transaction processing market. The company is headquartered at 19333 Vallco Parkway, Cupertino, Calif. 95014. Phone 408/725-6000

CONTACT: Tandem Computers Inc., Cupertino
Gina Burr, 408/725-7455
Pat Becker, 408/725-6035

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LEVEL 1 - 3 OF 5 STORIES

Copyright © 1985 Business Wire Inc.;
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June 10, 1985, Monday

DISTRIBUTION: Business Editors

LENGTH: 520 words

HEADLINE: SYTEK/TANDEM; Sign OEM and technology licensing agreements to provide local area network capability for Tandem users

DATELINE: MOUNTAIN VIEW, Calif.

BODY:

Sytek Inc. and Tandem Computers Inc. (OTC:TNDM) Monday announced that they have signed OEM and technology licensing agreements to provide local area network capability for Tandem users.

Tandem will make use of Sytek's broadband technology to connect workstations and terminals to host computers.

Tandem will support Sytek protocols for IBM's PC Network, which will enable users to connect IBM Personal Computers, Tandem DYNAMITE (TM) workstations, and Tandem host computer systems. Sytek has agreed to license PC Network source technology and to sell PC Network compatible products to Tandem. Terminal-to-host connectivity will be accomplished through the integration of Sytek's LocalNet (TM) open architecture products.

"We are especially pleased to join Tandem's aggressive and well-focused commitment to data communications," said George Klaus, Sytek senior vice president and member of Sytek's office of the chief executive.

"The partnership reinforces Sytek's strategic orientation to the financial, manufacturing and government markets that Tandem already serves so well. The Tandem agreements are consistent with our commitment to PC Network as a solidly established industry standard," stated Klaus.

"We view the Sytek protocols as a de facto industry standard. This is the first time Sytek has chosen to work with another computer vendor other than IBM to support the PC Network," stated Dennis McEvoy, Tandem's vice president of software development.

"Tandem provides fault tolerance and linear growth in an on-line transaction processing environment. We have a large installed base of distributed networks and see Sytek's broadband technology as complementing our communication capabilities," added McEvoy.

Tandem also announced today its Information Management Technology (IMT) strategy. As part of this strategy, Tandem announced development projects to support IEEE 802.3 LAN standards, including Ethernet and AT&T's Starlan. (See Tandem IMT Press Release entitled "Tandem Announces Information Management Strategy: Unveils New Products and Commitments to Industry Standards").

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Tandem Computers manufactures and markets computer systems and networks for the on-line transaction processing market. The company is headquartered at 19333 Vallco Parkway, Cupertino, Calif. 95014. The telephone number is 408/725-6000.

Sytek Inc. is a leading supplier of broadband local area networking products, including both terminal-to-host and personal computer-to-personal computer connections. In 1981, Sytek announced LocalNet, the first commercial product to integrate channel sharing, speed matching, and other advanced networking technology with broadband cable. In 1984, the company announced an agreement with IBM to provide the proprietary technology for the network adapter card within the IBM PC Network local area network.

CONTACT: Sytek Inc., Mountain View
Stuart McFaul, 415/966-7417
or
Tandem Computers Inc., San Jose
Corrine DeBra, 408/725-7574

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LEVEL 1 - 4 OF 7 STORIES

Copyright © 1985 Business Wire Inc.;
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June 10, 1985, Monday

DISTRIBUTION: Business Editors

LENGTH: 515 words

HEADLINE: SYTEK/TANDEM; Sign OEM and technology licensing agreements to provide local area network capability for Tandem users

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Tandem Computers Inc., San Jose
Corrine DeBra, 408/725-7574

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growth, especially in vertical markets such as medicine, petroleum, aerospace, military, financial, and manufacturing process control.

In addition, experts predict AI ultimately will play a major role in solving the problems of human/machine inter-

faces make up an additional 8.2 percent. This area is also expected to experience significant growth with the potential to reach a much broader market of computer users.

AI programming languages account for the remaining 2.9

third-party players to include the technology in specific vertical products and open up investor opportunity, some observers said.

"The concept of AI as a separate marketplace will fall away, as the opportunity unfolds for OEMs and VARs to add additional value to their

vertical markets, and I see this as the best play for independent investors. There will be very few opportunities for stand-alone AI systems, because most business managers need integrated solutions."

Edward A. Feigenbaum, co-founder of IntelliCorp, said three key areas of "golden opportunity" for AI are process control, integrated circuit design using ultra large scale integration, and computer assisted programming.

Tandem Sets Stock To Halt Hostile Bids

CUPERTINO, CALIF. — Tandem Computers Inc. has created a new series of preferred stock as part of a plan to discourage hostile takeover attempts.

The fault-tolerant computer maker said it will issue to shareholders one "right" for each share of the company's common stock. Each right will entitle holders to buy 1/100th of a share of the new preferred stock for an exercise price of \$80.

The rights would become active only when a person or group acquires 20 percent or more of Tandem's common stock or makes a tender offer for 30 percent or more of the company's stock.

Tandem said the plan makes a two-tier takeover "relatively unattractive to potential acquirers and discourages greenmail attempts."

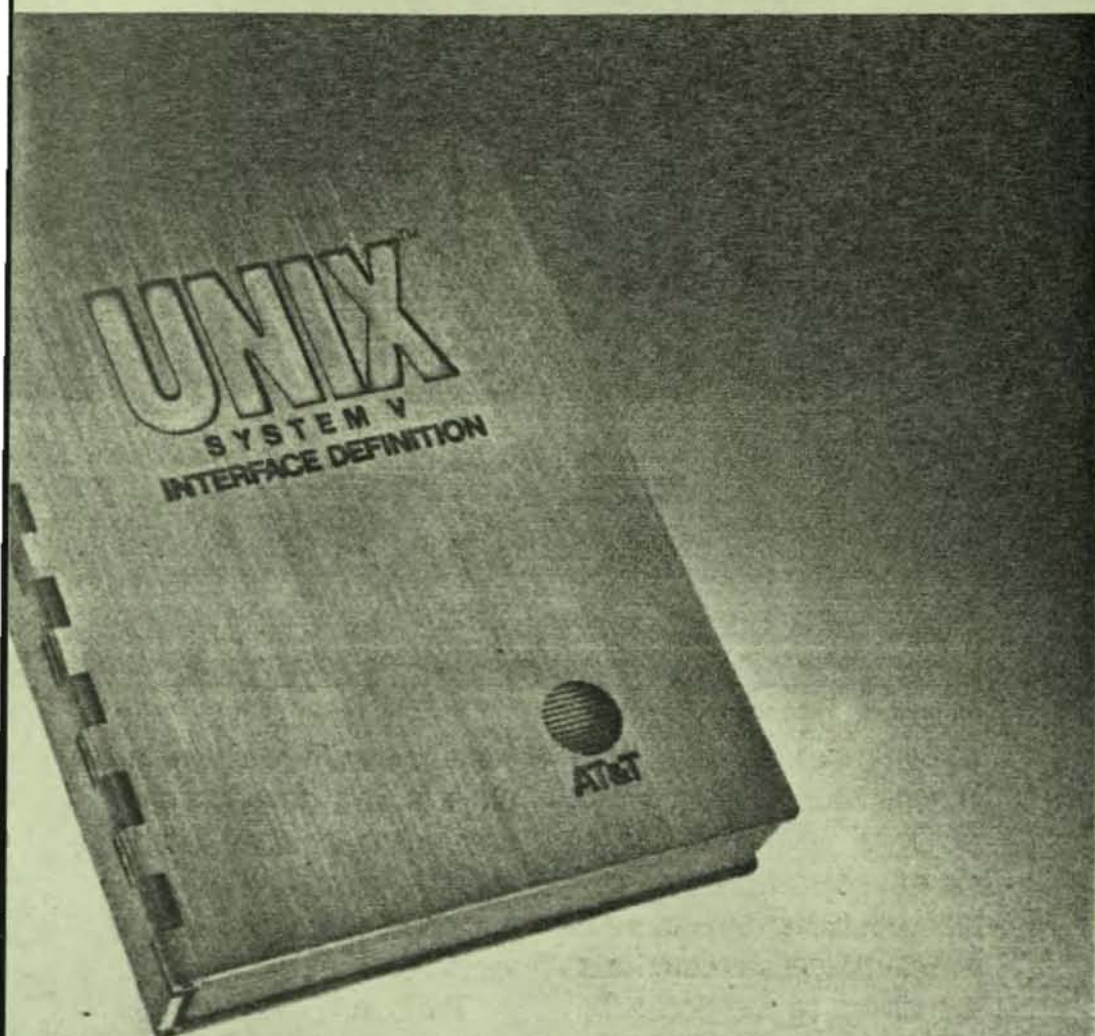
The offer became effective May 17, and the rights will expire in 1990, the company said.

Int'l Data In Contract With Goldman, Sachs

FRAMINGHAM, MASS. — International Data Corp. has received a multiyear, multi-million dollar contract to provide Goldman, Sachs & Co., a New York-based investment banking and brokerage company, with exclusive access to its domestic technological financial and stock information and research services.

An IDC spokesman would not disclose the terms or duration of the contract except to say the agreement is for "less than \$10 million and more than a year."

In addition to providing Goldman Sachs with information via written and telephone reports, IDC will offer the investment firm consulting ser-



UNIX SYSTEM V. BEST-SELLING SOFTWARE IS WRITTEN BY THE BOOK.

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prise standard System V. You'll have the information needed to write applications that are portable across current and future System V environments—without modification. Applications that are virtually hardware independent, from personal computers to mainframes.

Software developers will be able to sell more software to more customers for a broader range of hardware products. VARs will be able to offer more customers a wider choice of System V-based equipment—with a ready supply of software to run on it. And that means greater profitability.

A standard you can bank on
AT&T is committed to UNIX System V as a universal standard. It's gaining wide

commercial acceptance.

We plan to preserve the integrity of UNIX System V and promote the compatibility between System V and its derivatives. Conforming to the System V Interface Definition ensures your applications will meet these high standards. And satisfy end-user needs.

To profit from the growing demand for software written by the book, order the System V Interface Definition—at \$37.00 plus tax. Call 1-800-432-6600 and ask for Operator 393. You can charge your order to any major credit card.

UNIX System V. From AT&T.
Consider it standard.

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Computer Systems News June 10, 1985 p 54

Printed by: ROBERTSON HEIDI @TSII
Sent: 10 Jun 85 10:01
From: ZINKER SELMA
To: ROBERTSON HEIDI @TSII
Subject: dow jones report

TEXT 10 Jun 85 10:01 Creator ZINKER_SELMA

\poff 6; outlen 72

DOW JONES STOCK QUOTE REPORTER SERVICE

/TNDM /EDP /
06/10 TANDEM COMPUTERS - NEW (DJ) PRODUCTS -2-
CUPERTINO CALIF -DJ-

TANDEM COMPUTERS INC. WHICH ANNOUNCED A MULTI-VENDOR SYSTEM
INTEGRATION STRATEGY ALSO ANNOUNCED AGREEMENTS WITH SYTEK INC. TO
PROVIDE LOCAL AREA NETWORK CAPABILITY FOR TANDEM USERS.

TANDEM SAID IT WILL MAKE USE OF SYTEK'S BROADBAND TECHNOLOGY TO
CONNECT WORKSTATIONS AND TERMINALS TO HOST COMPUTERS. TANDEM SAID IT
WILL SUPPORT SYTEK PROTOCOLS FOR IBM'S PC NETWORK

'WE VIEW THE SYTEK PROTOCOLS AS A DE FACTO INDUSTRY STANDARD. THIS
IS THE FIRST TIME SYTEK HAS CHOSEN TO WORK WITH ANOTHER COMPUTER
VENDOR OTHER THAN IBM TO SUPPORT THE PC NETWORK ' A TANDEM SPOKESMAN
SAID.



successful in UK.

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He adds that there is a pressing need for technology companies to understand precisely how innovation happens in their businesses and to manage accordingly.

A loose, entrepreneurial management style may stimulate process, says Connell, but "there soon comes a point when an idea must become a commercial product". Much stricter formal project management is then required.

The aim of the conference this month is to look at alternative approaches to the issues. Deloitte groups them as internal, external and joint development strategies.

By internal strategies it means management mechanisms of proven innovative companies - including Hewlett-Packard. External strategies include corporate venturing and acquisition.

Connell comments that corporate venturing - as practised by the likes of Olivetti - is an increasingly popular way of opening "windows on new technologies", and at the same time

spreading risk.

He adds that Deloitte's experience as a financial advisor is that "acquisition can be very powerful if it can be made to work". But he warns that it can be precarious too, because the success of small companies can depend on a few individuals who may not fit into a corporate structure.

Strategies for Innovation will be held in London on June 26. Details on 01-493 0000. Speakers include David Baldwin, managing director of Hewlett-Packard, and Mike Watson, technical director of ICL.

■ The Association of British Chambers of Commerce and British Telecom are running a competition to find the most "innovative" small business. Any of the UK's 1.5 million so-called "small firms" can compete. They will be judged on the basis of turnover and profit growth, efficient use of technology, customer satisfaction and innovations in products and services. The prize is £10,000 and £2,500 worth of BT equipment.

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COMPANY BRIEFS

UK management consultancy P-E International is reported to be planning a public flotation next year. It is advised by broker Hoare Govett. Last year the company made £691,000 pre-tax profits on turnover of £13.6 million.

US micro software products company Lotus Development expects a growth rate of over 30% this year. It reported net income of \$36 million in 1984.

US supplier of standalone workstations Telesis says it

will not now be taken over by minicomputer and electronics group Gould, because a financial agreement could not be reached.

After IBM's acquisition of Stratus, fellow fault-tolerant computer maker Tandem Computers has created a "poison pill" share, designed to discourage a hostile takeover. It has issued rights to a special preferred stock, which will be activated if 20% of the company's stock is acquired or by a tender bid for 30%.

company has not been very successful in the UK, where annual turnover is only around £5 million.

IAI Gemini, which is owned 50:50 by Cap Gemini Sogeti and UK communica-

The company looked at

Lessor faces takeover

by Angeli Mehta

Surrey-based IBM computer leasing company Megaleasing UK is set to be taken over by Swedish finance house PK Banken Group.

The bank's subsidiary, PK Finans International, has agreed to take a controlling interest in Megaleasing through a new holding company for an undisclosed sum.

The deal has still to be passed by Swedish authorities.

Megaleasing's managing director, Andrew Fitton, sees the arrangement as "an important development in the UK computer leasing industry bringing together the expertise of a specialist computer leasing company with the resources of a major bank".

SHARES TABLE

The shares table, which is specially compiled for Computer Weekly, shows selected computer companies that reflect the state of the computer industry.

6.6.85				Index 152.11				Change -2.56			
Pence		London Stock Exchange		Pence		Pence		London Stock Exchange		Pence	
1985		Stock		Price		1985		Stock		Price	
High	Low				Cng	High	Low				Cng
Unlisted securities continued											
270	185	ACT	185	-10		190	185	Shenwood	190	+3	
455	355	Atlantic Comp	355	-5		245	205	Synapse	245	-2	
162	105 1/2	British Telecom	151	-6		115	80	Tech for Bus	95	+2	
595	450	Cable & Wireless	550	-20		530	375	Telecomputing	420	-25	
265	203	Comcap	250	-3		76	60	Trident	75	-	
257	242	Case	250	-7		32	25	Zygal Dyn	27	+2	
480	417	DPCE	475	-5		OTC Stocks					
165	82	Dataserv	165	-		170	130 1/2	Adis Sys	150	-10	
367	287	Estel	345	-		65 1/2	52	Bleasdale	63 1/2	-	
176	132	Ferranti	132	-12		235	190	Tadpole	190	-	
216	178	GEC	180	-12		US Stocks					
36	26	Kalamazoo	36	-		S		S		S	
215	170	Kode	215	+5		23 1/2	20 1/2	AT&T	23 1/4	-1	
385	249	Logica	257	-8		17 1/4	13	Amdahl	13 1/4	-1 1/2	
360	284	Memec	355	-5		30 1/4	19 1/4	Apple	19 1/4	-1 1/2	
225	125	Micro Bus	140	+15		30 1/4	19 1/4	Appollo	20	-2 1/4	
950	325	Micro Focus	370	-20		46 1/4	26	ADP	46 1/4	+1 1/4	
375	185	Microgen	340	-25		85 1/4	54	Burrnoughs	85 1/4	-1 1/2	
4212 1/2	3462 1/2	Norsk Data	385 1/2	-75		85 1/4	54	Comp Auto	84	-1 1/4	
1537 1/2	1231	Philips Lamp	1250	+19		16 1/4	14	Comp Sciences	15 1/4	-1 1/4	
204	148	Plessey	148	-24		10	6 1/4	Comshare	9 1/4	+1 1/4	
100	37	Prestrick	100	-7		36 1/4	25	Control Data	30 1/2	-3 1/4	
90	37	Quest Auto	38	-		81 1/2	50 1/4	Cray Research	81 1/4	-1 1/4	
278	184	Racal Elect	184	-16		27 1/2	27 1/2	Cullinet	20 1/2	-8 1/4	
296	252	Reuters B	286	+4		33 1/4	31 1/4	Data General	40	-14 1/4	
185	175	Sitron	180	-5		21 1/2	12 1/2	Dataquest	12 1/2	-1	
276	177	STC	177	-9		125 1/4	96	Digital Equip	103 1/4	-3 1/4	
60	35	Star Comp	54	-6		26 1/2	20 1/2	Gould	22 1/4	-4 1/4	
116	81 1/2	Systems Des	104	-12		34 1/4	25 1/4	Harris	27 1/2	-7 1/2	
320	250	Systems Rel	300	-20		36 1/2	32	Hewlett-Packard	32	-4	
400	317	Thomemix	340	-10		54 1/4	34 1/4	Honeywell	61	+1 1/4	
462	399	Thorn EMI	437	-17		31 1/2	25 1/2	Intel	27 1/4	-4 1/4	
348	313	Unilever Leasing	345	-1		137 1/2	120	IBM	131 1/2	-1 1/4	
185	147	Wordplex	152	-4		33	22 1/4	Lotus	30	-1	
Unlisted Securities											
33	14	Azcom	17	+3		14 1/4	11	MDS (Muhawk DI)	14	-1 1/4	
140	97	Alphamerc	140	+8		8 1/4	6 1/4	Modular	7	-1	
355	250	Bralat	295	-25		37 1/2	31 1/4	Motrola	33 1/4	-4 1/4	
95	32	Bus Comp	45	+5		13 1/4	10 1/2	National Sem	10 1/4	-1 1/4	
160	98	CPS	98	-3		20 1/4	18 1/4	NCR	20 1/2	-1 1/4	
61	36	CPU	43	-2		41 1/4	31 1/4	Northern Telecom	36 1/4	-5 1/4	
20	10	Cifer	15	-5		28	25 1/4	Parsons Elmer	25 1/4	-2 1/4	
140	127	Comsol	140	-5		15 1/4	15 1/4	Prime	18	-1 1/4	
70	42	Consult (CAF)	68	-		11	7	Rodine	10 1/2	-1 1/2	
177	151	DDT	151	-		54	41	Sperny Comp	52 1/4	-1 1/4	
40	30	Imen Bus Sys	38	-		27 1/4	24	Storage Tech	21 1/2	-5 1/2	
78	40	Inter	45	-		18 1/4	16 1/4	Tandem	21 1/2	-2	
275	215	INSTEM	240	-		130 1/4	92	Texas Inst	92	-1 1/2	
72	35	JSD	70	-		12 1/4	12 1/4	Uccell	12 1/2	-1 1/2	
220	190	MAT	195	-		29 1/4	17	Wang Lab B	17 1/2	-1 1/4	
313	238	Memcom	250	-		Market makers include: - ** Granville & Co Ltd. * Harvard Securities Ltd.					
17	8	Memory Comp	10	-5		The table shows the closing prices in London on 24/5/85 and in America on 23/5/85					
95	63	Microviser	80	-		and the changes from the previous table. Highs and Lows have been adjusted where necessary. The Share Index is based on a selected list of the UK companies.					
365	210	Mies 33	365	-		Company News is compiled by Dave Madden					
60	40	Mines	45	-		COMPUTER WEEKLY, June 6, 1985					
410	267	NBM	265	-		Computer Weekly					
300	255	Norbert	265	-		June 6, 1985 p18					
185	150	Northamber	150	-							
162	140	Parcom	140	-							
125	87	Real Time	100	-							
153	115	Rule & Nolan	142	-10							

Market makers include: - ** Granville & Co Ltd. * Harvard Securities Ltd. The table shows the closing prices in London on 24/5/85 and in America on 23/5/85 and the changes from the previous table. Highs and Lows have been adjusted where necessary. The Share Index is based on a selected list of the UK companies.

Company News is compiled by Dave Madden

file Tandem
6/3/85

Minicomputers & Peripherals

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<u>Company</u>	<u>Symbol</u>	<u>Price</u> 5/30/85	<u>Estimated</u> FY 1985	<u>E.P.S.</u> FY 1986	<u>One-Year</u> <u>Recommendation</u>
Data General	DGN	\$38	\$2.00	\$3.00	Buy
Prime	PRM	18	1.15	1.50	Buy
Norsk Data	NORKZ	37	2.25	2.80	Buy
Stratus	STRA	14	0.45	0.75	Buy
Tandem	TNDM	19	1.00	1.35	Hold
Wang	WANB	17	0.38	1.00	Hold
Digital Equipment	DEC	102	6.25	7.95	Hold

We have again lowered our earnings estimates for the major minicomputer and office automation companies. The order improvement that we had earlier expected by mid-year has not materialized. If anything, business conditions have deteriorated slightly. The third quarter holds little hope for a pick-up, particularly since international business, which has been quite strong, tends to drop off significantly in the summer months. We do believe, however, that orders could accelerate in the fourth quarter due to declining interest rates, a weakening dollar and the possible expiration of the investment tax credit which could boost year-end orders.

We expect the June quarter to show lackluster results for most of the information processing companies. At Data General, for instance, the disappointing \$0.34 which was reported in the March quarter is now viewed as a ceiling for the current period. We expect Prime to report flat results, while Tandem's earnings should be down versus a year ago. Wang's business has taken an even deeper fall with the company expected to report a substantial loss in the quarter. Much of the loss will involve much-needed inventory write-offs.

The only companies in this universe for which we have not lowered our earnings expectations are Norsk Data and Stratus. For both companies, incoming business continues to be excellent, and we continue to recommend purchase of the shares.

Many of the stocks in this group are off sharply from their highs. While we may not yet have reached bottom, investors with an 18 months to two year time horizon may find some of the battered stocks, particularly Data General and Wang, to be rewarding over the longer term. LES

Although we believe it is now generally recognized that Digital Equipment is likely to have a lower fourth quarter in earnings per share in fiscal 1985, we are concerned that the seasonal summer slowdown may lead to difficult quarterly comparisons in the first quarter of fiscal 1986. There is a great deal of operating leverage in the company and profit margins still appear to be under greater pressure than we would have expected a few months ago. We have reduced our fiscal 1985 earnings per share estimate to \$6.25 and that for fiscal 1986 to \$7.95. (Our Techviews update of May 30, 1985 provides additional detail on our current thinking.) Longer-term, in spite of present challenges for the company, we believe DEC will remain an attractive vehicle for investors that can tolerate high volatility and the absence of any cash dividend. MS

Techviews 6/3/85

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Martin Simpson & Company, Inc., 150 Broadway, New York, NY 10038

LEVEL 1 - 1 OF 1 STORY

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Computerworld

June 3, 1985

SECTION: COMPUTER INDUSTRY; Executive Corner; Pg. 74

LENGTH: 39 words

BODY:

Tandem Computers, Inc. has announced the following appointments: Thomas Lyman Chun to the newly created post of vice-president of corporate projects and Thomas J. Klitgaard to vice-president, general counsel and corporate secretary.

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System/38 and Wang Laboratories Inc.'s VS minicomputers. Keane has reseller agreements with both companies.

that market, he added. "We do not have the people to go out there and market this thing on a national

tem/36—is designed to allow Keane to address a largely untapped market for software for seven years.

Tandem Expands Program To Let VARs Sell Into Its Major Mkts.

By Susan Kerr

CUPERTINO, CALIF. — Tandem Computers Inc. has expanded its value-added-reseller program to allow VARs to market its entire line of fault-tolerant computers into Tandem's major end-user markets, instead of just selling into those vertical markets Tandem isn't addressing directly.

Previously, Tandem allowed its resellers to sell its high-end NonStop TXP, NonStop II and NonStop 1+ systems only

into vertical markets—such as hospitals and warehouse automation—that the company's sales force was not targeting directly, according to Ed Peverell, Tandem's director of third-party marketing.

However, when Tandem announced its low-end TXP computer system in April, the company decided to allow VARs to sell just that system into narrow segments of Tandem's primary markets, which include finance, manufactur-

ing, retail point-of-sale and airlines. The company has now extended that decision to include the more expensive, high-end systems, Peverell said.

"This is the first time VARs can sell any or all Tandem computer models within a segment of our end-user markets," he said. "Within those markets, there are areas we can't effectively address alone."

For example, Peverell said, while banking is a primary Tandem market, there are

many specific applications within that arena—such as check processing—that Tandem does not address directly. These kinds of applications require high-performance systems which VARs will now be able to buy from Tandem.

Tandem also has signed up four new resellers as a result of its recently enhanced VAR program, Peverell said. Two of the newest Tandem resellers—Wisner & Becker System Technologies Co., Sacramento, Cal-

if., and Eyring Research Institute, Provo, Utah—will produce computer-aided dispatch systems for police, fire and emergency medical departments, according to Peverell.

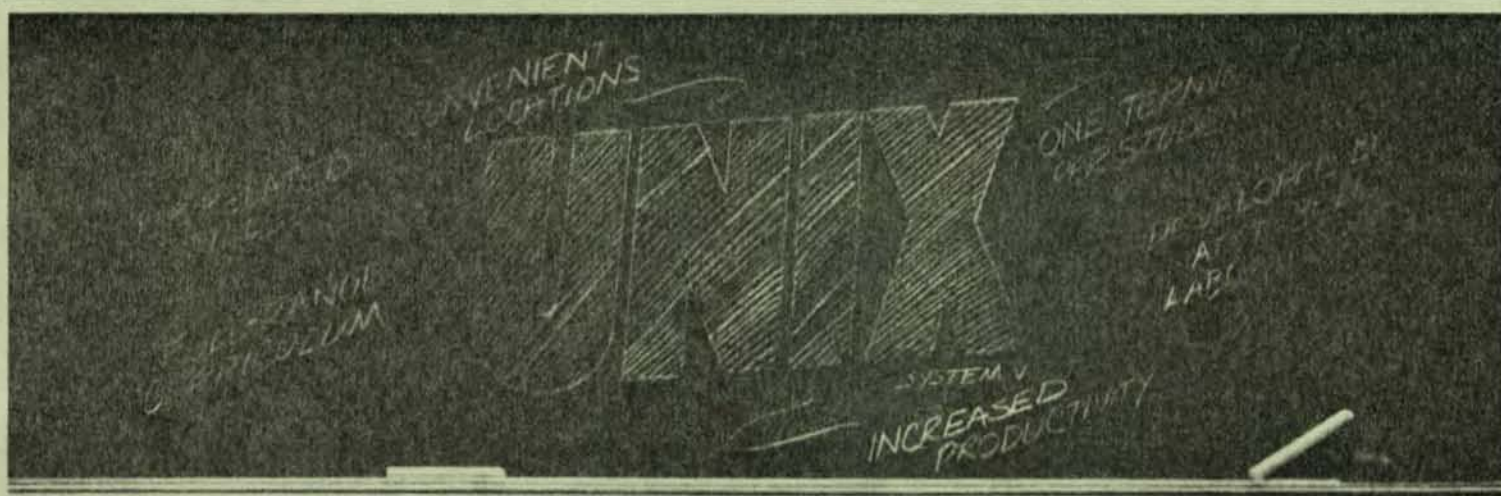
Wisner & Becker already has begun working on Tandem systems to be used by the Las Vegas, Nev., Police Department and the Placer County, Calif., police, fire and medical departments.

Litton ABS, Los Angeles, another new reseller, will sell Tandem systems into warehouse automation applications. Mistix, San Diego, the fourth new reseller, will sell Tandem systems to concert and sports facilities for automated ticketing applications. Mistix already has signed a contract to resell Tandem systems to Rockefeller Center, New York, Peverell said.

Tandem also has signed four new members to Tandem Alliance, a third-party software development program. These four will market their software directly to users of Tandem's NonStop computers.

Factorial Systems Inc., Austin, Texas, will offer its !Factorial Paperless Factory System, which provides manufacturing floor monitoring and control. Signorum Inc., Campbell, Calif., offers the Trakmaster warehouse inventory control system designed for warehouses larger than 100,000 square feet.

Schonfeld & Associates, Evanston, Ill., will market a fourth-generation language for business modeling called INGOT, while Customized Information Systems Inc., Torrance, Calif., will offer on-line accounting systems for credit, payroll and personnel departments.



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