

LEVEL 1 - 3 OF 5 STORIES

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February 19, 1986, Wednesday

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LENGTH: 569 words

HEADLINE: MCDONALD/TANDEM/SIS; Tandem NonStop computer and SIS software selected
by McDonald & Co. Securities Inc.

DATELINE: CUPERTINO, Calif.

BODY:

Tandem Computers Inc. (OTC:TNDM) Wednesday announced that McDonald & Co. Securities Inc. of Cleveland, Ohio, has installed a Tandem NonStop TXP computer and software from Securities Industry Software Corp. (SIS) of Evergreen, Col., to operate an integrated brokerage accounting system. McDonald & Co. is a leading Great Lakes investment banking and brokerage firm. Willard E. Carmel, chairman of McDonald, said the company installed the system, their first in-house computer for brokerage services, to contain costs and enhance services to clients. "Like most regional brokerages, we have relied on outside service bureaus in the past," said Carmel. "The new system will make us more competitive by giving us better access to information and protecting us from rising service bureau costs." The Tandem/SIS system will handle order management, brokerage accounting and real-time firm trading. According to Edward L. Tabol, chief financial officer, McDonald chose a Tandem system because of its fault tolerant features and communications capabilities, and because the software developed by SIS provided the full range of applications McDonald needed. "We want to ensure that our clients receive prompt service without the delays that computer failures can cause," he said. Tandem is a leading supplier of computer systems to the brokerage and securities industries with installations at firms such as Merrill Lynch & Co., Kidder, Peabody & Co. and Oppenheimer & Co. The SIS package, designed to run exclusively on Tandem systems, is used by 32 brokerage companies including 10 that own Tandem systems and 22 that use Tandem-based computer services from SIS. Randy Bliss, director of marketing for SIS, said, "Our package is the only totally integrated real-time system for brokerage accounting. "Financial service firms must take advantage of such state-of-the-art data processing and telecommunications techniques to maintain their positions in a fast-changing regulatory, technological and competitive environment." Gerald L. Peterson, Tandem vice president of marketing, added, "McDonald is one of a number of regional securities firms that are beginning to move their information processing in-house. Like most businesses they are finding that on-line information not only gives them more control over their daily operations, but can be a strategic competitive weapon." SIS, which provides specialized software to the financial community, is a member of the Tandem Alliance, a program to encourage firms to develop application software programs that run on B!xV ZLHjKo W Z Y Z*r*hZs headquartered at 4886 Beaver Brook Drive, Evergreen, 80439. Tel. 303/670-1000.

Tandem Computers Inc. manufactures and markets computer systems and networks for the on-line transaction processing marketplace. The company is headquartered at 19333 Vallco Parkway, Cupertino 95014. Tel. 408/725-6000. Note to editors: Tandem, NonStop and NonStop TXP are trademarks of Tandem Computers Inc.

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LEVEL 1 - 1 OF 2 STORIES

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February 18, 1986, Tuesday

DISTRIBUTION: Business Editors

LENGTH: 439 words

HEADLINE: TANDEM; Announces two new line-matrix technology printers

DATELINE: CUPERTINO, Calif.

BODY:

Tandem Computers Inc. (OTC:TNDM) Tuesday announced two new line printers incorporating the latest line-matrix printer technology, designed specifically for reliable, high performance operation. Designed for use with the company's Non-Stop systems, the new printers are the most reliable of their kind, increasing the mean-time between-failure by as much as 100 percent. The 5515 desktop model prints at 300 lines per minute, and 5516 free standing model prints at speeds up to 600 lpm. Both printers are designed for medium- to high-duty printing and support a wide variety of applications for the office, manufacturing floor and the computer room. Advanced microprocessor controls provide such functional capabilities as a self-test diagnostic that isolates most failures to the board level, allowing for quick repair. Both have few moving parts and require no scheduled maintenance. The new printers use state-of-the-art line-matrix printer technology that provides high-resolution quality characters, avoiding print quality deterioration on high-usage characters while printing at band printer speeds. Lawrence A. Laurich, vice president of engineering, stated, "Tandem is adding the leading edge impact printer technology to its NonStop systems. The new models allow us to offer greater versatility and reliability to our users." Requiring minimum floor space of less than three square feet for either model, both printers offer the capability to print graphics images for such applications as technical documentations, bar graphs and charts for office presentations. In addition, both models can create multiple low-resolution bar codes and oversize characters for manufacturing and distribution markets. Printer features are under application control. By utilizing line-matrix printer technology, the new models offer users the ability to select characters sets for multiple languages including most major European languages. The 5515 and 5516 printers are available for immediate delivery in the United States and Canada. Availability to all other locations will be in the third quarter of 1986. The 5515 is priced at \$7,200 (U.S.); the price for the 5516 is \$11,950 (U.S.). Quantity discounts are available. Tandem Computers Inc. manufactures and markets computer systems and networks for the on-line transaction processing marketplace. The company is headquartered at 19333 Vallico Parkway, Cupertino 95014. Tel. 408/725-6000. Note to editors: Tandem and NonStop are trademarks of Tandem Computers Inc.

CONTACT: Tandem Computers, Cupertino
Rich Ghiossi, 408/725-6330**LEXIS NEXIS LEXIS NEXIS**

in other countries.

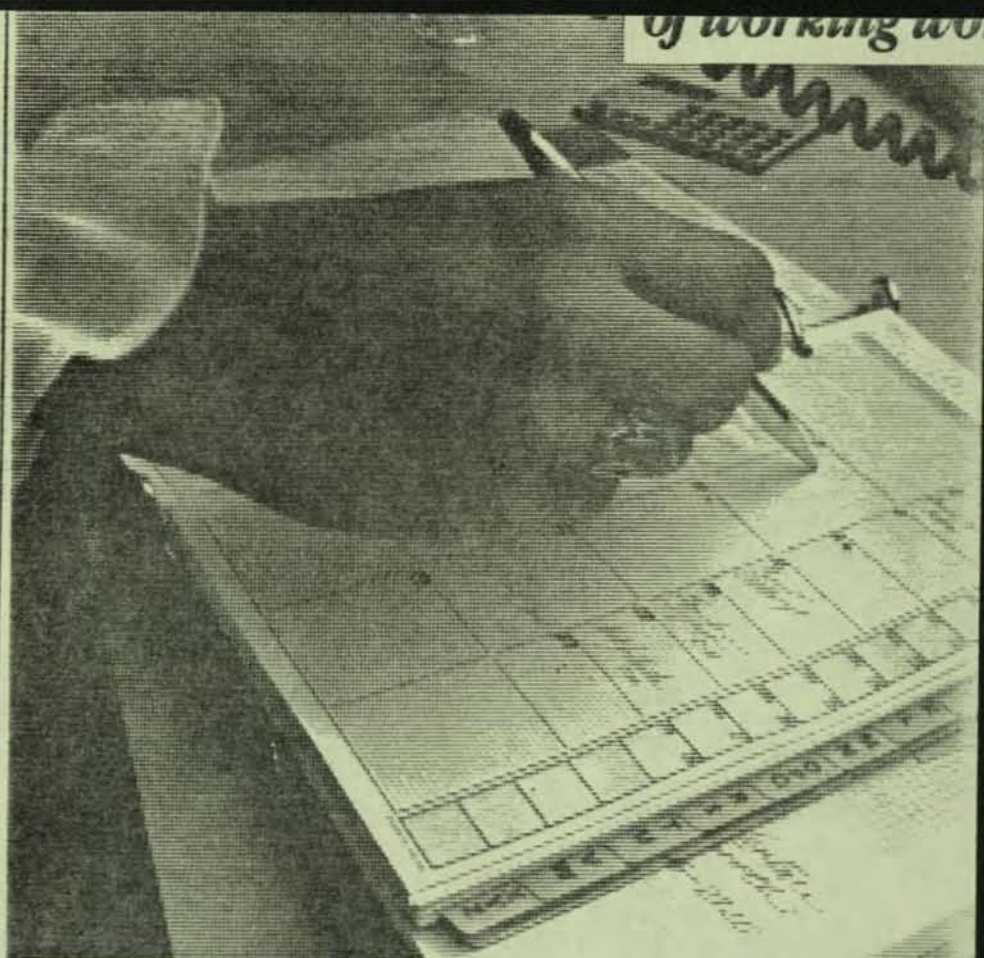
General Motors Corp. has led the drive to develop integrated manufacturing systems by codifying the standards IBM is developing with Industrial Networking. In the last two years, GM and other major manufacturers decided that they would only buy equipment adhering to the standards, called Manufacturing Automation Protocol.

IBM's new Silicon Valley deals are viewed as an endorsement of Measurex and Industrial Networking and an admission that, in factory automation, Big Blue cannot do what it often does in businesses—supply every part of a data processing system.

Industrial Networking's product marketing manager, David Fields, said the need for manufacturers to turn to a number of vendors has left it three to five years behind other businesses in automating.

The Silicon Valley deals, said Fields, "represent a kind of admission by IBM that they need to figure out how to play in a multi-vendor environment on the factory floor."

Industrial Networking is a closely held joint venture of Ungermann-Bass Inc. of Santa Clara and General Electric Co. Fields said IBM and Industrial Networking had been working together "for a long time before the announcement came out." He would not say when the first



Tandem invests in Texas firm

Hoping to profit from increasing demand for networks to let computers exchange data, Cupertino-based Tandem Computers Inc. has made its first equity investment, purchasing a minority interest in a closely held Texas company that makes telecommunications hardware and software.

Tandem officials would not disclose the terms of the agreement.

Tandem makes computer and communications networks designed with backup systems to prevent system failures. Pat Becker, Tandem's director of corporate communications, said its 19.5 percent ownership of Integrated Technology Inc. of Plano, Texas, could result in Tandem computer systems tailored for telecommunications switching equipment.

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*San Jose Business Journal
2/17/86 p13*

2/17/86 p23

PEOPLE ON THE MOV

Steve Hoberg has rejoined Robert E. Agorastos Inc. of Milpitas. Most recently, he operated his own business in Santa Cruz. Hoberg will be responsible for preparing bid proposals and estimating job costs as well as seeing construction projects through to completion.

Dr. Dennis Augustine has been elected secretary of the national Academy of Ambulatory Foot Surgery. He is the founder and director of the Park Avenue Foot Clinic in San Jose.

Tandem Computers Inc. of Cupertino has elected Donald E. Fowler vice president of strategy and corporate development, a new position. He assumes responsibility for the company's strategic planning process. Fowler previously held a position in strategic planning with the Bechtel Group.

National Advanced Systems of Mountain View named Gary Land vice president of market planning. He was vice president of marketing for Optimum Communications Inc. Land will be responsible for product and strategic planning.

C. Jean Littrell-McCulley has been appointed marketing communications manager at the Microcircuits Division of Intech Inc. of Santa Clara. She will be responsible for all aspects of advertising, public relations, trade shows, catalogs and data sheets. McCulley was a marketing communications consultant.

Ed Zschau for U.S. Senate of Los Altos has appointed its fund-raising staff. Joyce Valdez will co-ordinate efforts in Los Angeles. Karolyn Dorsee will take charge of fund-raising events in San Diego County. John Hix and Lynn Joyner will spearhead activities in the Central Valley. Northern California fund raising will be headed by Kimberley Williams and John Fisher will be co-ordinating efforts in the bay area.

LaPine Technology Corp. of Milpitas has appointed Russell Krapf as chief operating officer. He has been president of Grenex, a Fremont

elect; Dana Sutherland, vice president programs; Robin Carr, treasurer Lisa Figlioli, secretary.

Prentice Corp. of Sunnyvale selected Phil McDermott president and chief executive officer. He comes with 19-year career at Northern Telecom.

Louis Tomafsky has joined the related sales and service office of Delithograph Co. in Santa Clara.

Altera Corp. of Santa Clara has selected Charles Messmer to the new created position of western area sales manager. He will be responsible for managing the sales activities of manufacturers' representatives and distributors in the 11 western states. Messmer was western area sales manager at Mostek.

Star Microwave of Campbell has chosen Richard DeLauer as permanent business adviser. He is president of the Orion Group Ltd. of Alexandria, Va. DeLauer will advise the company on microwave equipment and product requirements for both domestic and offshore markets. Star Microwave also appointed Wayne Coturri as manufacturing engineering manager. He has more than 13 years of process and material engineering experience in microwave and special purpose tubes.

Seiko Instruments U.S.A. Inc. of Santa Clara has named Michael Hoffman product sales manager for its focused ion beam mask repair systems. He will have marketing, sales and organizational responsibility for the product line. Hoffman was regional sales manager for the company's Scientific Instruments Division.

THOUGHT FOR THE DAY

The word "mercy" keeps coming into my heart and mind. God's mercy towards us is so much

MISWeek Feb 17, 1986

Tandem Buys Slice Of Startup Telecom Firm

By JULI CORTINO

CUPERTINO, Calif.—Tandem Computers Inc. last week joined a small, but esteemed, group of its peers in forming an alliance with a telecommunications service provider, Integrated Technology Inc. (ITI) of Plano, Tex.

Tandem purchased a 19.5 percent equity stake in the 21-month-old, privately-held startup company, an investment that was Tandem's first under a new alliances program established a year ago.

Financial terms of the agreement, which gives Tandem one seat on ITI's board of directors, were not divulged.

Integrated Technology, founded in May 1984, announced its intention last August to develop and market, with Tandem, a sophisticated signalling and computer database system to long distance carriers and regional Bell operating companies (RBOCs) (See August 28, 1985 MIS Week, pg. 1).

Integrated Technology's system, based on Tandem's NonStop processors, provides common carriers with a specialized hardware and software combination the carrier can use to offer users "intelligent network services."

Enhanced '800' Included

Peter Walsh, ITI vice president of marketing and sales, said applications offered include enhanced "800" toll-free service, virtual private network services, calling card applications and communications links between automated teller machines (ATMs) and bank databases.

"Tandem has not been on the switching side of the telephone industry," said Walsh. "They've supplied equipment to the MIS, and business or administration, sides of companies like GTE and Sprint. ITI gives Tandem software and systems integration expertise in the switching and engineering side of the industry."

Gerald D. Held, Tandem director of new ventures, said, "ITI was looking for some funding, and we figured better us than some other vendor. We also consider this alliance to be in a strategic, emerging technology area. We want the telecommunications world to understand our commitment to the data communications marketplace."

The Tandem-ITI alliance gives Tandem an entre into the world of integrated services digital networks (ISDN), a concept that reflects a move to all-digital networks universally accessible to users.

Held said Tandem has seen "one opportunity (for investment) per day" since it announced its strategic alliances program. "Data communications is an area ripe for other relationships," said Held, who hinted of more such alliances to come this year.

Analyst: 'Not Surprising'

David Wu, analyst with S.G. Warburg, Rowe, & Pitman, Akroyd Inc., said Tandem's purchase of a stake in a telecommunications company is "not

surprising."

Said Wu, "This is a growing trend. We've seen alliances between Wang and Intecom, IBM and Rolm, and AT&T and Convergent Technologies."

Wu said alliances and planned new technologies aside, "The key issue for Tandem over the next three years is marketing. That will determine their success."

Wu noted that Tandem faces increasing competition from

Digital Equipment Corp. and Stratus Computer Inc. One way in which Tandem will combat the competition this year is to in-

code-named Check, is expected to be introduced in April. The systems are expected to be based on a chip similar to one used in Data

FINANCIAL

roduce a new generation of computers based on emitter-coupled logic (ECL) technology.

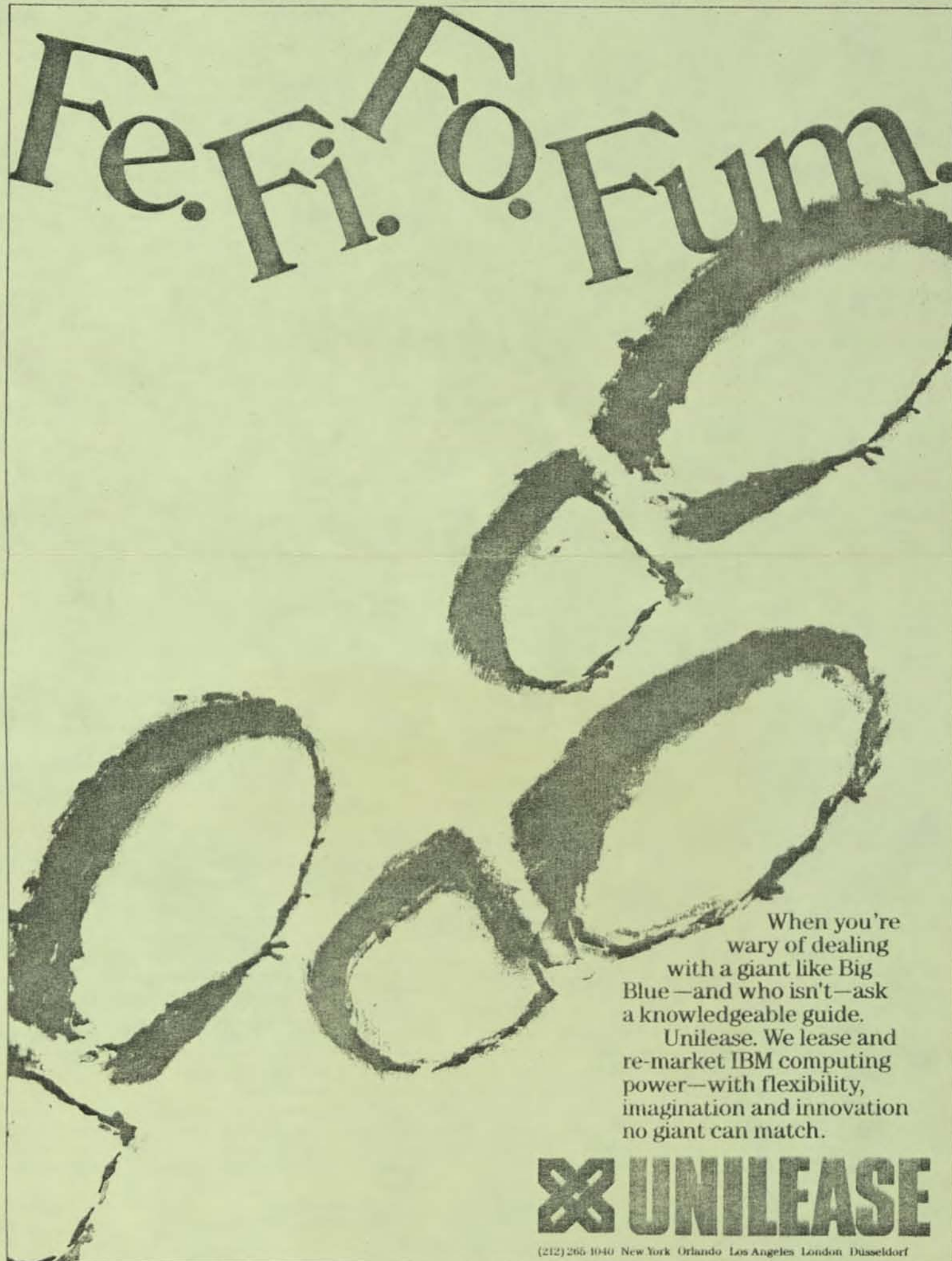
Tandem's new computer line,

General's Eclipse product line, the 2800 ECL. The ECL chip is manufactured by Motorola, which is said to be working with

Tandem on technology for its new systems.

The ECL technology, said to be four times faster than Tandem's current systems' technology, will be central to the new processors. The existing technology will be used in conjunction with ECL, however, in order to maintain compatibility between Tandem's new systems and its older generations.

The Check system will be the first in an expensive series of processors. Beta testing reportedly has begun on the systems.



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Tandem Names V-P For Strategic Plans

CUPERTINO, Calif. — Tandem Computers, Inc., has named Donald E. Fowler vice-president of strategy and corporate planning, filling a position which has been vacant for the past 2 years.

Mr. Fowler, who will report to president and chief executive James G. Treybig, will be responsible for strategic planning. Reporting to Mr. Fowler will be Thomas Chun, vice-president of corporate projects, who had reported to the Office of the President, consisting of Mr. Treybig and Robert C. Marshall, senior vice-president and chief operating officer; and Gerald Held, director of new ventures.

Before joining Tandem, Mr.

Fowler had been manager of information technology at Bechtel Corp., San Francisco, responsible for the development of strategic plans for information technology and technology in the defense and space industries. Prior to joining Bechtel, Mr. Fowler had been an IBM employee for 11 years.

The strategic planning vice-president post had been vacant since Steve Schmidt was transferred from the post of vice-president of strategic planning and product management to vice-president of operations. In that 2-year interval, responsibility for strategic planning had been shared by Mr. Treybig and other members of the executive staff.

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Electronic News

Feb 17, 1986 p21

To: Lynne Price Loc: 100-05

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CORPORATE

Cobol 85 compiler awaited

Tandem eyes April debut for ANSI standard tool

By John Gallant

CUPERTINO, Calif. — The first fully Cobol 85-compatible compiler may be available as early as April 1.

Tandem Computers, Inc., headquartered in Cupertino, has targeted that date for the release of a Cobol compiler and runtime library dubbed Cobol85 [CW, Sept. 26] for use with its Guardian 90 operating system on Tandem's Nonstop II and TXP processors. The company said it believes Cobol85 will be the first generally available compiler that conforms fully to the new Cobol language standard, known as Cobol 85, approved late last year by the American National Standards Institute (ANSI) and the International Standards Organization [CW, Sept. 16; Sept. 23].

Participants in the drafting of Cobol 85 agreed that Tandem's compiler will be a pioneering effort. Jerome Garfunkel, founder of Litchfield, Conn.-based Jerome Garfunkel Associates, Inc., a Cobol 85 consulting and training firm, and a member of the ANSI Cobol committee, said vendors like IBM and Digital Equipment Corp. have offered compilers that boast many of Cobol 85's features. "But as far as I know,

this is the first fully compatible compiler," Garfunkel said. "A lot of other products come close, but this is the first exact implementation of the standard."

Because the federal government has given vendors that sell to government agencies 18 months to provide a Cobol 85 compiler for use with their hardware, most major manufacturers will offer such products by late 1986 or the first quarter of 1987, Garfunkel said.

Tandem's Cobol85, which will be licensed at a monthly fee of \$300, supports all of ANSI's required standard modules including the nucleus, sequential and relative I/O, indexed I/O, sort/merge, interprogram communications and source text manipulation. According to Donald Nelson, senior software designer at Tandem and chairman of the Codasyl Cobol Committee, Tandem has chosen not to implement optional modules of the Cobol standard such as the report writer and segmentation modules.

Corinne Robinson, product manager for languages and tools with Tandem, said the company would not divulge the number of Cobol85 beta test sites or the installation base of the Guardian 90 operating system. She said Tandem currently has 1,000 customers, 70% of whom use the company's older Cobol 74-compatible compiler. "Ob-

See **TANDEM** page 32

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ComputerWorld
Feb 17, 1986 p 29

INSTANT ANALYSIS

"The major hardware manufacturers waited for the ANSI committee to make Cobol 85 official. None of them were bold enough to prerelease a product. But now that vendors have the assurance of a standard, they are readying their compilers."

— Jerome Garfunkel,
founder,
Jerome Garfunkel
Associates, Inc.,
on the status of
Cobol 85 compilers

Tandem Cobol85 compiler awaited

From page 29

viously, we'd like to convert all of them to Cobol85 in order to help them become more productive," Robinson said.

Though potential incompatibility between Cobol 74- and Cobol 85-based applications was a major issue that stalled adoption of the new language standard, Nelson said he feels conversion problems for Tandem users should be minor ones.

"As it turns out, the beta users have experienced little trouble, if any," according to Nelson.

He said there is little but professional pride to be gained by releasing the first Cobol 85-compatible compiler.

Garfunkel was more generous, saying, "Very few people are going to switch hardware vendors just to get a compiler," Garfunkel said. "But Tandem is gaining a reputation within the industry for being a leading-edge company. Tandem is hoping to extend that reputation to the user community."

Tandem Buys 19.5% of Integrated Tech

CUPERTINO, Calif. — Tandem Computers, Inc., has purchased for an undisclosed amount a 19.5 per cent equity stake in Integrated Technology, Inc., a privately-held Plano, Tex., telecommunications company.

As expected (Data Topics, Feb. 10), the two firms, which have been engaged in joint development projects since last August, plan to introduce a Signaling System 7 controller and software package integrated with Tandem's NonStop transaction processors, which they plan to market to carriers beginning in the middle of this year. (EN, Feb. 10)

Tandem's decision to take an equity investment in ITI is part of a strategy adopted last year to work closely with other firms in the development of products, and sometimes take equity positions in companies which would play an important role in Tandem's future, said Gerald Held, director of new ventures at Tandem.

Tandem is engaged in discussions with other unidentified companies it might take an equity position in, and "we will be announcing others in the future," Mr. Held said.

Tandem decided to take an equity position in ITI because the company believes the Tandem system is ideally suited to play a role in ISDN networks. The development of the Signaling System 7 capabilities which enable the Tandem system to become a sig-

nal control point is the first project the two have developed, but the two firms are "definitely interested in offering other services related to ISDN," Mr. Held said. He would not say what specific projects were under way, but said development of them would take place in Plano and Cupertino.

Because of the equity investment, Tandem will receive one new seat on the ITI board. Tandem does not have any plans to increase its equity position, a Tandem spokeswoman said.

To offer the Signaling System 7 capabilities, Tandem has developed, with ITI engineers, signalling control elements that are based on Motorola 68020 microprocessors and which will be integrated into the Tandem system on an optional basis. ITI has developed the software to provide various capabilities using the signalling control elements, including 911 and 800 numbers, authorization code functions, and other capabilities. Additional features will be developed on a semi-custom basis to provide for customer needs.

The average selling price of the system will range from \$1 million to \$10 million, with most in the \$3 million to \$4 million range, Mr. Held said. Tests of the system, which is now largely completed, have been conducted at GTE Sprint, and the system will be ready to sell to customers by the middle of this year, he said.

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Transaction processing: Tandem in Japan

The U.S. maker of fault tolerant minicomputer systems has raided IBM for new personnel. The firm has big ambitions

Tandem Computers Inc. wants to expand its presence in the Japanese market. The Cupertino, California-based firm is the U.S. leader in fault tolerant on-line transaction-processing computers, used in such places as banks, insurance companies and the stock exchange, where computers must process a great many transactions on line very quickly and without ever "crashing." Tandem's 70-employee Japanese subsidiary, Tandem Computers Japan Ltd., currently has an installed base of 30 systems in Japan which include 95 central processing units (CPUs). In addition, it has installed 12 Non-Stop EXTs, Tandem's low-end entry model. But that's small potatoes compared with Tandem's worldwide installed base of more than 3,000 systems (that include 9,000 CPUs) and 500 EXTs.

Moreover, competition in Japan is fierce. IBM-Japan has about 28% of the \$4.4 billion banking industry computer market, the biggest single transaction processing segment. Hitachi Ltd. has about 26%, according to the latest *Nikkei Computer* magazine census.

In addition, traditional mainframe companies like Fujitsu Ltd. are also

moving quickly into the banking arena. Fujitsu already dominates the \$500 million market for horse race ticket-issuing systems, another transaction-processing segment. And the company's reputation for fault tolerance is so good, says one Fujitsu insider, that when Tokyo's electronic data processing managers go out to play golf on the weekends, the EDP manager at Daiichi Kangyo Bank, which owns a Fujitsu on-line system, is the only one who does not bother to take a business suit. Everyone else brings one, he says, because they may have to rush back to their respective offices in the event that one of their computers crashes.

Enter Hajime Takayanagi, the former regional banking manager for IBM-Japan. Tandem recruited Takayanagi to be the new president of its Japanese subsidiary last summer. Not long after, Takayanagi recruited another former IBMer, Norio Izumi, who had been Big Blue's branch manager of card business development.

Although Tandem-Japan is small now, Takayanagi thinks the company can eventually beat IBM at its own game. The other mainframe vendors, including IBM, frequently have to



TANDEM JAPAN's TAKAYANAGI: Our customers don't complain about downtime



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apologize to their customers in the banking industry because their computers average two crashes per month, says Izumi. Tandem computers, in contrast, because of their "absolute fault tolerant architecture," can remain in operation 24 hours a day, 365 days a year, nonstop. The Tandem systems use multiple CPUs that run simultaneously. If one breaks down, the others continue operating the system while the problem is being fixed. "We have never had to go to our customers to apologize for trouble," he boasts. And Susumu Okamoto, a section manager at Toyo Information Systems, a leading Japanese information processing service company, confirms what Izumi says. Okamoto says his Tandem system has been running for over 500 days straight, including holidays.

In addition, Izumi cites independent benchmark studies done by J.C. Penney retail stores in the United States and a user survey conducted by the Connecticut-based Gartner Group which purportedly show Tandem computers surpassing IBM's in reliability, and also in the number and speed of transactions processed.

Japanese computer users, Takayanagi says, are finally getting the message. Tandem already sells some systems and software on an original equipment manufacturing (OEM) basis to Nomura Computer Systems Company Ltd., an information-processing services company which just landed a large contract for Tandem-based systems with the Kyodo Value-Added Network, a 57-company joint venture involved in large-scale information processing. And Tandem-Japan has also just established Valtecs, a joint venture with Computer Engineering and Consulting (CEC) — a major Japanese software house — to develop and sell software for Tandem computers.

Takayanagi believes that he will succeed in making Tandem-Japan a \$150 million company by 1990. Otherwise, he says, he would not have left his prestigious job at IBM. "I did not leave IBM because I was dissatisfied," he said. "I joined Tandem-Japan because of the challenge." Takayanagi, an avid mah-jongg player, says he wanted to prove to his only son that it is a good idea to take risks every once in a while. This philosophy of "challenging new possibilities" will be "my only gift to my son [when I die]," he says with a smile, "since I am a man without inheritance."

SHOHEI KURITA

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PAGE 18

LEVEL 1 - 10 OF 14 STORIES

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February 13, 1986, Thursday, Home Edition

SECTION: Business; Part 4; Page 2; Column 1; Financial De k

LENGTH: 145 words

HEADLINE: BRIEFLY

BODY:

✓ Citicorp, Nynex and RCA announced the formation of a jointly owned company that will conduct research and development in interactive electronic services . . . Cupertino, Calif.-based Tandem Computers said it has acquired a 19.5% equity stake in Integrated Technology, a telecommunications company in Plano, Tex. . . . Security Pacific Corp. and Hoare Govett Ltd. announced that Security Pacific's London-based subsidiary, Security Pacific Ltd., has been renamed Security Pacific Hoare Govett Ltd. . . . Dayton Hudson, parent of Mervyn's and Target stores, increased its quarterly dividend to 21 cents a share from 20.5 cents, payable March 10 to shareholders of record Feb. 25 . . . Postal Instant Press of Los Angeles said that it expects net income for the third quarter ending March 31 will be about the same as what it reported for the same period a year earlier.

TYPE: Brief; Column

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file Tandem

company.
Sunnyvale-based AMD said Wednesday it plans a wide-ranging joint technology development program with Sony. The two firms have signed a letter of intent to develop, produce and market the "next generation" of certain types of integrated circuits, which they declined to identify.
AMD is the first among Silicon Valley's "Big Three" chip makers — AMD, National Semiconductor and Intel — to

fronics firms competitive access to "looting at the scene of a disaster."
"Since our society does not tolerate looting, why should we tolerate unfair trade practices that are injuring an industry that is vital to the United States of America?" said Sanders, who has called for temporary quotas on Japanese imports.
AMD's alliance with Sony comes as U.S. trade negotiators are growing increasingly frustrated with Japan's reluctance to open

the world's largest consumer markets.
U.S. firms "are getting the political resolution is not them everything they wanted. Cuhney, a securities analyst Peabody. Cuhney called the pact "a strategic decision of He suspects that the alliance which he calls "very encouraging" will enable the Sunny

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Market snaps back, Dow climbs 7.11 points

Snapping back from a one-day slump, the Dow Jones industrial average rose 7.11 points to a record 1,629.93. The broader market advanced moderately on technical factors and a continued weakness in oil prices. Volume weakened to 136.4 million shares. IBM fell 1% to 155. Burroughs fell 1% to 67 3/4. Wells Fargo shares, still reacting to the planned acquisition of Crocker Bank, gained another 3 3/4 to 78 3/4. Among active Over-the-Counter stocks, Wyse gained 1/2 to 12 1/4. Ask rose 3/4 to 13 3/4, and Intel fell 1/2 to 28 3/4.

✓ **APPLE JOINS STANDARDS GROUP:** Apple Computer Inc. of Cupertino has joined an industry-wide effort to accelerate the acceptance and implementation of communications standards that will allow machines from different computer and telecommunications companies to share information. The Corporation for Open Systems was founded last month and presently includes 24 electronics companies.

X ✓ **TELECOMMUNICATIONS TANDEM:** Tandem Computers Inc. of Cupertino purchased a 19.5 percent equity position in Integrated Technology Inc., a Plano, Texas, telecommunications firm. The firms will develop telecommunications features that will make Tandem's minicomputers compatible with proposed international communications standards called the Integrated Services Digital Network.

NATIONAL, XEROX IN VENTURE: National Semiconductor Corp. of Santa Clara announced a long-term, multimillion-dollar technology exchange and purchase agreement with Xerox Corp.'s electronics division. They will exchange technology and expertise in developing chips tailored for individual applications. National will supply "the majority" of Xerox' semicustom integrated circuit needs.

IN BRIEF: Citibank overtook Bank of America last year as the nation's largest bank ranked by deposits, totaling \$94.4 billion in deposits to Bank of America's \$88.2 billion. ■ Burroughs Corp. will lay off 900 employees, including approximately 300 in California, by the end of September. ■ Wyse Technology of San Jose completed a stock offering of 3.3 million shares at \$11.75 a share.

From Mercury News Staff and Wire Reports

MoneyList

RACING FOR DOLLARS

Purses of major American marathons

Joltin' Joe

Since March 1983, Joe Granville has been predicting a stock-market crash: 'You could not have that many parallels by luck or coincidence. You could not have that much smoke without a fire close by.'

Granville's warning

Orlando Sentinel

ORLANDO, Fla. — Joseph Granville sees a train coming, and he is warning people to get off the track.

Granville may be the only one who sees the train. Just as bad, from his standpoint, is that few people are listening.

after August 19 further decline ceeded to zoom more than 1,200

Since March 1 been predicting through his spe recently published



LEVEL 1 - 1 OF 1 STORY

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February 12, 1986, Wednesday

DISTRIBUTION: Business Editors

LENGTH: 429 words

HEADLINE: TANDEM-COMPUTERS; Signs agreement to purchase 19.5 percent stake in Integrated Technology Inc. of Plano, Texas

DATELINE: CUPERTINO, Calif.

BODY:

Tandem Computers Inc. (OTC:TNDM) Wednesday announced it has made a 19.5 percent equity investment in Integrated Technology Inc. (ITI), a privately held telecommunications firm, as part of a strategic alliance between the two companies. The partnership addresses a need to provide equipment in an area of the telecommunications market that is rapidly growing and becoming increasingly more sophisticated. Through this agreement, Tandem and ITI will jointly develop products for Tandem's NonStop systems and will be among the first to provide Integrated Services Digital Network (ISDN) capabilities. According to Gerald D. Held, Tandem director of new ventures, "We felt the need to move forward aggressively, providing solutions for telephone companies, telecommunications service providers and other customers. "Through this effort these companies will be given the engine and tools so they can create and offer new services via a modernized digital network." ISDN is a concept for an all-digital network based on international standards. An objective of an ISDN is to offer improved and extended voice and data service choices. The implementation of standard interfaces permits global digital connectivity between users and equipment. This type of network requires sophisticated, high performance and highly reliable signaling and data base systems. ITI's telephony signaling expertise and Tandem's large-scale NonStop systems offer the necessary combination of products and experience to serve this market. Under the terms of the agreement, Tandem has purchased 19.5 percent of the outstanding shares of ITI, a privately held corporation based in Plano, Texas. The agreement also provides that Tandem will have one seat on the ITI board of directors. The financial terms of Tandem's first equity investment were not disclosed. Tandem Computers manufactures and markets computer systems and networks for on-line transaction processing. The company is headquartered at 19333 Vallico Parkway, Cupertino, Calif. 95014. The phone number is 408/725-6000. Integrated Technology Inc. was founded in 1984 to serve the hardware and software development requirements of the telecommunications industry. ITI is headquartered at 850 E. Central Parkway, Suite 240, Plano, Texas 75074. The phone number is 214/423-5383.

CONTACT: Tandem Computers Inc., Cupertino
Corinne DeBra, 408/725-7574
or
Integrated Technology Inc., Plano
Peter Walsh, 214/423-5383

LEVEL 1 - 3 OF 11 STORIES

Copyright © 1986 Business Wire Inc.;
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February 11, 1986, Tuesday

DISTRIBUTION: Business Editors

LENGTH: 518 words

HEADLINE: TANDEM-COMPUTERS; Signs agreement with GSI Transcomm to jointly
market distribution software

DATELINE: CUPERTINO, Calif.

BODY:

Tandem Computers Inc. (OTC:TNDM) Monday announced that it has signed an agreement with Transcomm Data Systems Inc., Pittsburgh, Penn., to jointly market the GSI Transcomm TOLAS distribution management software to a wide variety of industries, including electronics, pharmaceuticals, heavy equipment, sales and other inventory-related industries. The announcement was made Tuesday at a press conference held by GSI Transcomm in Pittsburgh. Under the terms of the agreement, GSI Transcomm, a subsidiary of Generale de Service Informatique (GSI), Paris, will market TOLAS directly to NonStop system users under the sponsorship of the Tandem Alliance, a program that encourages the development of software solutions for Tandem users. The GSI Transcomm TOLAS application software system is designed to effectively manage the distribution operations for both centralized and decentralized business operations with multiple plants, warehouses and order points. While the TOLAS system can be used as it is without modification, it is normally tailored by GSI Transcomm to fit the unique requirements of each customer. According to Philippe Beaurain, president of GSI Transcomm, "The functionality of TOLAS allows for rapid shipping and flexible backorder filling, improved customer service with immediate access to pertinent information, and increased visibility into multi-location inventories. By offering TOLAS on Tandem, we can take advantage of all the features of the NonStop architecture -- continuous availability, linear expandability and advanced networking options." The TOLAS package includes three major distribution modules, the order entry/invoicing, inventory management and purchasing modules, each priced at \$49,000. Additional sales and purchasing functions provide the means for interpreting historical information and projecting future requirements. Developed by GSI Transcomm, TOLAS is designed to operate on the full range of Tandem NonStop computer systems. TOLAS will be available for general delivery by early March. GSI Transcomm is a wholly owned subsidiary of Generale de Service Informatique (GSI), one of Western Europe's largest data processing organizations. The TOLAS distribution application software, originally designed to run on Digital Equipment Corp.'s family of minicomputers, is currently being used by many mid- to large-size corporations in both single and multiple location environments. GSI Transcomm is located 1380 Old Freeport Road, Pittsburgh, Penn. 15238. Telephone is 412/963-6770. Tandem Computers Inc. manufactures and markets computer systems and networks for the commercial on-line transaction processing market. Tandem is located at 19333 Vallico Parkway, Cupertino, Calif. 95014. Telephone is 408/725-6000. Note to Editors: Tandem and NonStop are trademarks of Tandem Computers Inc.

CONTACT: Tandem Computers Inc., Cupertino, Calif.
Joyce Strand, 408/725-6516

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SYSTEMS · PERIPHERALS · SOFTWARE

Comp

DATA TOPICS

In an effort to break into the local telephone company and specialized common carrier communications markets, Tandem Computers, Inc., is preparing to acquire an equity position in Integrated Technology, Inc., a 2-year-old, 30-employee Plano, Tex., systems integrator that specializes in telecom fields. The Cupertino, Calif., computer firm reportedly plans to put one representative on the board of ITI and establish a project team in Plano to work with the privately-held firm. The two firms currently are developing software that will allow ITI signaling equipment, based on Motorola 68020 32-bit MPUs, to interface with Tandem's NonStop transaction processors. The combined package, expected to be commercially available by mid-year, would act as a signal control point (SCP) system for new telecom switches hitting the market, which will allow carriers to offer subscribers a variety of telephone, voice/data network, equal access and authorization code functions. It is anticipated that the Tandem/ITI product, currently being tested by GTE Sprint in Burlingame, Calif., would be priced between \$2 million and \$10 million, depending on configurations, traffic capacity and applications software. A comparable SCP product, based on Digital Equipment Corp. VAX equipment, reportedly is on the drawing boards at Bell Communications Research, the R&D unit set up for the divested Bell operating telephone companies, while a SCP application is projected to be among the market niches IBM will address with the System/88 fault tolerant processor supplied by Stratus Computer. It is pointed out that IBM recently shifted responsibility for the System/88 to its Communications Products division.

Electronic News

Feb 10, 1986

p 16

CORPORATE
INFORMATION CENTER

four versions they replace: the Systems 10, 40, 64 and 264.

All new models are compatible with the older systems. Existing Qantel units can be upgraded with the new Q31 add-on board, priced between \$15,000 and \$18,000. The Q31 adds up to 4 Mbytes of memory and offers almost a three-time increase in processing speeds compared with preceding processors.

The minicomputers feature Qantel's BEST/AOS operating system; the Protocol Conversion Interface for communication with PCs; bar code readers and other devices; and the BEST/NET local network software, which connects up to 16 Qantel computers.

The low-end System 45 features up to 1 Mbyte of main memory, a 1/4-inch streaming cartridge tape drive, a 45-Mbyte disk drive, a 180-cps printer and support for up to 32 workstations. Prices start at \$20,000.

The System 55, priced from \$42,760, supports up to 4 Mbytes of RAM, a 150-Mbyte disk drive, a 300-lpm printer, the 1/4-inch cartridge tape drive and up to 64 stations.

Also capable of supporting up to 64 workstations, the System 58 offers a maximum of 16 Mbytes of main memory, the 150-Mbyte disk drive and 300-lpm printer, as well as a 1/2-inch streaming tape drive. Prices start at \$73,670.

The System 78 offers the same features as the System 58 except for support for 150 workstations, a 600-lpm printer and 300-Mbyte disk drive. It is available starting

Tandem Taps Vice-President

CUPERTINO, CALIF. — Tandem Computers Inc. has named Donald Fowler to the newly created position of vice-president of strategy and corporate development.

Fowler comes to the fault-tolerant computer maker from Bechtel Group, where he was in charge of strategic planning.

Previously, Fowler spent 11 years with IBM, where he held a variety of management positions in its development, sales and marketing organizations.

Fowler reports to Tandem president and chief executive James Treybig.

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Feb 10, 1986 p17

A&I • BURRO
GTE • IBM •
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You Can See And

Than in weeks of trudging around from company to company. That's one of the reasons all these leading companies have permanent Demonstration and Consulting Centers under our one roof. Whether you're considering your first personal computer, or you're planning to replace a large information processing system for the tenth time in your career, you'll find lots of help. **INFOMART**

Monday through Friday, 8:30 to 5:00 without appointments, the experts from these companies are available to help

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LEVEL 1 - 11 OF 14 STORIES

Copyright © 1986 The Times Mirror Company;
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February 6, 1986, Thursday, Home Edition

SECTION: Business; Part 4; Page 3; Column 2; Financial Desk

LENGTH: 25 words

HEADLINE: PEOPLE: CALIFORNIA

BODY:

Tandem Computers, Cupertino, announced the election of Donald E. Fowler as vice president of strategy and corporate development, a new position.

TYPE: Column

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LEVEL 1 - 3 OF 7 STORIES

Copyright © 1986 Business Wire Inc.;
Business Wire

February 5, 1986, Wednesday

DISTRIBUTION: Business Editors

LENGTH: 520 words

HEADLINE: TANDEM-COMPUTERS; Announces agreement with Transnet to jointly market Collection Management software

DATELINE: CUPERTINO, Calif.

BODY:

Tandem Computers Inc. (OTC:TNDM) Wednesday announced that it has reached an agreement with Transnet Information Systems Inc., San Francisco, to jointly market Transnet's Collection Management System to credit granting organizations, including banks and other financial service companies, utilities, retailers, oil and telecommunication companies, and state and local governments. Under the terms of the agreement, Transnet will license CMS directly to NonStop system users under the sponsorship of the Tandem Alliance. The Transnet CMS software automates the collection process by providing on-line services to the collection staff. Facilities are offered to allow management control of the collection process and associated policies. CMS is designed to enhance collector productivity, to increase the dollar return on collection efforts, and to reduce delinquency and charge-off rates. CMS management information reporting offers early identification of opportunities to streamline the collection process. CMS allows control of account classification into policy groupings, assignment of authorized collector actions and automated CMS actions, and workload prioritization, scheduling, distribution and tracking. Ed Hernandez, president of Transnet, said, "While CMS is a comprehensive solution that automates the collection operations process, the product's real power lies in its unique design architecture. Credit managers can customize, model and fine-tune the collection process to meet their specific business requirements, and to rapidly and cost-effectively respond to a highly dynamic and competitive marketplace." According to Ed Peverell, Tandem director of third party marketing, "By combining the Tandem and CMS architectures, users can totally integrate corporate collections in a distributed network characterized by flexibility, reliability and cost-effective growth management." CMS is a proprietary software product designed by Transnet to operate on the full range of Tandem NonStop computer systems. It is currently available. Transnet Information Systems Inc., maintains offices in San Francisco and Los Angeles and specializes in custom systems development and credit management software products. Transnet is headquartered at 150 Post Street, San Francisco, CA 94108. Phone is 415/362-5401. The Tandem Alliance is a program which encourages application designers to develop software solutions for Tandem users. Since the Alliance program was inaugurated in August 1983, the number of companies qualified to design application solutions for Tandem users has grown from 35 to more than 130. Tandem Computers Inc. manufactures and markets computer systems and networks for the commercial on-line transaction processing market. Tandem is located at 19333 Vallco Parkway, Cupertino, Calif. 95014. Telephone is 408/725-6000.

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LEVEL 1 - 1 OF 7 STORIES

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February 5, 1986, Wednesday

SECTION: TECHNOLOGY TODAY; Technology Topics; Pg. 3

LENGTH: 104 words

HEADLINE: TANDEM'S EARNINGS DOWN

BYLINE: Michael Weinstein and David O. Tyson

BODY:

Tandem Computers Inc. of Cupertino, Calif., reported net income for the quarter ended Dec. 31 of \$11.6 million, or 28 cents a share, down 17% from earnings of \$14 million, or 34 cents a share, in the year-earlier period.

Revenues for the most recent quarter, which was the first of Tandem's 1986 fiscal year, were \$170 million, up 6.5% from \$159.7 million in the same quarter for fiscal year 1985.

"This was a strong quarter for our international business, particularly in Europe," said Tandem president James G. Treybig. "However, in the United States, we continue to see a very weak demand environment."

LEVEL 1 - 2 OF 7 STORIES

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February 5, 1986, Wednesday

SECTION: TECHNOLOGY TODAY; Pg. 9

LENGTH: 73 words

HEADLINE: DML to Offer Mortgage Software for Tandem

DATELINE: NEW YORK

BODY:

Tandem Computers Inc., Cupertino, Calif., has signed a joint marketing agreement with DML, a New York City software firm, to promote a processing system for mortgage-backed securities.

Under the terms of the agreement, DML will market its system to banks and brokers that use Tandem computers. DML's system supports on-line processing of mortgage-backed securities transactions from the beginning to the end of each transaction.

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2/5/86

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/TNDM

02/05 TANDEM COMPUTERS IN JOINT (DJ) MARKETING PACT WITH TRANSNET
CUPERTINO CALIF.

TANDEM COMPUTERS INC. SAID IT HAS REACHED AN AGREEMENT WITH
TRANSNET INFORMATION SYSTEMS INC. SAN FRANCISCO TO JOINTLY MARKET
TRANSNET'S COLLECTION MANAGEMENT SYSTEM TO CREDIT GRANTING
ORGANIZATIONS.

12:23 PM

disc

the chip industry, but the exact number of jobs to be eliminated has not yet been determined, said spokeswoman Liz Baird. The company employs 1,300 workers worldwide and 900 in northern California.

ENZYME TO BE CO-DEVELOPED: California Biotechnology Inc. of Mountain View announced an agreement with American Home Products Corp. covering the development and marketing of inhibitors of renin, a human enzyme central to the control of blood pressure. Under the agreement, California Biotechnology and American Home's Wyeth Laboratories division will conduct development of renin inhibitors, the company said. Wyeth will conduct subsequent testing and regulatory activities on the inhibitors and will market any resulting products under an exclusive license.

MEXICO MAY NEED HELP: Bankers said that Mexico's debt burden, aggravated by the slump in oil prices, would probably require a joint rescue by lenders. Most of the assistance, they said, would come from public entities such as the International Monetary Fund, the Inter-American Development Bank and governments around the world. The bankers, participating in a debt conference with Mexican officials, said it was unlikely that private lenders would provide anything near the \$8.7 billion in new loans that Mexico now says it will need this year.

IN BRIEF: Four-Phase Systems Inc. of Cupertino, a division of Motorola Inc., said it will change its name to Motorola Computer Systems Inc. on April 7. ■ Tandem Computers Inc. of Cupertino announced an agreement with Transnet Information Systems Inc. of San Francisco to jointly market Transnet's collection management system. ■ Corporate Data Sciences Inc., a Santa Clara desk-top electronic publishing company, said directors have extended the expiration date to March 20, 1987, on the company's Class A common stock purchase warrants. ■ ILC Technology Inc., a Sunnyvale light source and sensor company, agreed to acquire "substantially all" the assets of Sensor Technology Corp. of Chatsworth. ■ C.H. Butcher Jr., the younger brother of convicted swindler Jake Butcher, was arrested on fraud charges in connection with the 1983 failure of a thrift institution not covered by federal insurance, the FBI said. ■ The dollar sank in response to President Reagan's announcement of a possible new international monetary conference, and gold was quoted at \$336.25 an ounce in late-afternoon trading in New York.

2/6/86

From Mercury News Staff and Wire Reports
San Jose Mercury News (morning) p16

MoneyList

JOHN Q. PUBLIC'S TAXES

What the Average Citizen Paid the Taxman Last Year

Tax Category	Average Taxes Paid
1. Individual Income Taxes	\$1,526.85
2. Sales, Receipts & Customs Taxes	692.57
3. Property Taxes	408.44
4. Corporate Income Taxes (paid indirectly)	313.09

SOURCE: U.S. Census Bureau



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INCLUDES ROSS WILSON & REINBERG OF PALO ALTO.

"Campeau has stepped out," says Wes Willoughby, a spokesman for the San Francisco Redevelopment Agency. "Their explanation was that they wanted to get out of housing and restrict their efforts to commercial development."

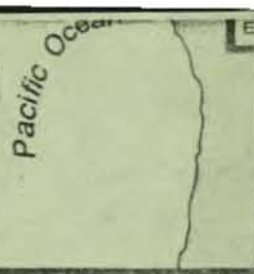
However, Campeau sold the commercial part of the project in November to Joe Weiner Interests, a San Francisco development firm. "I'm taking that over for Campeau," says Weiner.

Campeau also is reportedly negotiating the sale of its interest in the Walnut Creek Town Center, a \$100 million retail and hotel complex that has been stalled by the anti-growth moratorium passed in that city in November. The company won't comment on the possible sale.

But Campeau Vice President Peter Clark says those transactions don't signal a retrenchment by Campeau. He says that Campeau has only the projects at heart and not its own interests.

"We're continually asking ourselves, as every developer does, what's best for the project," Clark says.

He says Campeau is going at full steam with its projects elsewhere. The company just received city approval to build up to 2 million square feet of office and retail space and 600 residential units on its southern San Francisco site called San Francisco Executive Park.



Campeau also is pushing Street project, a 510,000 high-rise in San Francisco leased. It will be complete.

Its Centrum project, at the old Marine World/A. wood City, is under construction. It will total about 1.2 million commercial buildings, including 350-room Raffles Hotel.

The decision to proceed and not with the San Jose reflect one way or another. Campeau decided that the Center "would be better off... if it was managed than as a joint venture."

The gap grows

U.S. electronics trade deficit widens to \$8.6 billion in '85

By Evelyn Richards
Mercury News Technology Editor

The U.S. trade deficit for electronics products increased in 1985, but not as much as the American Electronics Association had projected.

The Palo Alto-based trade association said Wednesday that preliminary government statistics indicate the United States last year imported \$8.6 billion more in electronics goods than it exported. That's a 39 percent increase from 1984, the first year the nation recorded a trade deficit for electronics products.

The U.S. electronics trade deficit with Japan alone is estimated at \$17.6 billion for last year, up 17 percent from 1984, the AEA said. A surplus with other nations compensates in part for the large deficit with Japan.

A year ago, the AEA estimated that the U.S. would record a \$12 billion worldwide electronics deficit in 1985 and a \$20 billion deficit with Japan.

AEA spokesman John Hatch said he suspects the electronics slump slowed the growth of the deficit.

Even though the U.S. electronics trade gap with Japan increased at a slower rate than its overall electronics deficit, the AEA still focuses much of its attention on that nation.

"This continually increasing negative trade balance, particularly with Japan, is politically and economically unsustainable and must be corrected," AEA senior vice president Ralph Thomson said in a prepared statement.

Recently, U.S. and Japanese government and industry groups have reached a number of pacts to open Japan's market to foreign goods. Japan has given

Balancing imports

According to preliminary United States trade balances in these key categories, () means a deficit. Figure in billions of dollars.

Category	U.S.
Consumer Electronics	()
Computer Components	()
Communications Equipment	()
Office Products	()
Instruments	()

Source: American Electronics Association

permission for imports of telecommunications network equipment. Representation on certain set electronics standards.

But U.S. industry is a victory.

"The litmus (test) is said in a recent interview.

The \$8.6 billion estimate according to the AEA, reflects a deficit in exports of goods. The AEA tracks six categories: computers, components, office products and instruments.

According to the AEA, last year in only two fields. The largest deficit consumer products.

Taking Stock

A weekly report compiled from the proxy statement of a publicly held company based in the Santa Clara Valley or a company having a major division in the area.

Tandem Computers Inc.

(information as of Dec. 17, 1985)

Shares of common stock outstanding	41,526,844
Price a share on Jan. 23, 1986	\$22.625
Market value of firm on Jan. 23, 1986	\$939,544,845.50

Principal Shareholders

	Shares	Percent
Sanford C. Bernstein & Co. Inc., New York	3,777,105	9.1
The Capital Group Inc., Los Angeles	2,580,500	6.2
T. Rowe Price Associates Inc., Baltimore	2,178,300	5.2

Director-Controlled Stock

	Shares	Percent
Morton Collins, 49, General partner of DSV Associates, DSV Partners III and DSV Partners IV, private investment partnerships in Princeton, N.J.	11,304	— ¹
Andrew Knight, 46, Editor, The Economist, Economist Newspaper Ltd. Governor of Imperial College of Science and Technology, University of London. Member of the advisory board of the Center for Economic Policy Research, Stanford University. Trustee of the Victoria and Albert Museum, London.	12,000	— ¹
Robert C. Marshall, 54, Senior vice president and chief operating officer.	184,000	0.4
Franklin P. Johnson Jr., 57, General partner of Asset Management Partners, a private investment partnership in Palo Alto. Owner of Asset Management Co., an investment management proprietorship. Director of Amgen, Boole & Babbage, California Microwave Inc., Coherent Inc., Ross Stores Inc., SBE Inc. and Teradyne Inc. Member of the advisory board of the Center for Economic Policy Research, Stanford University.	200,000 ²	0.5
Thomas J. Perkins, 53, Chairman of the board. General partner of Kleiner & Perkins; Kleiner, Perkins, Caufield & Byers, and two other private investment partnerships in San Francisco. Director of Corning Glass Works, Genentech Inc., Hybritech Inc., LSI Logic Corp. and Spectra-Physics Inc.	500,468	1.2
Thomas I. Unterberg, 54, Chairman and senior managing director of L.F. Rothschild, Unterberg, Towbin, an investment banking firm. Director of Applied Energy Services Inc., Ask Computer Systems Inc., J. Rothschild Holdings plc, Lin Broadcasting Corp., Scitex Corp. Ltd. and Systems & Computer Technology Corp.	10,000	— ¹
Thomas J. Davis Jr., 73, General partner of Mayfield II, III, IV and V, private investment partnerships in Menlo Park. Director of Compression Labs Inc. and Equatorial Communications Co.	38,572	0.1
Robert G. Stone Jr., 62, Chairman of Kirby Exploration Co., an oil and gas company. Formerly chairman of West India Shipping Co. Inc. Director of The Chubb Corp., Combustion Engineering Inc., Core Industries Inc., Corning Glass Works, Great Northern Nekoosa Corp., Hamilton Brothers Petroleum Corp., The Japan Fund Inc., The Pittston Co., R.H. Macy & Co. Inc. and Western Pacific Industries Inc.	95,086	0.2
James G. Treybig, 45, President and chief executive officer.	309,444	0.7
All directors and officers as a group (28 people)	2,141,856	5.1

Executive Compensation

	Cash
James G. Treybig, president and chief executive officer	\$320,056
Robert C. Marshall, senior vice president and chief operating officer	\$266,723
David J. Rynne, vice president and chief financial officer	\$257,499
Dennis L. McEvoy, vice president—software	\$213,390
Lawrence A. Laurich, vice president—engineering	\$200,092

Special Notes

Located at 19333 Valico Parkway, Cupertino, Tandem Computers Inc. makes and sells computer systems for on-line transaction processing. The company employs about 5,500 people and has selected Arthur Andersen & Co. as its independent accountant.
Directors who are not employees of Tandem receive \$13,000 per year, plus \$1,000 for sitting on a committee of the board. The chairman is paid an additional \$2,000 a year.

Footnotes:

1. Less than 0.1 percent of total.
2. All shares are held by Asset Management Partners, of which Johnson is general partner.

Mortgage rates

Lender	30-year R
Bay View Federal Savings & Loan	—
Central California Mortgage	10.63%-2.1
City Commerce Mortgage	10.5%-2
First Franklin Financial	10.875%
First National Mortgage	10.75%-1

Rates are as of Jan. 22, 1986.
Based on a loan of \$133,250.
1. Maximum rate over the life of the loan
2. Call for points

Automobile lo

Lender	Fixed-APR	Var
Barclays Bank	12.95%	11.8
Golden State Sanwa Bank	13.75%	—
Imperial Bank	14.5%	—
Mitsubishi Bank	12.2%	—
South Valley National Bank	13.21%	—

Rates are as of Jan. 22, 1986.
Based on a new car loan of \$10,000 with 80% financing.
1. Loan fee is 0.5% of the loan balance

Credit card rat

Card	Annual Inter Rate
Visa	20%
Master Card	20%
American Express (green card)	18% ¹
Macy's	19.2%
Penney's	19.2%
Emporium	19.2%

1. This is only a general guideline. Other criteria are used.
2. This applies to travel expenses only.
3. There are no pre-set or default limits. General guidelines

Savings accou

Banks	Money Market Account
American Bank & Trust	6.25/6
Bank of Los Gatos	7.0/7.2
Bank of Northern California	7.0/7.2
Barclays Bank	6.25/6
California First Bank	6.25/6
De Anza Bank	6.25
Eureka Federal Savings	6.5/6.7
Golden State Sanwa Bank	6.5/6.9
Imperial Bank	6.25
Lloyds Bank	5.5
Mitsubishi Bank	6.25/6
National InterCity Bank	6.25
Savings & Loans	Money Market Account Savings
American Savings	6.65/6
Bay View Federal Savings	6.58/6
Beil Savings	6.7/7.2
California Federal Savings	6.55/6
California Savings	6.61/6
Capital Federal Savings	6.65
First Nationwide Savings	6.58/6
Gibraltar Savings	6.55/6
Great Western Savings	6.55/6
Home Federal Savings	6.6
Home Savings	6.55/6
Mercury Savings	7.06/7

Rates are as of Jan. 28, 1986.
Based on deposits of \$2,500 and over.
Note: Second figure denotes yield from compounded interest.
Money market savings rates are for accounts with limited CD.
1. 2-year CD
2. Minimum deposit of \$5,000 required

LEVEL 1 - 1 OF 1 STORY

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February 3, 1986, Monday

DISTRIBUTION: Business Editors

LENGTH: 550 words

HEADLINE: TANDEM/FIRST-NH-BANKS; First NH Banks of Manchester, N.H., selects
Tandem Computers for ATM network

DATELINE: CUPERTINO, Calif.

BODY:

Tandem Computers Inc. (OTC:TNDM) announced Monday that First NH Banks Inc. (OTC:FINH) of Manchester, N.H., has installed a Tandem NonStop II system to run its Resource 24 automated teller machine (ATM) network. First NH Banks Inc. is a multi-bank holding company with 13 affiliates, including 11 banks, and 56 banking offices providing retail and commercial banking services in New Hampshire. Assets of more than \$1.3 billion make it the leading New Hampshire banking organization. Resource 24 is First NH Banks' network of more than 40 ATMs serving customers throughout New Hampshire. Resource 24 is also part of the Pocketbank shared ATM network which serves the New Hampshire market. First NH Banks will run the Connex software package from A.O. Smith Data Systems Inc. of Brown Deer, Wis., on the Tandem system. The Connex software will directly handle transactions originating at the ATMs, including withdrawals, deposits, transfers, balance inquiries, and loan payments, and will settle transactions for the participating banks of Resource 24. The Tandem/Connex system will go on-line in June 1986. Commenting on the selection of Tandem equipment, Edward H. Lee, vice president of operations for First NH Banks, said, "We only considered vendors with fault-tolerant offerings because of the requirement to provide continuous 24-hour service to our customers. "Our requirements are not large now, but we are growing fast," Lee continued. "Tandem offered us affordable low-end systems capable of modular growth without replacing hardware, as well as easy interface to the ATMs, teller terminals, workstations, mainframes, and other networks in our environment." Tandem's multiple processor computers are widely used in the banking and financial industries, where Tandem counts over 300 customers among banks, brokerage firms, insurance companies and other financial institutions. Sixty-four of the top 100 U.S. banks are Tandem users, and Tandem-based applications worldwide include cash management applications, point-of-sale and ATM networks, and wire transfer systems. A.O. Smith Data Systems is a member of the Tandem Alliance, a program to encourage application designers to develop software solutions that run on Tandem NonStop systems. The address of A.O. Smith Data Systems is 8901 N. Kildeer Court, Brown Deer, Wis. 53209. Phone is 800/558-6980. Tandem Computers Inc. manufactures and markets computer systems and networks for the on-line transaction processing marketplace. The company is headquartered at 19333 Vallco Parkway, Cupertino, Calif. 95014. Phone is 408/725-6000.

Tandem, NonStop and NonStop II are trademarks of Tandem Computers Inc.

Resource 24 is a trademark of First NH Banks Inc.

Pocketbank is a trademark of Pocketbank Inc.

Connex is a trademark of A.O. Smith Data Systems Inc.

@ 1986 Business Wire, February 3, 1986

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LEXIS NEXIS LEXIS NEXIS

AMERICAN EDUCATIONAL COMPUTERS, INC., PALO ALTO, reported the company's losses for the quarter ended Sept. 30 decreased 60 percent from \$480,000 in 1984 to \$193,000. IDENTIX, INC., PALO ALTO, reported a net loss for its first fiscal quarter ended Sept. 30, of \$488,003 or \$.20 per share, compared to \$255,825 or \$.11 per share in the first quarter of the previous year.

message across

create and work on projects with each other, no matter where they are located physically. For effective international business collaboration, the arm has to know what the hand is doing."

Besides media production, AVA is very active in the fast-growing media equipment rental and sales business. Having started almost ten years ago as an AV rental company, they now handle all the audio visual needs of local hotels like the Airport Hilton, Marriott and Holiday Inns, and have recently expanded into the rental and sales of equipment for professional quality board room presentations.

This includes video projectors, IBM PC's, slide and movie projectors, teleconferencing equipment, and the acclaimed VideoShow technology, a high quality IBM PC-based system that allows easy do-it-yourself creation of color slides for presentations.

For many companies, renting high tech equipment may make more sense than buying it. Rentals can be both convenient and can be tax deductible for the year incurred. And sometimes department heads prefer to rent equipment than plow through their company's bureaucratic purchasing procedures. Speed of service is also attractive to many companies. AVA, for example, can set up, deliver and run equipment within hours of placing an order, 24 hours a day, seven days a week.

With one of the largest inventories of audio and video/computer rental equipment in the San Francisco peninsula, AVA must crack a sizable overhead each month.

"Our production work is feast or famine," admits Scott. "What keeps us afloat is the steady income generated by our hotel rental business. The hotel staff helps generate business for us, serving in part as our sales department."

CORPORATE TIMES

SDA SYSTEMS, SANTA CLARA, recently reached a marketing agreement with EUROPEAN SILICON STRUCTURES (ES2). Under terms of the agreement, ES2 will market SDA design systems throughout Europe and will use them in several design centers.

GRID SYSTEMS CORP., MOUNTAIN VIEW, has been awarded a \$2.4 million contract for the delivery of 400 GRID portable computers, associated GRID software, and GRID peripherals, to the U.S. Army. The company also recently received a contract from the CHRYSLER CORP. for 600 portable computer systems.

BRIDGE COMMUNICATIONS, MOUNTAIN VIEW, recently introduced the NCS Network Control Server, a management tool that allows local area networks to gather network statistics from thousands of users in real time and analyze them graphically to derive trends.

TANDEM COMPUTERS INC., CUPERTINO, has been awarded a contract expected to exceed \$40 million over the next 10 years by the telephone operating subsidiaries of GTE CORP., STAMFORD, CONN. Procurement of data processing systems, software, and services for the implementation of a facilities management system by the telephone companies, is a provision of the contract.

WIDCOM, INC., CAMPBELL, and CALIFORNIA MICRO-WAVE, INC., SUNNYVALE, have agreed to co-market the two companies' video conferencing and communications equipment. Both companies have co-marketing agreements with AT&T COMMUNICATIONS to assist the end user by providing peripheral equipment for use with the ACCUNET Switched 56 Service.

UNILINK, SAN FRANCISCO, recently introduced "Professional Time and Billing," program, known as "TB Link," which is designed for accountants, attorneys, and other professionals. The program runs on the IBM PC family and compatibles.

CORVUS SYSTEMS, INC., SAN JOSE, has signed a \$3 million renewal contract with FOXMEYER DATA CENTER, WICHITA, KAN. The agreement provides for Corvus to supply its Corvus 5012 UNIX-based, multi-user microcomputers, plus spare parts to the Kansas company over a 12-month period.

PRIAM CORP., SAN JOSE, has signed a new OEM purchase agreement, valued at more than \$5 million, with QUOTRON SYSTEMS, INC., LOS ANGELES. The products covered by the agreement are PRIAM's Advanced 8-inch Winchester disk drives.

CAMBRIDGE INSTRUMENTS, SANTA CLARA, began marketing the Cambridge Chipcheck Pattern Inspection System for a new application: Fully automatic inspection of wafer stepper images. Chipcheck inspects resist images produced by standard fabrication techniques.

HUNTER & READY, PALO ALTO, recently completed distributorship agreements with ADVANCED TECHNOLOGY LTD., TEL AVIV, ISRAEL and TOKYO ELECTRON LTD., TOKYO to sell its VRTX family of real-time operating system components.

Feb 1986 P15

CORPORATE
INFORMATION CENTER

CorporateTimes

MIS Week
2/24/86 p16

SYSTEMS

Onyx Line To Megalogic

In Corvus, OEMtek president and chief executive officer, James L. Siehl, became Corvus president and CEO late last year. Last month, Corvus laid off 99 individuals, most of them "multi-engineers" with Onyx. Corvus now has 400 employees. Megalogic will continue to manufacture the Onyx products in Mexico. Corvus will provide repair service for the existing Onyx installed multi-user base. Corvus and Micrologica also

signed an agreement under which the Mexican company will distribute Corvus's LAN and PC products in Mexico. Both companies intend to sign a manufacturing licensing agreement for these products that will permit Micrologica to manufacture the products in Mexico.

Corvus reported a net loss of \$4.62 million, or 19 cents per share, on revenue of \$10.48 million for its second fiscal quarter of 1986, ended Nov. 30.

Two Tandem Printers Bow

CUPERTINO, Calif. — Tandem Computers Inc. has introduced two new line printers, the 5515 desktop model, which prints at a speed of 300 lines per minute (lpm), and the 5516 free-standing model that prints at 600 lpm.

The printers are designed to be used with Tandem's NonStop line of fault-tolerant processors.

Tandem engineering vice president Lawrence A. Laurich said the new printers offer "leading-edge impact-printer technology." The printers use a line-

matrix technology that provides high-resolution characters and avoids deterioration of print quality of characters that are used repeatedly, the company said.

Both printers require floor space of less than three square feet. Each printer has the capability of printing graphic images for technical documents, bar graphs and charts for office presentations.

Price for the 5515 is \$7,200. The 5516 is listed at \$11,950.

**HURRICANE ALICIA
UPROOTED 1,287 TREES,
236 MOBILE HOMES
AND THE STAFF
OF A MAJOR
HOUSTON HOSPITAL.
BUT NOT THE GUY
FROM CENTEL.**

... threatened by one of the worst hurricanes in decades, 80 Houston staff levels as the storm

Tandem Offering Two New Printers

CUPERTINO, Calif. — Tandem Computers, Inc., has introduced two high-speed line matrix printers for use with its NonStop systems to replace a 4-year-old existing model.

The new printers are the 300-line-per-minute model 5515, priced at \$7,200 in single quantities, and the 600-lpm model 5516, priced at \$11,950.

Both printers, which Tandem purchases from an unidentified OEM supplier, can print multiple low-resolution bar codes, oversize characters, graphics, and a variety of fonts, according to a company spokeswoman.

The two printers, available now, use microprocessor controls for self-test diagnostics, and take up less than 3 square feet of floor space.

CORPORATE
INFORMATION CENTER

Electronic News

2/24/86 p35

...ations are up about 7% compared to the latest published national figure, which is down 13.5%.

Page has no ready answers for the rise in applications, but points to good relationships with local schools and careers teachers, and attention to material which comes out in the form of prospectuses.

"It is something that is very necessary for our indus-

of postgraduate sponsorships.

He is pessimistic, however, about the ability of universities to keep their best students when there are so many attractive incentives for them to move away from academia.

The university is putting up a new Computer Science building which will be ready in October, and is setting up a School of Engineering and Information Technology.



BLYTH . . . Youthful.

Plessey US wins order

by J. Green-Armytage

Plessey's US subsidiary, Stromberg-Carlson, has won a contract which could be a milestone in its efforts to break into the market for switching equipment among the regional Bell operating companies.

Stromberg-Carlson will supply South Central Bell with a central host switch with two unattended remote exchanges, together handling

over 8,000 lines. The size of the order is less significant than the fact that it has been won because it moves Stromberg into the second phase of the lengthy evaluation procedure followed by the Bell companies.

Stromberg-Carlson has been a heavy drain on Plessey since its acquisition for \$33 million in 1982.

In its latest year the subsidiary lost \$25 million.

Plessey boss

Plessey has created the job of managing director to bring in the relatively youthful Sir James Blyth. The move is welcomed in the City, where it is seen as breaking the control of brothers Sir John and Michael Clark over the group. Blyth, 45, joined in November as part of a drive to recruit younger top management. He headed Plessey's electronics business. He was previously head of defence sales at the Ministry of Defence.

fresh US challenge

produce standard components. The switch to Asics follows a statement of intent last October, when the company identified it as the panacea for its ills.

NatSemi hopes to supply four-fifths of the world market for application specific integrated circuits (Asics) by 1990. This is forecast to be worth about \$17 million com-

pared to \$9 million this year, according to Dataquest research group.

European suppliers, such as Plessey, Ferranti and the pan-European European Silicon Structures (ES2) formed last year, are proportionately much stronger in Asic than standard markets, where they lack the volume capacity of US rivals.

Tandem stake

Nonstop computer manufacturer Tandem has taken a 19.5% stake in telecomms company Integrated Technology Inc (ITI). The two companies will develop products jointly to give Tandem's Nonstop systems Integrated Services Digital Network (ISDN) capabilities. Tandem would not reveal how much it paid for its stake in ITI.

COMPUTER WEEKLY February 20, 1986

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p6

LEVEL 1 - 1 OF 1 STORY

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**CORPORATE
INFORMATION CENTER**

February 19, 1986, Wednesday

DISTRIBUTION: Business Editors

LENGTH: 563 words

HEADLINE: MCDONALD/TANDEM/SIS; Tandem NonStop computer and SIS software selected by McDonald & Co. Securities Inc.

DATELINE: CUPERTINO, Calif.

BODY:

Tandem Computers Inc. (OTC:TNDM) Wednesday announced that McDonald & Co. Securities Inc. of Cleveland, Ohio, has installed a Tandem NonStop TXP computer and software from Securities Industry Software Corp. (SIS) of Evergreen, Col., to operate an integrated brokerage accounting system. McDonald & Co. is a leading Great Lakes investment banking and brokerage firm. Willard E. Carmel, chairman of McDonald, said the company installed the system, their first in-house computer for brokerage services, to contain costs and enhance services to clients. "Like most regional brokerages, we have relied on outside service bureaus in the past," said Carmel. "The new system will make us more competitive by giving us better access to information and protecting us from rising service bureau costs." The Tandem/SIS system will handle order management, brokerage accounting and real-time firm trading. According to Edward L. Tabol, chief financial officer, McDonald chose a Tandem system because of its fault tolerant features and communications capabilities, and because the software developed by SIS provided the full range of applications McDonald needed. "We want to ensure that our clients receive prompt service without the delays that computer failures can cause," he said. Tandem is a leading supplier of computer systems to the brokerage and securities industries with installations at firms such as Merrill Lynch & Co., Kidder, Peabody & Co. and Oppenheimer & Co. The SIS package, designed to run exclusively on Tandem systems, is used by 32 brokerage companies including 10 that own Tandem systems and 22 that use Tandem-based computer services from SIS. Randy Bliss, director of marketing for SIS, said, "Our package is the only totally integrated real-time system for brokerage accounting. "Financial service firms must take advantage of such state-of-the-art data processing and telecommunications techniques to maintain their positions in a fast-changing regulatory, technological and competitive environment." Gerald L. Peterson, Tandem vice president of marketing, added, "McDonald is one of a number of regional securities firms that are beginning to move their information processing in-house. Like most businesses they are finding that on-line information not only gives them more control over their daily operations, but can be a strategic competitive weapon." SIS, which provides specialized software to the financial community, is a member of the Tandem Alliance, a program to encourage firms to develop application software Programs that run on [TEXT ILLEGIBLE] headquartered at 4886 Beaver Brook Drive, Evergreen, 80439. Tel. 303/670-1000. Tandem Computers Inc. manufactures and markets computer systems and networks for the on-line transaction processing marketplace. The company is headquartered at 19333 Vallco Parkway, Cupertino 95014. Tel. 408/725-6000. Note to editors: Tandem, NonStop and NonStop TXP are trademarks of Tandem Computers Inc.

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**CORPORATE
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PAGE 2

LEVEL 1 - 2 OF 5 STORIES

Copyright © 1986 Interavia S.A.;
Interavia Air Letter

February 17, 1986, Monday

SECTION: BUSINESS & FINANCE; No. 10,940; Pg. 3

LENGTH: 100 words

HEADLINE: Tandem/Transcomm Agreement

DATELINE: Cupertino, CA

BODY:

Tandem Computers Incorporated has signed an agreement with Transcomm Data Systems Inc., Pittsburgh, PA, to jointly market the GSI Transcomm TOLAS distribution management software to a wide variety of industries, including electronics, heavy equipment, sales, and other inventory-related industries.

Under the terms of the agreement, GSI Transcomm, a subsidiary of Generale de Service Informatique (GSI), Paris, will market TOLAS directly to NonStop system users under the sponsorship of the Tandem Alliance, a programme that encourages the development of software solutions for Tandem users.

2/17/86

Computer Systems News p44

Tandem Invests In Telecom Company

CUPERTINO, CALIF. — Tandem Computers Inc. last week made an equity investment in Integrated Technology Inc., a privately held telecommunications company that will provide Integrated Services Digital Network capabilities for Tandem systems.

Tandem purchased 19.5 percent of ITI, which is based in Plano, Texas. Financial terms of the investment, the first such made by Tandem, were

not disclosed.

Tandem said it plans to take one seat on ITI's board of directors. No decision has been made as to which Tandem official will sit on the ITI board, a Tandem spokeswoman said.

Product Line

ITI, founded in 1984, specializes in developing signaling hardware and software products for the telecommunications industry. According to

the Tandem spokeswoman, the two companies began working together last August when ITI joined Tandem's Alliance program of third-party software developers.

Tandem and ITI will jointly develop products for Tandem's NonStop fault-tolerant computers. Final details as to how the two companies will work together or when a first product will be ready have to be ironed out, the spokeswoman said.

Xebec Suffers Loss In Quarter

(Continued from Page 41) quarter and 26 percent in the preceding period. Datapoint Corp. accounted for 16 percent of first-quarter revenue.

While the most recent quarterly loss puts Xebec in technical default of its lending agreement with Bank of the West, Hoebich said the company expects to negotiate a new bank deal.

Xebec late last year fell into technical default when it became the target of a lawsuit by a group of investors, but the company later said the provision was waived.

Computer Auto Quarterly Loss

IRVINE, CALIF. — Computer Auto reported a net loss of \$2,152,000 of \$5,060,000 for the quarter.

This compares with a year operations of \$1,531,000, or \$9,853,000, restated to reflect company's Commercial System was consummated in early 1985.

For last year's quarter, the loss from discontinued operations, bringing the total loss

For the six-month period, ed a net loss of \$5,734,000 venue of \$10,003,000, continuing operations of \$1,983,000, restated revenue of \$20,900,000, the prior fiscal year.

Commodore Records Loss

(Continued) difficult one for making most profitable year."

Second-quarter revenue of highest quarterly revenue slightly more than the \$338 million of the prior year's second quarter.

Commodore, which is in loans, lost \$113 million for its pointed out several bright spots: an improved cash situation, \$51.5 million of its bank debt.

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INFORMIX®4GL is the first complete database programming language that offers all the flexibility and functionality of COBOL or C, plus the power of a Fourth Generation Language.

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March 12

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This announcement appears as a matter of record.



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PAGE 7

LEVEL 1 - 3 OF 6 STORIES

Copyright © 1986 McGraw-Hill, Inc.;
Electronics

February 24, 1986

SECTION: PEOPLE; People on the Move; Pg. B4

LENGTH: 88 words

HEADLINE: DONALD E. FOWLER

BODY:

Tandem Computers Inc. has named Donald E. Fowler to the post of vice president of strategy and corporate development, a new position for the Cupertino, Calif., maker of fault-tolerant computers. Fowler, 47, will assume overall responsibility for the company's strategic planning. Before joining Tandem, he held key general management posts at the Bechtel Group and IBM Corp. Most recently, he led development of strategic plans for information technology and for technology in the defense and space industries at Bechtel.

...DEC TO SUPPLY BITBUS INTERFACE FOR MICROVAX II

Firms supporting Bitbus intend to use it for a wide range of products and applications. DEC plans to supply a Bitbus interface capability for its MicroVax II minicomputer. Toshiba is developing a high performance, general-purpose interface component between microprocessors and the Bitbus.

Intel intends to ship a microcomputer for Bitbus-based control applications by the middle of this year.

In related news, another type of industrial network based on MAP could garner big business for certain vendors. MAP-based carrierband networks will capture the largest piece--45%--of the total market for all types of industrial networks, according to a recently released market study by Venture Development Corp. (VDC), Natick, Mass.

Carrierband networks are single-channel subnetworks that control individual process units or factory cells (DC, Nov. 20, p. 8). The 5-Mbps networks carry data among these small cells.

The study predicts that vendors will ship over 6000 MAP carrierband networks by 1990, as compared to about 3000 MAP-based broadband networks (10 Mbps). Also, prototype carrierband networks will be available this year.

In a release that will surely push carrierband implementation, Motorola is expected to announce a VLSI chip and a carrierband modem by mid-year, said VDC. Concord Data Systems, a leading LAN supplier for the factory, got an early start on the market by making available a carrierband modem, network analyzer and bridge late last year. Others are expected to follow suit.

Many industrial users are concerned about using broadband networks to integrate all plant operations. Users fear that channels on the networks could interrupt other channels if equipment breaks down, according to VDC. Users prefer to install MAP carrierband networks because of this concern.

Technology

TANDEM ESTABLISHES ITSELF AS EARLY PLAYER IN ISDN MARKET

Tandem Computers Inc. is taking an unusual tack away from its on-line transfer processing business by unveiling an agreement with a small

Texas firm to position itself for the Integrated Services Digital Network (ISDN) market. Tandem is one of the first major computer firms getting ready to attract big business from telephone companies who want to offer ISDN-level features, including software-defined networks.

Tandem has purchased 19.5% of Integrated Technology Inc., Plano, Tex., in steps to move into an arena traditionally inhabited by vendors in the telephone industry. ITI and Tandem plan to jointly develop network database systems for providing advanced data transfer features based on new protocols developed for telephone signaling. They will implement software on Tandem's Nonstop line of computer systems to reside on central office switches. ITI is a software house specializing in telephone signaling.

The products are based on the No. 7 common channel interoffice signaling system (SS7) which is at the "heart of ISDN," and which takes over the call-setup requirements usually handled by public networks, said Gerald Held, Tandem's director of new ventures. It is intended to overlap those public networks.

SS7 provides data transfer similar to that of X.25 systems but it links central offices to other central offices. It also has a higher data throughput requiring greater R&D investment, prohibiting many vendors from entering the market. SS7 runs data at 3000 to 10,000 packets per second in contrast to normal packet switching throughput of 400 to 800 packets per second.

Tandem and ITI are competing directly with Bell Communications Research (Bellcore) to develop a product of this kind, Held told DATA CHANNELS. Tandem and ITI expect to deliver products by mid-year, much earlier than Bellcore, he said.

AT&T and M/A-Com also want the telco business, and are sinking massive amounts of money into products that operate on SS7, David Castiel, M/A-Com's director of business planning told us. ITT dropped out of the market a few weeks ago.

Telcos wanting to offer SDN applications will be able to tap into databases that are independently located from central offices. As a result, it allows users to have a high-performance transaction processing system which interfaces to the SS7 signaling system that routes data packets to the databases.

The Tandem/ITI product eliminates the need for SDN users to span multiple switches for their multiple locations across the country. It also eliminates the need to install database systems on switches which are difficult to update, Peter Walsh, ITI's vice president of marketing told us.

SDNs are rapidly becoming popular because they allow large corporations spanning the United States to run their own "virtual" private nationwide network by leasing trunks and eliminate not having to install trunks.

"It's an interesting opportunity to take advantage of, especially when most of the traditional suppliers focus on voice switching and not data switching," Held said. The telephone industry, ranging from individual telcos to long-distance carriers, will demand a product like this, eliminating the need for telco switches to provide database functions, he said.

...TELCOs MUST INVEST IN NEW EQUIPMENT

Telephone companies who want to deploy ISDN-based network database services will have to deploy 2 new types of equipment for signal transfer points and service control points which are on the SS7 system. Tandem's equipment is developed around the service control points which allow the regular central office networks to talk to the SS7 network for advanced database transactions. Meanwhile, vendors like M/A-Com are developing equipment centered upon the signal transfer points, providing communications between the signal transfer points.

Individual operating telephone companies especially need to offer these capabilities to compete with long-distance providers who are also looking to provide SDN capabilities, and even bypass the individual telcos which stand to lose large amounts of revenue, Held said.

Tandem's computers, called Nonstop systems, are highly reliable, fault-tolerant computers for high performance on-line transaction processing. ITI is a 35-person engineering house formed in 1984.

Tandem currently is carrying out a field trial with Sprint, a major common carrier, and is in discussion with some Bell operating companies, we were told. Tandem is also in negotiations with an existing vendor of packet-switching exchanges.

Management

new position of vice president of wide area networking marketing.

•Codex Corp., Mansfield, Mass., has announced 3 vice presidential promotions. John A. Lockitt has been named senior vice president of wide area network operations. Succeeding Lockitt as vice president of transmission products is Robert F. Heile. Mark A. Davies has been promoted to the

•Jean D. Henderson has been named vice president of marketing at Racal-Milgo based in Sunrise, Fla. He is responsible for the firm's line of datacom equipment, including modems, multiplexers and network management systems.

•Avanti Communications Corp. has appointed Philip H. Hayden as chief operating officer and executive vice president. Based in Newport, R.I., Avanti makes high-speed multiplexers.

•The Electronic Mail Association's board of directors have elected Philip M. Walker as chairman for a 1-year term. Walker is general regulatory counsel of GTE Telenet. Roy Anderson of Western Union was elected vice-chairman.

•John R. Hoffman has been elected president by the board of directors of the Competitive Telecommunications Association, or Comptel. Hoffman is senior vice president of legal/external affairs for US Telecom.

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LEVEL 1 - 9 OF 14 STORIES

Copyright © 1986 The Times Mirror Company;
Los Angeles Times

February 26, 1986, Wednesday, Home Edition

SECTION: Business; Part 4; Page 3; Column 3; Financial Desk

LENGTH: 25 words

HEADLINE: PEOPLE: CALIFORNIA

BODY:

Cupertino-based Tandem Computers Inc. has elected Donald E. Fowler to the newly created post of vice president-strategy and corporate development.

TYPE: Column

LEXIS NEXIS LEXIS NEXIS

LEVEL 1 - 6 OF 8 STORIES

Copyright © 1986 Penton/IPC;
Industry Week

February 17, 1986

SECTION: FEATURES; Management; Pg. 48

LENGTH: 2093 words

HEADLINE: SHARING FAMILY SECRETS;
SHOULD YOU REVEAL COMPANY SECRETS TO EMPLOYEES? YES, INSIST SOME EXECUTIVES. BUT
HOW MUCH TO TELL? -- AND WHEN?

BYLINE: By BRIAN S. MOSKAL

BODY:

Twenty-one officers of Whirlpool Corp. gathered in October 1984 for a major meeting and discussion regarding the company's new five-year strategic plan. It was just days before the beginning of the plan's first-year cycle. Company strengths and weaknesses, as well as opportunities and threats to Whirlpool, had been analyzed for nine months. The documents that lay before the officers represented a culmination of that effort. They contained much sensitive information. If knowledge of Whirlpool's intentions fell into the hands of competitors, the results could be devastating to the corporation.

Suddenly a debate erupted. Originally, the strategies had been thought of as sensitive, confidential information to be shared only at the most senior levels. Then came the realization: "How can we accomplish our five-year mission if we don't communicate it to our employees who are ultimately responsible for its execution?"

J. Paul Dittman, vice president for corporate planning and management services, remembers: "The debate centered on 'What if this information fell into the hands of our competitors?' The officers agonized about giving the information broad exposure within the corporation."

The result: Whirlpool decided to share the confidential information with employees and, in 1985, the corporation embarked on a major effort to communicate the essence of the firm's road map to the future.

"How can you expect management and workers to pull together for common corporate goals if they [employees] don't know the goals?" asks Mr. Dittmann.

HUSH-HUSH. Not all companies share that view.

When Monsanto Co. acquired G. D. Searle & Co. in July 1985, Searle Chairman Donald Rumsfeld did not immediately apprise employees that the chemical company was buying his Skokie, Ill.-based pharmaceutical firm for \$2.7 billion.

Two hours after the media received the merger announcement, a man telephoned the Chicago Sun-Times' business desk, identifying himself only as the son of a woman who worked for Searle.

Maybe you can help me," he said. "My mom just heard a rumor that her company has been sold." The Sun-Times replied that the information was correct. The

© 1986 Penton/IPC, Industry Week, February 17, 1986

caller then said, "Thanks, I'd better call mom."

Though there is much debate over what information to share and when to share it, companies with an open format think their approach is superior to a more secretive style.

Many companies have had to rethink their attitude toward sharing information with employees over the last decade-and-a-half. It has been a period marked by an uncertain economy, foreign competition, and new management practices. Quality circles, labor negotiations over pay freezes and salary reductions, layoffs, introduction of office electronics, acquisitions, and divestitures have all demanded a high level of communication between labor and management.

"Generally, companies that express their goals, objectives, philosophy, direction, standards, and ethics openly are far more healthy than those that do not," says Andrew A. Sherwood, president of Goodrich & Sherwood Co., New York, a human-resource management firm. "Like families, there are some secrets that aren't communicated to the outside," he adds, "but the more information that is shared the better the family."

BENEFITS. Progressive firms find that by sharing all sorts of information -- production plans, product introductions or changes, new processes, designs, sources of supply, acquisition or divestitures -- they gain the confidence and co-operation of employees.

Frost Inc., a privately held Grand Rapids, Mich., maker of material-handling equipment, shares financial information, software programs, designs, and new-product introductions with employees -- once the company is positioned to hit the market.

"They have the kind of information that, in a competitor's hands, would be devastating to us," says Chad Frost, chairman of Frost Inc. "In general, we tell employees anything and everything they can understand. If they can't [understand] our annual report, we help them to understand it. With critical information that shouldn't be shared with the public or talked about in public places, we tell our employees how the information could be damaging and why they shouldn't divulge it," adds Mr. Frost.

Zycad Corp., Arden Hills, Minn., a maker of special-purpose industrial computers, schedules weekly and monthly meetings with employees at which time "any subject is fair game."

"We deal with questions that employees have come up with the week before," says Terry L. Bradford, director of human resources and administration. "We discuss questions ranging from competitors to our research and development efforts to how well our new products are doing in the marketplace." But Zycad, like other publicly held companies, doesn't release any financial or "insider information" governed by Securities & Exchange Commission regulations. But as soon as financial information about Zycad is made public, it's released promptly to its 260 employees.

The only exception to sharing sensitive information at Marquette Electronics Inc., Milwaukee, is telling employees the salaries of others. "All other information is totally shared. I treat employees like members of the family," says Michael J. Cudahy, chairman, president, and founder of the \$95 million

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medical electronic equipment maker.

Whirlpool shares financial information (once it becomes public), new-product ideas that may be a year away from introduction, market-share intelligence, and strategies of foreign competitors, among its 150 most senior managers. At manufacturing locations, Whirlpool employees are given the same information orally, but do not receive "hard copies."

SAME VISION, SAME GOALS

Executives who believe in information sharing understand that it's an effective way to get everyone in the organization pulling in the same direction. "Employees have to know what we are doing; we must talk about profits and how they are made," says Mr. Frost. "Without sharing financial information, employees can't understand the priorities of the company."

Being candid with employees can also encourage problem-solving by workers. "If they feel responsible for the product and the company, then there is a tendency for employees to take problem-solving more seriously. It helps if they love the joint," says Mr. Cudahy.

He cites a recent start-up problem in production. "I went out to the floor and just shot the breeze with a few of the production-line workers. We [management] hadn't come up with a solution but we knew of the situation. The production-line workers knew about the problem from their perspective. Together we solved the problem -- not right away, but soon after my visit to the floor," Mr. Cudahy says proudly.

"If the workers trust you," he adds, "then they'll perform better."

✓ Tandem Computers Inc., a Silicon Valley company headquartered in Cupertino, Calif., communicates the essence of its five-year plan to all 5,500 employees in 26 countries via its own TV network. But only about 7% of its people are briefed on future product strategies. Nevertheless, by conventional standards, the company is very open with employees.

"You want people to do the right thing. The more the individual understands, the more that person can help you with your business plan," stresses James G. Treybig, president and CEO of Tandem. "If you don't involve employees, it can cause apathy. If you do involve employees, they are better motivated to be productive and creative."

Whirlpool's C. Michael Simeck, vice president for human-resource services, thinks his company's corporate culture creates a team atmosphere.

"We've been concerned about how to trigger people to think in innovative ways," says Mr. Simeck. "We have appealed to our employees to find ways to make our products either more marketable or more efficient to produce." In one case, employees were asked to think about refrigeration in the future. "We received 6,000 suggestions from 19,000 employees," he notes.

Zycad Corp. also has found that by being candid and sharing sensitive information with its employees, it can involve the entire employee population in problem-solving. "You can get their suggestions and help in cross-fertilization between departments like marketing and R&D. After all, problems aren't just

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the job of management," says Zycad's Mr. Bradford.

Though management is usually good about communicating positive events, that often only makes employees suspicious. "Many companies run information dissemination like the Communists," says Mr. Sherwood at Goodrich & Sherwood. "The information that employees usually get is only a part of the whole; employees know it and sneer at it."

HOW MUCH TO TELL? Yet, how do even the most open companies decide what to tell employees? Generally, the more market-or product-sensitive the information, the less willing companies are to share it with employees.

Frost Inc. shares its trade secret on a "need-to-know" basis only. Management reveals acute problems only when probable solutions have been formulated. "If employees can help, we share the information with them. But we don't announce critical problems unless we are ready to move on a solution and think employees can help us," says Mr. Frost. "If there is nothing that employees can do, and if you're in a do-or-die situation, why share that information? There is no sense in getting employees worried about what they have no control over."

Whirlpool's policy draws no clearcut dividing line between disclosure and non-disclosure. Whirlpool is very open in oral communication but limits information in printed form.

"I think companies tend to over estimate the value of what they call confidential information," submits Whirlpool's Mr. Dittmann. Nonetheless, he wouldn't make acquisition negotiation information available to employees unless the discussions were already public. "It could compromise the other company's position with its employees," he says. "In addition, I wouldn't release information to employees that could damage customer relations."

Open companies also tend to give sensitive information less often to unionized plants and more often to non-union employees. During union negotiations "we have a strong inclination to share sensitive information, but the dilemma we face is that we must prove the information by opening our books. We have not gone the full 9 yards yet," says Mr. Dittmann.

Hewlett-Packard Co., Palo Alto, Calif., uses a broadly interpreted "need-to-know" basis for sharing information with employees. The dividing line -- whether to share broadly or not -- is based on the perceived value of the intelligence to competitors. New products are referred to only by code name; and employees who are not directly involved in marketing and production are not told the pricing strategy or the specifications for the new products, says Frank Williams, manager of personnel communications and marketing. "We don't talk too freely about new products," he adds.

LEAKS CAN HAPPEN

Few executives report having experienced any major problems stemming from large-scale information-sharing with employees. Tandem's Mr. Treybig says: "I can't cite one example in the ten years of existence."

Frost Inc., however, did encounter a problem once when it lowered the price on some of its material-handling equipment. An inside sales-person let it

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slip to a customer that the company would be discounting its price. The customer relayed the information to Frost's competitor, which matched Frost's discount, causing Frost to lose the advantage of surprise.

"The moral of the story," says Mr. Frost, "is to warn salespeople about how important it is to be first in the market, without giving the competition advance time to adjust. Leaks aren't a reason to stop communication with employees; but employees must understand that they shouldn't divulge critical information."

On the other hand, Hewlett-Packard experienced one negative result from not sharing sensitive information. In 1984 a significant internal reorganization had been planned and a massive in-house communication program was readied. But the media got wind of the story first and scooped Hewlett-Packard's internal announcement by two days.

Says Hewlett-Packard's Mr. Williams: "Our employees told us that they would have preferred hearing it from us first."

GRAPHIC: Illustration, no caption, Elwyn Mehlman; Picture 1, CUDAHY; Picture 2, TREYBIG; Picture 3, DITTMANN