

Tandem looks hard at growth, 'revitalizes'

By NICK ARNETT

It's no secret that Tandem Computers President James Treybig likes growth.

Following a period last year in which the company didn't meet its goals, Tandem began to focus on factors that affect growth—profit margins in particular—Treybig said in an interview last week.

The Cupertino company makes large high-reliability data communication networks and data bases. Its "on-line transaction processor" systems are used by customers such as the New York Stock Exchange and airline reservation systems.

Treybig said that new products coming this year from Tandem will continue to center on networking and databases.

The company has built a manufacturing site near Austin, Tex., where it plans to mass produce a new system to be announced later this year, said Treybig. The factory is now making Tandem's Dynamite work station, which was unveiled last fall.

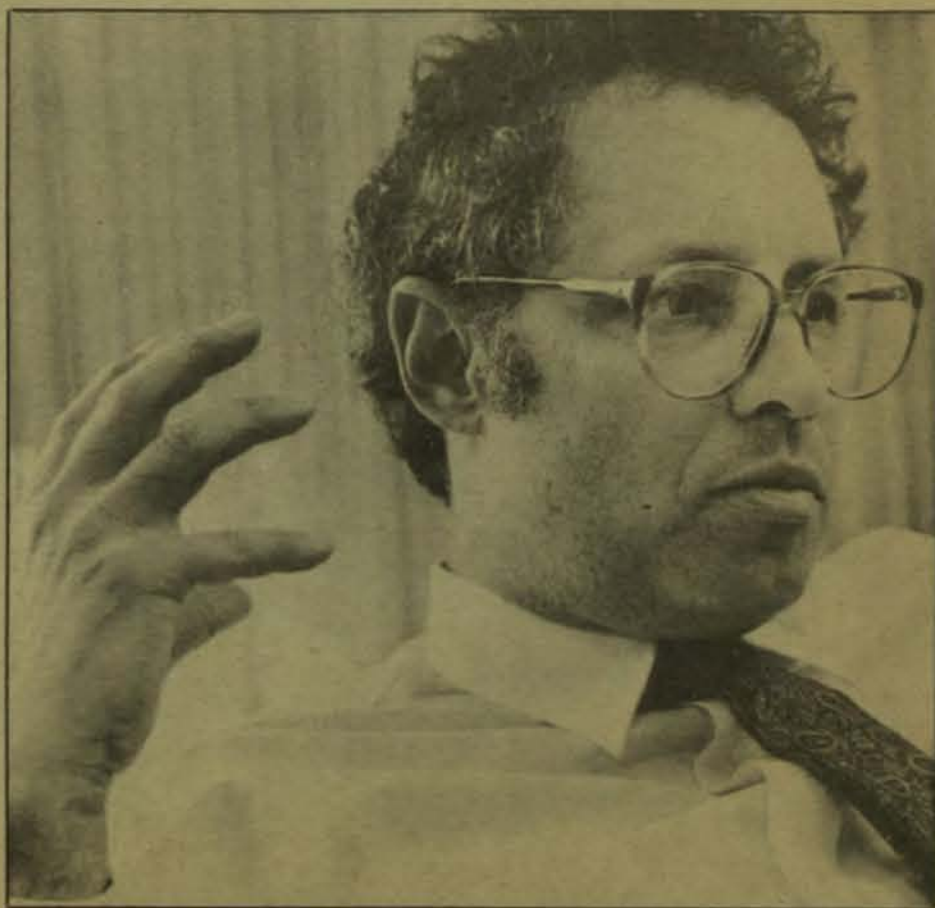
Treybig called the "paperless factory" a pioneer in advanced manufacturing techniques.

"We've never missed a shipment because of manufacturing," he said. "We have a tremendous manufacturing group."

A year ago, it appeared to some that perhaps Tandem was getting ahead of itself.

In fiscal 1984's second quarter, which ended last March, Tandem's revenue dropped to \$111 million from \$126 million in the preceding quarter, but was still up 16 percent over the comparable quarter in 1983.

Tandem made money, but pre-tax profit margins slipped to 6 percent to 7



"We're a lot smarter now," says Tandem President James Treybig.

percent, said Treybig.

Since then, it has returned to near 30 percent growth; the year's final quarter showed revenue of \$153 million; and the year closed with revenue of \$532.6 million and net income of \$42.9 million or \$1.04 a share.

As Treybig recalled Tandem's recent growth, he could have been describing the 49ers' 1984 season.

"It's like a football team that wins and wins and wins, then loses one game," he said.

"It's probably a positive thing. It helps you re-examine your assumptions, keeps you realistic."

"We're a lot smarter now, revitalized for the next five years. There will probably be the need to question ourselves again in five years."

Self-examination is an ongoing task, he added.

Example: "We've spent a lot of time on inventory control and asset management. Today, we do a lot better job at that."

Cash assets have risen from \$24.8 million in 1982 to \$106.9 million in 1984, despite the cash requirements of growth, he said.

"That's a lot of cash for a company our size," said Treybig, explaining that Tandem relies on equity and has virtually no debt.

"If you're growing and interested in high growth, there's enough risk in that," he said. "You won't go bankrupt until you run out of cash."

The most recent re-examination was of margins, Treybig said.

Tandem's 1984 annual report—not yet released—says, "We are not satisfied with our level of profitability. The company's first priority for fiscal 1985 is increasing profitability while meeting our product and marketing objectives."

One problem was that Tandem's hiring was based on higher growth than it realized, said Treybig.

The annual report says employment will be held approximately level, although sales people will be added.

Treybig said part of the cure for the margins was to reposition its products.

Tandem lowered prices on its older systems and slightly raised the price on its

newest, the TXP.

"It's working out well," he said.

The company "substantially" lowered the price of memory, which resulted in a doubling of volume and a better profit margin, he said.

"We changed the mix to meet a wider range of price and performance alternatives."

Tuesday, Tandem will introduce a high-capacity disk drive package designed to reduce the time needed to get information in and out of large data bases.

The Tandem V-8 Disc Storage Facility holds up to eight smaller disk drives rather than one big one.

The advantage is that it offers eight data paths rather than a single one, reducing access time, said disk drive industry analyst Raymond Freeman of Freeman Associates in Santa Barbara.

He said one of the most significant features of the V-8 is the option of recording two copies of each set of data, to provide a backup.

Each drive in the V-8's cabinet has an independent power supply, and there are two power cords so the copies of the data can have independent power sources.

Freeman called the product "safe" because it is not pushing technology, but uses proven techniques to make data storage and retrieval more efficient in systems such as Tandem makes.

The V-8 will sell for \$50,000 with four drives, each holding 168 megabytes of data, or fully loaded with eight drives, holding 1.3 gigabytes, for \$88,000.

It is rated at 20,000 hours mean time between failures (MTBF), which Freeman said indicates good reliability.

He said price comparisons with other drives would not be particularly meaningful because the value of multiple data paths and data redundancy vary according to application.

Treybig indicated that Tandem will soon release a product that will allow network users to send documents along with ordinary electronic text messages. "Tandem's going to be here forever," he said. "It will grow and grow and someday I won't be here. You have to keep growing or you're dying. Growth is the blood of this business."

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LEVEL 1 - 2 OF 4 STORIES

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January 28, 1985

SECTION: Labor; Pg. 79

LENGTH: 1060 words

HEADLINE: Sabbaticals Spread From Campus to Business

BYLINE: By CAREY W. ENGLISH

HIGHLIGHT:

Many employers are finding that granting workers extended leave to recharge their batteries pays off.

BODY:

Extended job absences known as sabbaticals are joining holidays, vacations and sick leaves on the list of company benefits that pay employees for time not worked.

For as little as a month to as much as a year, workers in growing numbers are being allowed to get away from their jobs without sacrificing income or their employment. In most cases, they are assured of the same or a comparable job when they return.

The expansion of extended-leave programs stalled after gaining some initial acceptance in the 1960s, but the concept is spreading again -- this time in newer companies, many of them less than a decade old.

Long a fixture for college faculty, sabbatical programs are in place today at companies as diverse as McDonald's and IBM. About 1 out of every 10 major companies has some form of sabbatical, says Eugene Jennings, a professor of management at Michigan State University and a management consultant.

What a company does or makes often determines whether it offers the benefit. "I have my best luck selling the idea of sabbaticals as policy to firms with quasi-academic environments, as in high tech, where great emphasis is put on individual creativity," says Jennings.

Typically, sabbaticals are provided to attract and keep workers, deal with stress and burnout on the job, broaden professional skills or simply provide veteran employees with an opportunity for personal growth.

Employers who offer sabbaticals say the expense is small compared with what they get in return. "It's worth many times the investment," says Wells Fargo Vice President Nancy Thompson. "Employees know that the company appreciates them."

Bonus for company. McDonald's officials say that sabbaticals substantially raise productivity, creativity and morale. Available to every full-time employee, the leave consists of one eight-week stint at full pay for every 10 years of full-time service.

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"The sabbatical allows long-term employees the opportunity to reflect on their jobs and their careers away from the daily pressures of work," says a spokesman for the fast-food chain. "It's not so much a reward for past performance as it is an investment in the future."

Support for the concept is far from unanimous. New York management psychologist Salvatore Didato says the effect on the career of the worker and on the employer can be devastating when executives lose touch with their work during sabbaticals. The program can also hurt morale if it is not applied companywide and can even backfire if the leave taker uses the time off to explore other employment opportunities. "I'm not so sure sabbaticals are good things for the corporate world," says Didato.

Ten-year-old Tandem Computers established a sabbatical program in 1979 after employees voted for it over two other benefits -- profit sharing and a retirement plan. Executives at the Cupertino, Calif., company created the sabbatical program because they recognized that many employees had been working for a long time and needed a change and an extended period of leave time to refresh themselves.

As a result, all of Tandem's 4,000 U.S. employees are eligible after four years with the company -- and every fourth year thereafter -- to take a six-week sabbatical in addition to normal accrued vacation time. So far, 75 employees have taken their second sabbaticals.

Free choice. Many companies let employees do whatever they want while they are away. At the Rolm Corporation in Santa Clara, Calif., employees can take either 12 weeks off with full pay or six weeks off at double pay after six years on the job. Leave takers are encouraged to step back from their working routines and, in the words of an official, "have some fun and relax."

That's exactly what 43-year-old Tony Seidel did during the three-month sabbatical he took after seven years with the telecommunications-equipment company. Seidel, who returned from the leave January 14, traveled to Hawaii, Fiji, Australia, New Zealand and Mexico. He also built a new bathroom, went skiing and, as he puts it, "reacquainted myself with my family and learned how much I hate wearing neckties."

Sabbaticals at other companies are more restrictive. Fifteen years' service is required at Wells Fargo, a San Francisco-based bank holding company, before employees can apply for a three-month "personal growth" sabbatical. The application must include an outline of what they intend to do. Explains Thompson, the Wells Fargo vice president, "We want them to have a serious interest in a project that they wouldn't be able to do because of their work."

For Richard Jones, a 22-year veteran, that meant a trip to the Orient a year and a half ago to expand his interest in bonsai -- the Japanese art of cultivating dwarf trees. It also helped lead to a decision to take early retirement at the end of this month.

Altered perspective. "I don't think retirement is management's objective," says Jones, 55. "They want you to come back rejuvenated, refreshed and ready to go. In my case, however, I was very much aware of a change in me personally. I became conscious of the fact that I didn't miss the bank, that there was a whole world out there for exploration and all kinds of things to do with my life."

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besides a 9-to-5 job."

Experts say that this kind of transformation is more the exception than the rule, however. A more important question involves the long-term value of the extended leave.

"The concept can lead to increased retention in certain settings," says clinical psychologist Jerome Beam, chairman of BeamPines, Inc., a human-resources consulting firm in New York.

"But I've seen too many cases where executives suffering from burnout are brought back to the same work environment after extended leaves and begin exhibiting the same burnout symptoms again within 60 days. Done that way, sabbaticals amount to nothing more than a quick but temporary fix."

Still, those who get sabbaticals are enthusiastic. Rolm Corporation's Seidel says that his three months off helped put his job in better perspective. "I discovered how little things change, how everyday problems manage to take care of themselves and the world goes on without you," he says. "In that sense, I think I'll be a more effective person, and that's in both my and the company's best interests."

GRAPHIC: Picture 1, Away three months, Tony Seidel hit the beaches from Mexico to the South Seas. SUNNY SEIDEL; Picture 2, Wells Fargo employe Richard Jones expanded a gardening hobby during his sabbatical. LIANE ENKELIS FOR USN&WR

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LEVEL 1 - 3 OF 5 STORIES

Copyright © 1985 Business Wire Inc.;
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January 31, 1985, Thursday

DISTRIBUTION: Business Editors

LENGTH: 792 words

HEADLINE: TANDEM; Financial results

DATELINE: CUPERTINO, Calif.

BODY:

Tandem Computers Inc., (OTC: TNDM) Thursday announced operating results for the first fiscal quarter of 1985, which ended Dec. 31, 1984. The California-based manufacturer of NonStop computer systems reported that revenue for the quarter increased 26.3 percent to \$159,653,000 from \$126,369,000 in the like period of fiscal 1984. Operating income advanced 33.4 percent to \$22,509,000 in the first quarter of fiscal 1985, up from \$16,878,000 posted in the first quarter of fiscal 1984. Net income grew 39.5 percent to \$14,028,000, or 34 cents per share, compared with net income of \$10,054,000, or 24 cents per share, earned in the same fiscal quarter of 1984. James G. Treybig, Tandem president and chief executive officer, commented, "Tandem made good progress during the quarter with programs to improve our overall profitability. For example, we continued our focus on controlling the level of employment. "Since the end of the previous quarter, total employment declined slightly to 5186, down from 5223, while the number of salespeople grew by 7 percent." Commenting further, Treybig noted, "Tandem continues to show positive results from our asset management programs. Accounts receivable days stayed at a moderate level, inventory days declined, and cash reached an all-time high total of \$112 million." Treybig concluded, "We have also seen a positive response to the repricing and repositioning of our NonStop II system, which took place toward the end of the last fiscal year. The first fiscal quarter was marked by a good level of new customer activity. As we had hoped, the NonStop II system played a strong role in attracting first-time users to Tandem." Tandem Computers Inc., one of the Fortune 500 largest U.S. industrial corporations, manufactures NonStop computer systems and networks for the on-line transaction processing market. In addition to sales, service and manufacturing facilities throughout the United States, Tandem has manufacturing operations in Germany and maintains a network of subsidiaries and distributors located in the major commercial centers throughout Canada, Europe, Latin America, the Middle East, Asia and the Pacific.

Tandem Computers Inc.
Financial Highlights
(In 000s except for per share data)

	Three Months Ended	
	12/31/84	12/31/83
Revenue		
Product revenue	\$134,135	\$108,474
Service and other revenue	25,518	17,895
Total revenue	159,653	126,369

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@ 1985 Business Wire, January 31, 1985

Costs and expenses		
Cost of revenue	62,021	51,360
Product development	15,127	10,849
Marketing, general and administrative	59,996	47,282
Total costs and expenses	137,144	109,491
Operating income	22,509	16,878
Interest income, net	1,888	1,076
Income before income taxes	24,397	17,954
Provision for income taxes	10,369	7,900
Net income	\$ 14,028	\$ 10,054
Earnings per share	34 cents	24 cents
Weighted average shares outstanding	41,384	41,841

Editor's note: Prior period amounts associated with cost of service and other revenue have been reclassified in order to conform to the current period presentation.

Balance sheet is available through Tandem Computers Inc.

CONTACT: Tandem Computers Inc., Cupertino
Cacey Tangney, 408/725-7555 (Financial) or
Pat Becker, 408/725-6035 (Media)

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LEVEL 1 - 3 OF 4 STORIES

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Legal Times

January 21, 1985

SECTION: THE RECORD; Selected Freedom of Information Act Requests; Pg. 30

LENGTH: 518 words

HEADLINE: Securities and Exchange Commission

BODY:

Requested by: Jack Berman; Bronson, Bronson & McKinnon, San Francisco, 11/21/84. SEC and other agency investigative reports concerning J. David Dominelli, the J. David Companies, and related entities. Disposition: Denied, 12/11/84. Exemption: (b)(5).

Requested by: Jerome G. Snider; Davis Polk & Wardwell, D.C., 11/27/84. Documents concerning the acquisition of a Lone Star Industries Inc. cement plant in New York by the St. Lawrence Cement Co. Disposition: Denied, 12/12/84. Exemptions: (b)(3), (b)(4) (b)(5), (b)(7)(A).

Requested by: Clive D. Kamins; Morrison & Kamins, P.C., Chicago. Information concerning Zeus Components, Inc. Disposition: Partially granted, 12/17/84. Exemption: (b)(5).

Requested by: Eric H. Fisher; Solinger Grosz & Goldwassee, P.C., New York. Information concerning Chipwich, Inc. Disposition: Partially granted, 12/17/84. Exemption: (b)(5).

Requested by: Alexandra Leake, Dana & Gould, Boston. Documents concerning Potter Instrupany, Inc. Disposition: Parted, 12/17/84. Exemption. (b)(7)(C).

Requested by: Mary C. Wills; Piper & Marbury, Baltimore, 11/29/84. Documents relating to Fox & Co. Disposition: Partially granted, 12/9/84. Exemption: (b)(7)(A).

Requested by: Hillel T. Cohn; Rifkind, Sterling & Levin, Inc., Beverly Hills, Calif., 11/21/84. Materials generated in response to the Dec. 2, 1983 letter from Ralph Nader to John Fedders concerning the enforcement of § 16(a) of the Securities Exchange Act of 1934. Disposition: Partially granted, 12/9/84. Exemption: (b)(5).

Requested by: Jared Specthrie; Milberg Weiss Bershad Specthrie & Lerach, New York, 11/27/84. Correspondence between the SEC and Leasco Data Processing Equipment Corp., et. al. relating to the acquisition of Reliance Insurance Co. in 1968. Disposition: Granted, 12/19/84.

Requested by: Stanley R. Wolfe, Berger & Montague, P.C., Philadelphia, 12/4/84. Investigation files relating to Charter Company. Disposition: Denied, 12/19/84. Exemption: (b)(7)(A).

Requested by: Kirk D. Tavtigian Jr.; Day, Berry & Howard, Hartford, Conn., 7/17/84 and 9/31/84. Information relating to Atlantic Financial Management et al. Disposition. Partially granted 12/20/84. Exemptions: (b)(4), (b)(6),

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b) (7) (C).

Requested by. David C. Brezina; Brezina & Buckingham, P.C., Chicago, 12/3/84. Investigation papers regarding Southland Corp. Disposition. Partially granted, 12/20/84. Exemptions: (b) (5).

Requested by Bruce G. Stumpf; Pomerantz Levy Haudek Block & Grossman, New York, 12/3/84. Documents relating to the investigation and civil action against Tandem Computers, Inc. Disposition: Granted, 12/20/84.

Requested by: Stephen P. Hoffman: Pomerantz Levy Haudek Block & Grossman, New York, 12/4/84 Documents relating to the July 8, 1983 prospectus and registration statement of Computer Devices Inc. Disposition: Denied. 12/21/84. Exemption: (b) (7) (A).

Requested by: Stephen P. Hoffman: Pomerantz Levy Haudek Block & Grossman, New York, 12/4/84 Documents relating to the July 8, 1983 prospectus and registration statement of Computer Devices Inc. Disposition: Denied. 12/21/84. Exemption: (b) (7) (A).

py 20% less floor space than the earlier models.

Using 256K-bit memory chips, the 840, 850 and 860 models offer 16M bytes to 128M bytes of main memory. Current users of the 835, 845 and 855 systems can also take advantage of the 256K-bit memory chips to expand the capacity of their systems from the previous maximum of 16M bytes to 128M bytes. A CDC spokesman said the purchase price for main memory enhancements has been decreased

of the 860 is also available to replace the dual-processor configuration of the Model 855, the vendor said.

Like the other members of the 180 line, the Cyber 840, 850 and 860 support both CDC's older NOS operating system and the firm's NOS/VE operating system that was announced with the Cyber 180 line last year [CW, April 30]. Users can concurrently run NOS and NOS/VE in the same processor and main memory, the company

See CYBER page 64

veiling three mainframe models, Data Corp. also expanded its Ce family of IBM Series/1-compatible peripheral devices with the Certain a 4-in. streaming tape subsystem.

The Certainty 810 is said to provide 60M bytes of formatted storage disk backup. The subsystem includes streaming tape drive, an attachment

See CDC

Computerworld 1/28/85 p59

Tandem adds storage facility

4120-V8 houses eight disk drives in one cabinet

By John Desmond
CW Staff

CUPERTINO, Calif. — Tandem Computers, Inc. has announced the 4120-V8 Disk Storage Facility, said to store up to 1.3G bytes by housing eight 168M-byte Winchester drives in one cabinet and compatible with Tandem Nonstop 1+, Nonstop II and TXP systems.

The multiple drives are said to allow eight users to make eight I/O requests to the same file, and the requests will be processed concurrently. Average seek time is 20 Msec, and average time to data is 28 Msec with latency added.

The 4120-V8 is aimed at users with large data bases who are processing high transaction volumes, said Jerry Peterson, Tandem's vice-president of product management.

The eight disk drives are packaged in six sq ft of floor space. The 4120-V8 features a modular design to simplify servicing, with disk drive modules said to slide in and out without disturbing cables. Each Winchester drive is sealed and has a dedicated power supply.

The cabinet has two power cords, each

supplying up to four drives, allowing data to be mirrored on disks in the same cabinet to ensure data availability in the event of drive failure, the company said.

The 4120-V8 is compatible with Tandem's 4110/4111 disk drives, and no changes to application software or operating system software are required to use

the V8 in place of other Tandem drives, the company said. Each cabinet measures 36 1/4-in. high, by 24-in. wide by 36-in. long. The empty cabinet weighs 260 lbs. and each drive weighs 37 lbs.

The minimum V8 Disk Storage Facility configuration includes the cabinet and four drives, each with a capacity of 168M bytes unformatted, 128M bytes formatted. The price for the minimum configuration V8 is \$50,000, the vendor said.

Additional Winchester modules can be added in pairs, to

a maximum of eight per cabinet. Each additional pair costs \$20,000, the company said. The maximum V8 configuration of eight drives and cabinet costs \$88,000, the company said.

Tandem Computers is located at 19333 Vallico Pkwy., Cupertino, Calif. 95014.



The 4120-V8 Disk Storage Facility



HARD TALK
John Desmond
CW Staff

Like Mips, Mflops measure imperfection

Millions of instructions per second (Mips) has long been assumed to be a meaningful measure of how well computer vendors and users alike are performing. But in spite of the protests, Mips has remained popular possibly because many users and try followers have been unable to find a better way of easily expressing how processor performs relative to an

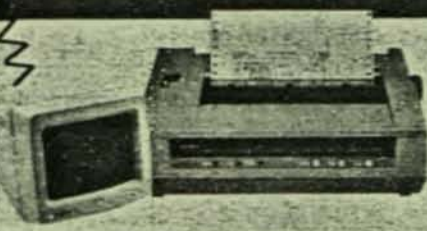
Now that scientific processors supercomputer or near-supercomputer speeds are becoming more prominent in the industry, complaints similar to those lodged against Mips are being voiced about the technique of counting millions of floating-point operations per second (Mflops).

In theory, Mflops measures the relative speed of a scientific processor by counting the number of straight calculations — such as additions or multiplications — a CPU can carry out in a second. Typically, these calculations do not

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LEVEL 1 - 1 OF 1 STORY

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January 23, 1985, Wednesday

SECTION: SECTION 1; Technology; Pg. 10

LENGTH: 407 words

HEADLINE: Disk store comes in compact 8-pack;
COMPUTER PERIPHERALS

BYLINE: BY ALAN CANE

BODY:

THE COMPUTER business thrives on low cost memory. When magnetic cores were king, IBM cut its manufacturing costs from 5 cents to 0.03 cent a core in 15 years and that fuelled much of its success with System/360 and S/370.

Today it is repeating its past success at the top end of the scale with its 3380 direct access storage device. This is a large sealed Winchester drive capable of storing 2.5 gigabyte (20 thousand million bits) of data.

Many of its competitors are in disarray. Control Data decided to get out of the IBM-compatible memory business after months of problems with its 3380 equivalent, the 33800.

Storage Technology, which filed for bankruptcy under the protection of Chapter 11 of the U.S. Bankruptcy Code late last year, has abandoned plans to build high capacity optical storage devices after spending more than \$130m.

So what kind of company plunges into the memory market at this stage. What can it offer that is new and original?

Tandem Computers of Cupertino, California, does. It is best known as a pioneer of "fault tolerant" computers, machines which will not stop operating because of the failure of any single component.

The trick is duplicated hardware and clever switching software.

Tandem seems to have taken a leaf out of its own book in its first foray into the high capacity memory market.

Its new disk storage device packs eight separate 168-byte Winchester drives in an a single cabinet, giving a total of 1.3 gigabytes.

The device is aimed, as is IBM's largest drive, at customers processing large number of transactions on line and so needing access to large volumes of data.

The Tandem machinery is best noted for its high transaction processing capability.

In its new memory, eight actuators are used making possible eight requests for information to be handled simultaneously.

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Each request for information handled (disk access) takes an average of any 20 millionth of a second, the company claims.

The cabinet containing the drives is six feet square, the most compact in the industry according to Tandem.

The new memory is for Tandem users only -- it is compatible with Tandem's other disk drivers and with its disk controllers but not with other industry standards. So there will be no direct competition with IBM.

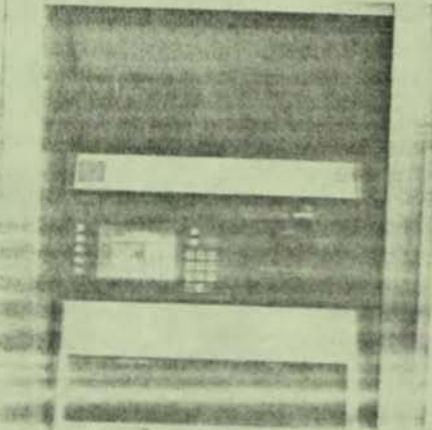
But Tandem spawned a host of imitators for its fault tolerant processors -- it remains to be seen if the same will prove true of its memories.

PRODUCT PARADE



Omron ATM Prints Out Updated Ban

Omron Financial Systems Inc., Las Colinas, Tex., the U.S. subsidiary of Omron Tateisi Electronics Co. of Japan, has introduced an automated teller machine (ATM) with a built-in statement printer that provides the customer with an up-to-date bank account statement. The statement includes a list of all checks cleared since the last statement. The user-friendly Orion ATM also has customer-oriented graphics and the machine is designed to accept cards of all major



resolution IBM EGA/VGA graphics for high-resolution applications is also available. The Graphax can output analog RGB at up to 50 nanoseconds per pixel. The card also features 5-pixel planes and alphanumeric overlay, 32 colors and four 512-color pallet maps for color animation. OEM prices per unit, configured with 512 Kbytes of memory, start at \$1,995. An Integrated Bar Code/Magnetic Stripe Reader has been added by Tandem Computers Inc., Cupertino, Calif., to its options for its line of 653X terminals. The option allows NonStop system users to enter machine-readable information directly from bar code labels and/or magnetically striped cards without having to use the terminal keyboard, thus

eliminating the need for external interface modules. Three versions, 6AIB, 6AIM and 6AIC, are available. The factory-installed Integrated Bar Code Reader is priced at \$1,295. The Integrated Magnetic Stripe Reader is \$1,095, and the combination costs \$1,995. Field-upgrade charge is an additional \$55.

Cynthia Shows 85-Mbyte Drive

Cynthia Peripheral Corp., Sunnyvale, Calif., a subsidiary of French Groupe Bull, has unwrapped its new 85-Mbyte, 5.25-inch Model D585 Winchester drive. The D585, which uses four platters, has a 30-millisecond average access time and incorporates the standard ST412/ST506 interface. It has 98 percent parts commonality with the D530, D550 and D570 series of disk drives. Track density is increased over the D570 from 960 to 1,040 tracks per inch. Data protection is provided by an automatic actuator lock, dedicated landing/shipping zone and full shock mounting. Prices for the D585 are \$1,695 each in moderate OEM quantities. Verbal Technologies Inc., New York City, has introduced a "Text Talking Terminal" that it says increases proof-reading productivity. The terminal,

borough, Mass., has announced a number of new products, including the Britewriter four-color pen plotter for business, the CP2 and CP3 Color Pinwriter dot-matrix printers and three additional Spinmate modules for its Spinwriter 8800 printers. The Britewriter plotter, which is HP 74- and 75-compatible, is available with felt-tip pens in blue, green and red, and has an optional set of four colors—violet, orange, brown and pink. Pens can be changed without interrupting the job and full-color printing can be delivered directly onto transparencies. Distribution has been arranged through high-end retail dealers as well as through OEM channels; the expected retail price is \$599, with

volume discounts available. The CP2 and CP3 eight-color printers, priced from \$1,099, have high-resolution graphics capabilities with direct pin addressing, download characters and an 18-pin dot-matrix head. Forms-handling options include snap-on, adjustable uni- and bidirectional tractors, an automatic cut-sheet feeder and a cut-sheet guide. Both printers have printing capacity of 180 characters per second (cps) on high-speed output, 90 cps on correspondence output and 30 cps on near-letter-quality output. Both have an interface module, that emulate the Epson JX80, and are compatible with most IBM standard packages. Both are targeted for use with IBM PC, PC XT and PC AT. The three new Spinmate printer modules, for which the suggested retail



tape for high-speed backup. It supports many popular languages including R, Cobol and a Basic Four and SMC-compatible Basic. Suggested retail price begins at under \$14,000.

ISI International Products

ISI International, Sunnyvale, Calif., has introduced the addition of a compact single-board Z-80-based microcomputer to its STD bus product line, and an STD BUS-compatible Universal Industrial I/O Module Interface Card. The ISB-310 microcomputer features the choice of either 64 or 256 Kbytes of RAM, a 28-p

to \$45,478,000.

President/CEO Irwin Federman cautioned, however, that "... MMI—reflecting general industry conditions—experienced both a high rate of order cancellations, and a reduced level of new orders in the first quarter...we are optimistic as to prospects for the second half of 1985."

Onyx + IMI

SAN JOSE, CA.—Recovering from the sale of its loss-making IMI subsidiary, micro and Winchester drive manufacturer Onyx + IMI reported a 344% increase in profits for its first quarter ended Dec. 23. Profits were \$648,000 or 6 cents per share, compared with \$146,000 or 1 cent per share in the comparable '84 period. Sales rose 29% to \$8 million.

Quantum

MILPITAS, CA.—Disk drive manufacturer Quantum Corp. reported a 106% increase in profits in its third quarter ending December. Profits were \$5.9 million or 62 cents per share, compared to \$52.9 million or 30 cents per share for the same '83 period. Sales went up 82% to \$31.8 million.

Ramtek

SANTA CLARA, CA.—Ramtek Corp. reported an increase in net income to \$151,000 or 4 cents per share for its second quarter ended Dec. 31 compared to \$118,000 or 3 cents per share for the same '83 period. Sales were up to \$11.5 million for the quarter against second quarter '84's \$10.1 million. The company makes industrial CAD and imaging systems.

Reid-Ashman

SANTA CLARA, CA.—Reid-Ashman Inc., which makes semiconductor test equipment, reported a 42% increase in profits for its first quarter ended Dec. 31. Profits were \$207,000 or 10 cents per share; sales went up 35% to \$1 million. The company attributes the increase to a 490,000-share IPO.

lion. Siltec, which supplies silicon wafers to semi manufacturers, also announced it would implement a two-week production shutdown affecting 650 employees. Company officials cited an inventory glut and flattening orders from semi makers.

Software Publishing

MOUNTAIN VIEW, CA.—Micro software house Software Publishing Corp. reported profits of \$2.36 million or 40 cents per share for its first quarter ended Dec. 31, more than double the comparable '84 figure of \$1.1 million or 21 cents per share. Sales were up 105% to \$11.5 million, compared with \$5.57 million in first quarter '84.

Stanford Telecommunications

SANTA CLARA, CA.—Stanford Telecommunications Inc., which makes equipment for satellite-tracking earth stations, reported net income up 42% for its third quarter ending December. Net income was \$519,000 or 15 cents per share, with sales also up 45% to \$8.4 million for the quarter.

Tandem

CUPERTINO, CA.—Tandem Computer Inc. reported profit and sales increases for its first quarter ended December. Net income was up 39.5% to \$14 million or 34 cents per share over first quarter '83, with operating income up 33.4% to \$22.5 million and sales up 26.3% to \$159.6 million. The company, a pioneer of "fail-safe" minicomputer-based systems, cited its efforts to concentrate on profitability rather than growth recently.

Ungermann-Bass

SANTA CLARA, CA.—Local area network vendor Ungermann-Bass Inc. reported a 229% profit increase for its year ended December. Profits were \$6.3 million or 38 cents per share, compared with '83's \$1.9 million or 14 cents per share. Sales also increased 242% for the year to \$52.3 million against '83's \$15.3 million.

(Please turn to page 26)

competitors are not allowed to enter the market for three years. Cosmetics may not be imported if they contain a single substance not on the government's list of approved ingredients. And to drive the point home, foreign manufacturers are not allowed access to the official list of 2,500 approved ingredients. It wasn't until July, 1981 that the Japanese government revealed 148 of the ingredients.

Foreign cigarettes can be sold at 20,000 retail outlets but not at 180,000 others. Foreign cigarette makers are also hampered by a 35 percent tariff and restrictions on advertising.

Semiconductor component producers in the U.S. find that when they sell integrated circuits to Japanese systems companies, the parts are put in a kind of pre-inventory limbo. Only when the parts are drawn out, sometimes six months to a year later, will the Japanese companies consider paying for the parts. When the U.S. company complains, they are told they don't understand Japanese business practices. And if the price has fallen during this time period, the Japanese company will attempt to negotiate for a lower price.

After several years of foreign protest, some of these practices have been terminated, but Japanese officials still use bureaucratic haze and delays, thus further discouraging the foreign company and giving time for the Japanese

(Please turn to page 26)

Silicon Valley Tech News
Jan 21 1985 p 25

floppy disk drive controllers. Both drives use 3M Co.'s DC1000 0.15-inch-wide tape.

Irwin said each drive is priced at \$330 in quantities of 1000; MS-DOS-compatible software for both streaming and file-by-file backup functions is available at no extra cost, it was noted.

New Co. Set To Ship Optical Tape Drive

PRINCETON, N.J. — A new tape drive company based here plans to begin shipments of a 2.5-gigabyte optical tape drive later this year.

Laserstore Inc. said the drive—which will be available in an 8-inch form factor—uses a proprietary 1/2-inch tape cartridge. The company said it has a major media supplier signed up to produce the cartridge, although the company wouldn't identify the supplier.

Laserstore's proprietary cartridge is said to be slightly larger than the IBM 3480 1/2-inch tape cartridge.

Marketing vice-president Peter Whear said

Tandem Debuts High-End Disk Subsystem

CUPERTINO, CALIF. — Tandem Computers Inc. last week brought out a high-end disk subsystem to be used with the company's transaction-processing systems.

The new V8 Disc Storage Facility is said to store up to 1.3 gigabytes of data. Tandem said the product packages up to eight 168-Mbyte Winchester disk drives, supplied on an OEM basis by Fujitsu America Inc., in a single cabinet.

In 1980, Irwin was reorganized as Irwin Magnetics Inc. to focus primarily on the OEM tape drive marketplace. The company is one of the industry's few suppliers of OEM tape drives using the 3M DC1000 cartridge as well as one of the few suppliers to market drives in the 3.5-inch form factor.

that drive should sell for around \$2500 in OEM quantities while the tape cartridge will be priced at around \$40.

The write-once device is designed for mini-computer and superminicomputer applications to back up clustered 8-inch disk drives, said Whear. The native interface for the drive will look like an SMD interface, while the company will offer IPI, SCSI and Pertec interfaces as well.

Laserstore expects to deliver evaluation quantities in the third quarter of this year. Production shipments will start in the second or third quarter of next year, noted Whear.

Reportedly available for immediate delivery, the V8 Disc Storage Facility is priced beginning at \$50,000 for a configuration including the cabinet and four 168-Mbyte unformatted disk drives.

Additional Winchester drives can be added in increments of two drives up to a maximum of eight per cabinet. Additional pairs of drives are priced at \$20,000. The maximum V8 configuration with eight drives and the cabinet is priced at \$88,000.

Falco Unveils New Low-End ASCII Terminal

SUNNYVALE, CALIF. — Falco Data Products Inc. has brought out a low-end ASCII terminal to be marketed primarily through its distribution channel.

Falco president Edward Browder said the new Fame 50 terminal emulates Wyse Technology Inc.'s WY-50 terminal; TeleVideo Systems Inc.'s 910, 920 and 925 terminals; and Lear Siegler Inc.'s ADM 31 terminal.

The \$595 Fame 50 has an 80-column-X-132-column capability, 16 programmable function keys with an extended storage memory of 512 characters, a buffered bi-directional printer port, and nine programmable editing keys.

Browder said the product is available for immediate shipment.

According to Browder, 90 percent of the Fame 50 models will be marketed through distributors and 10 percent through OEMs. Falco has 23 distributors and 40 OEMs.

IBM soon will unveil an i

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Other observers point to I
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MEGA
MEMORIES

earnings outlook for Norsk is quite strong and we continue to recommend purchase of the shares. LES

The order acceleration that began in the June quarter at Prime appears to have continued through the December period, with 25%+ growth likely. Now that Prime has new products at all ranges of the product spectrum, its competitive position has greatly improved. CAD/CAM sales continue to do well, and should contribute more than \$100 million to Prime's expected 1984 revenues of \$650 million. SG&A expenditures are expected to be higher as a percentage of sales in the period due to the aggressive sales force hiring which took place last quarter. Earnings per share should come in around \$0.30, versus \$0.21 a year ago. We continue to view the entire minicomputer group as attractive, with Prime ranked behind DEC and Data General. LES

Incoming business at Stratus continues to be quite strong, with fourth quarter revenues expected to exceed \$13 million, nearly double last year's level. As usual, the quarter's final results depend largely on the level of business received in the final weeks but indications are that earnings per share should be in the \$0.08-0.09 range (there will be no tax credits this quarter), versus \$0.03 a year ago and \$0.06 in the immediately preceding quarter. More than half of the company's sales are coming from the new XA 400 and XA 600. The 600 has proved to be somewhat harder to produce than originally anticipated, while production of the 400 came on faster than planned. Stratus now has 100 people in the field, of whom slightly more than half are salespeople. It has originally hoped to have 10-12 more sales reps by year end than the current level. Business in Europe is going well, with the U.K. operation now getting off the ground. Olivetti, which accounts for about 10% of sales, represents Stratus in the rest of Europe. This arrangement will become less significant as Stratus begins to go direct in more countries. In addition, Olivetti will probably begin to sell AT&T's fault tolerant system now that the latter owns 25% of Olivetti. For 1985, we expect Stratus to earn \$0.45-0.50 on revenues of \$80 million plus. We continue to recommend purchase of the stock. LES

It is not yet clear whether the momentum established by Tandem in the fourth quarter continued into the first period. While the general level of order activity is reasonably strong, the quarter's results will depend largely on the company's success rate at capturing some of the large orders it has been working on. Margin improvement is Tandem's primary goal, and it hopes to achieve operating margins in the 13-15% range by year end. The headcount is expected to be down this quarter for the second consecutive period. TXP continues to be the major contributor to revenues while a new low-end system is due to be announced within a few months. While the company's goal of 25-30% revenue growth this year should be attainable, our confidence in the level of earnings visibility is still lower than we would like. LES

LEVEL 1 - 1 OF 3 STORIES

Copyright © 1985 The New York Times Company;
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January 16, 1985, Wednesday, Late City Final Edition

SECTION: Section D; Page 4, Column 3; Financial Desk

LENGTH: 150 words

HEADLINE: COMPANY BRIEFS

BODY:

*

Chemical Bank said it had received final approval from the United States and Australian Governments to buy the remaining 50 percent interest in its Australian merchant bank, Chemical All-States Ltd.

*

Eastman Kodak Co., Rochester, said it planned to enter the fast-growing machine vision market, forming a new unit called Videk that would operate as a division of Eastman Technology Inc., a subsidiary.

*

Star Glo Industries Inc., East Rutherford, N.J., said it had terminated its Oct. 26, 1984, agreement with SPB Carlton Inc., a subsidiary of the closely held Pinnacle Industries, for the sale of substantially all of its assets, for \$5.50 a share.

*

Tandem Computers Inc., Cupertino, Calif., said it had introduced a high-performance disk storage that stores up to 1.3 gigabytes and speeds access to data through a new packaging design.

SUBJECT: Terms not available

LEVEL 1 - 2 OF 3 STORIES

Copyright © 1985 Business Wire Inc.;
Business Wire

January 15, 1985, Tuesday

DISTRIBUTION: Business Editors

LENGTH: 413 words

HEADLINE: TANDEM; Introduces new high-capacity high-performance disc storage product

DATeline: CUPERTINO, Calif.

BODY:

Tandem Computers Inc., (TNDM:OTC) Tuesday announced a new high-performance disc storage product that stores up to 1.3 gigabytes (1.3 billion bytes) and speeds access to data through the use of a unique new packaging design. Designated the V8 Disc Storage Facility, the product packages up to eight high-speed 168-megabyte Winchester drives in a single compact cabinet. The multiple drives speed access to data by allowing up to eight simultaneous disc accesses with an average seek time of only 20 milliseconds each. Jerry Peterson, vice president of product management and international marketing and sales, stated, "We designed the V8 for our customers who have very large data bases and are processing high volumes of transactions. The V8 will increase throughput in these applications by allowing fast, frequent access to large amounts of data with a high degree of parallelism. With eight disc drives packaged in six square feet of floor space, the V8 is the most economical user of computer room space in the industry. The V8 features a modular design that allows easy on-line service. Disc drive modules are slide-out units that can be individually installed or removed from the cabinet without disturbing any cables or interrupting other drives that are installed and operating in the same cabinet. The V8's design enhances reliability and data availability through the use of sealed Winchester technology drives, a dedicated power supply for each drive and two cabinet power cords. Each cord supplies power to up to four drives, allowing data to be mirrored on discs housed in the same cabinet to ensure data availability even in the event of a drive failure. The V8 Disc Storage Facility is available for immediate delivery. The minimum V8 configuration includes the cabinet and four drives, each with a storage capacity of 168 megabytes unformatted (128 megabytes formatted). It is priced at \$50,000. Additional sealed Winchester modules can be added in increments of two, up to a maximum of eight per cabinet. Additional pairs are priced at \$20,000. The maximum V8 configuration with eight drives and cabinet is priced at \$88,000. Tandem Computers Inc. manufactures and markets computer systems and large networks for the on-line transaction processing marketplace.

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

LEXIS NEXIS LEXIS NEXIS

...to the point where the most powerful products today are the VLSI microprocessors. People are beginning to work on schemes to attach a number of these into a multiprocessor computer. This next generation of computer systems should be available on an engineering basis in the next 12 to 24 months.

There are three efforts going on today to develop a multiprocessor computer. One is being conducted by Dr. David Shaw, associate professor of computer sciences at Columbia University.

He is working on a project called the NON-VON (named

communications network). The processors will each be able to write to any location within memory. The machine could address 4 gigabytes of main memory, would have peak performance of 160 MIPS and would be substantially better on a price/performance basis than the new DEC VAX 8600.

Pete Wilson of Inmos Corp., a semiconductor house in Colorado Springs, Colo., is working on the design of a family of microprocessors for multiprocessing computer systems. The IMS-T424 is the first transputer Inmos is working on and is expected to come out with it this summer.

...come out late in 1985; a disk controller chip and a telecommunications controller.

The third multiprocessor effort is being undertaken by a systems company, Star Technologies Inc. The company designs, develops, markets and manufactures high-performance scientific computer systems.

Star has a multiprocessor computer under development called ECAD that could be completed in the next 24 months. Star is using VLSI pieces that it has custom designed. The finished product will be used for scientific

But this will have universal application within the computer industry. General-purpose computing will be faced with competition from this type of product, which will be commercialized in the next five years. In addition, with the advent of multiprocessor technology, all the AI companies around today will be given new powerful tools to develop products useful to American industry. Multiprocessing technology lends itself especially to AI because of the way these companies approach computer problems.

Street Talk

The stock of **Intergraph Corp.** was battered last week after **First Boston Corp.** analyst Thomas Henwood removed the issue from First Boston's recommended list. Intergraph fell a total of 5-3/4 points, to 49-1/2, in heavy over-the-counter trading after Henwood reportedly reduced his 1984 and 1985 earnings estimates for the CAD/CAM company. Intergraph, however, wasn't the only high-technology company that fared poorly in the first trading session of 1985: **Apple Computer Inc.** and **Digital Equipment Corp.** both dropped more than a point, and **IBM** and **Data General Corp.** lost more than \$2 each in a broad sell-off in which the Dow Jones industrial average slipped 12.7 points.

A company that has been loved and hated on Wall Street, **Tandem Computers Inc.**, is again attracting attention in certain sectors. In recent research reports, **Goldman, Sachs & Co.** analyst John Levinson has recommended purchase of the company's stock. Levinson expects revenue for Tandem's 1985 first quarter, which just ended, to come in at around \$160 million. He also expects margins to improve to 12.5 percent from 11.7 percent in the September quarter. All this should lead to a 1985 per-share earnings figure of \$1.25, Levinson believes, up from 80 cents a share in fiscal 1984. The

company's stock, traded over-the-counter, has been changing hands at around \$18 lately, for a price/earnings ratio of 22 relative to 1984 results.

Altos Computer Systems said it will purchase up to 500,000 shares, or more than 3 percent, of its stock over the next year for use in employee benefit programs. Phil Johnson, director of investor relations, said Altos decided to repurchase the stock because it has been trading at very low prices, lately around 9-1/4, in the over-the-counter market. Although research-and-development requirements make stock repurchases a difficult expenditure for many high-technology companies, Altos is in a better position, being highly liquid, Johnson said. As of three months ago, Altos had \$59.8 million in cash, most of that from the company's initial public offering in November 1982. Altos, which earned 65 cents a share in fiscal 1984, has virtually no long-term debt, Johnson said. In launching a repurchase plan, Altos is following in the footsteps of such companies as **Tandy Corp.**, **Prime Computer Inc.** and **Floating Point Systems Inc.**, all of which embarked on stock repurchase programs last year.

Ken Brody, the **Goldman, Sachs** partner

who set up the firm little more than two to real estate financing is continuing as coordinating comman, Sachs partner, ing, has moved in cant changes are group, which has to a leadership banks underwriting ty offerings.

Michael C. Brook Inc. managing dis firm's New York ties in emerging-to join venture firm liam F. Murdy, a p in charge of Morg investment account technology group. McClelland, in ch ing-growth invest San Francisco and will assume overal ing growth invest and McClelland h 11 years.

WHO'S ON FIRST

SRI INTERNATIONAL

wood Ave.
CA 94025 (415) 326-6200

Nielson has been appointed vice president of SRI's Computer Science and Technology Division. He will have overall responsibility for directing and managing the operations of the division, which includes SRI's Science Laboratory, the Artificial Intelligence Center and Telecommunications Sciences Center. Nielson joined SRI as a research engineer in the communication and computer laboratory. For the past nine years he has served as vice president of the Telecommunications Sciences Center, and for the past five years he has acted as director for CSTD. SRI International is a not-for-profit problem-solving organization that provides services to industry, business and government around the world.

OKI SEMICONDUCTOR

Bella Ave.
New, CA 94043 (415) 958-9241

He has been appointed director of human resources at Oki Semiconductor. In his new position, he will be responsible for employment, recruiting, employee relations, compensation, and training and development. Most recently, he worked with Inmac as staffing and development manager. He held similar positions as an independent management consultant and with Blue Cross of California and Wells Fargo Bank. Oki Semiconductor is a manufacturer of high quality integrated circuits which include CMOS analog-to-digital converters, frequency converters, interface logic circuits, power MOSFET drivers, operational amplifiers and peripheral interface circuits.

MICRO POWER SYSTEMS, INC.

St.
CA 95050 (408) 727-5350

Hammer has been promoted to senior vice president and chief financial officer at Micro Power Systems, Inc. He will be responsible for corporate information systems, general accounting, equity financing efforts and will also play a



METAPATH, INC.

737 Lincoln Centre Dr.
Foster City, CA 94404
(415) 345-7700

H. Michael Doran has joined Metapath, Inc., as president and chief executive officer.

Prior to joining Metapath, Doran was president and chief executive officer of Teletone. Before that, he was vice president and general manager of R-Tec, a division of Reliance Electric.

Doran holds a bachelor's degree in business from the University of Oregon.

Metapath develops and manufactures modular distributed data switch systems.

TANDEM COMPUTERS INC.

19333 Valico Parkway
Cupertino, CA 95014 (408) 725-6000

Stephen C. Schmidt has been appointed vice president of operations for Tandem Computers Inc. Formerly vice president of strategic planning and product management at Tandem, he will assume overall responsibility for the firm's worldwide manufacturing including production operations at Tandem's six major manufacturing plants, material purchasing and control, manufacturing technology, quality assurance and production test operations. Tandem Computers manufactures computer systems and networks for the on-line transaction processing market.

OKI SEMICONDUCTOR

650 North Mary Ave.
Sunnyvale, CA 94086 (408) 720-1900

Mike Hamper has been appointed vice president of sales for Oki Semiconductor. In his new position, he will oversee all of the company's international and domestic sales activities. Hamper was previously Eastern area sales manager for Oki. Prior to joining Oki Semiconductor, he held managerial sales positions at National Semiconductor and Litton Industries. He has also held engineering positions at Automatic Electric and RCA Service Co. Oki Semiconductor designs, manufactures and markets very-large-scale integration (VLSI) circuits for use in computers, telecommunications systems and consumer products.

ELXSI

2334 Lundy Place
San Jose, CA 95131 (408) 942-0900

Jacob F. Vigil has been appointed president and member of the board of directors for ELXSI. Vigil joined ELXSI in 1983 as chief operating officer, where he was instrumental in organizing the company's efforts to manufacture and market ELXSI's superminicomputer. ELXSI was formed to develop an advanced general-purpose computer system offering a price/performance ratio superior to competing systems.

SRI INTERNATIONAL

333 Ravenswood Ave.
Berkeley, CA 94705 (415) 326-6200