CORPORATE
INFORMATION CENT[

SECTION: Financial

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HEADLINE: Tandem, GTE to develop large-scale communications systems

DATELINE: CUPERTINO, Calif.

KEYWORD: Tandem

BODY:
     Tandem Computers Inc. and a subsidiary of GTE Corp. on Wednesday said they
have agreed to jointly develop and market a large-scale telecommunications
system for use by government and business.

     Financial terms of the joint marketing agreement were not disclosed.

     The agreement is a major step into the telecommunications market for
Cupertino-based Tandem, best known for its large-scale, nearly fault-proof data
networks linking far-flung businesses and agencies such as the Royal Canadian
Mounted Police.

     GTE-Northwest, based in Everett, Wash., is a subsidiary of telecommunications
giant GTE Corp., and operates 760,000 customer service lines in Washington,
Oregon, Idaho, western Montana and northern California.

     According to an agreement signed in Cupertino on Wednesday, Tandem and
GTE-Northwest will seek to use each others' products in a single, comprehensive
telecommunications network, such as GTE's Network Management Control Center
System.

     The system enables large organizations such as companies and military bases
to keep track of inventories, directories, repair and service orders and
billing.

     The companies said the joint marketing venture will combine GTE's knowledge
of the telecommunications market and Tandem's strength in designing on-line data
processing systems.

     GTE-Northwest President Paul Nolan called the venture ''a significant step
toward the further development of our proven network management system.''

     ''Tandem is pleased to join with GTE-Northwest in this endeavor,'' said
Tandem chief operating officer Robert C. Marshall.

     ''This agreement will help to combine Tandem networking and on-line
transaction processing offerings with GTE-Northwest's products and knowledge of
the telecommunications market.''

cations.

The agreements allow Wang applications hosted on VS computers to be accessible to Apollo and Sun users through an Office window display on the workstations.

Two analysts, one a leading Wang observer and the other a turer ignoring the fact that there are motorcar companies starting to cut into its market."

He said that, while Wang would likely have a rough start in the field, as it has very little expertise and no recognition in the engineering/scientific community, it must produce workstations

He said a Wang workstation line would jeopardize marketing agreements it has with both Sun and Apollo. However, "its marketing relationship with Apollo and Sun are far less valuable to it," he said.

The analyst said Wang has a number of alternatives in its product strategy. The company, he said, can enter the workstation market, be solely a minicomputer vendor, enter the supercomputer field, or resell equipment.

"It can join the mainstream of computing and tackle workstations, because that's going to be the engine of choice in the environments in which it sells, or, it can stay with just minicomputers and have a constant or even growing share of rapidly diminishing market," he said.

"Or it can go into supercomputers which it knows nothing about. That's not really a choice. And, the last choice is to just buy workstations and resell them, becoming essentially an industrial remarketer, he said.

On the positive side, Foundyller said Wang has a substantial customer base within the office environment "for so-called office-automation tools—whatever that is," he said.

"We talked about office automation and the office of the future," he continued. (But) "We didn't get really get far beyond word-processing, fax and telephones. You package those up and you wind up witn something that nobody can operate. You get an incredibly complex telephone

eight pages per minute. In addition to RS-232 and Centronics parallel ports, AST has provided an AppleTalk port.

AST will also offer Postscript as an upgrade option for its current base of TurboLaser printers. The add-in board, requiring a 20-minute installation, will retail for $1,995. The add-in Postscript board will be available in September.

"We chose to go to Adobe for Postscript licensing rights because of our commitment to providing full Postscript functionality and compatibility with Adobe's prestigious typeface library," said Chuck Cortright, di-

but it will be available in two months. This represents the shortest time schedule between a contract signing and actual shipment of a new Postscript product."

The 12.5-MHz Postscript controller uses a Motorola 68000 microprocessor, 3 Mbytes of RAM and 1 Mbyte of ROM. The Turbo-Laser/PS printer features a Ricoh 4081 engine and has a paper tray with a 250-sheet capacity. TurboLaser/PS works with the IBM PC, XT, AT and compatible computers. It also works with all Apple Macintosh and Digital Equipment Corp. computers, Adobe said.

Drive Stores 750 Mbytes

MINNEAPOLIS—Control Data Corp. has introduced an 8-inch disk drive that stores 750 Mbytes of data and achieves seek times of 16 milliseconds or less.

The quarter-rack drive, called the Sabre Series 750, has track density of 960 tracks per inch and data density of 19,816 bits per inch.

Customer-evaluation units are available now, with production deliveries scheduled for the fourth quarter of this year. In OEM (original equipment manufacturer) quantities of 250 units, the Sabre 750 is priced at $4,260, excluding power supply.

The new drive is part of the EMD family of storage products, which Control Data has renamed the Sabre Series.

"The new name is reflective of a new and improved product line that we believe is the best in the industry today. Because it uses the same 19.72 MHz transfer rate as the Sabre 500 product (formerly known as the EMD 500), the Sabre 750 makes it easy for many of our current users of that product to upgrade to this higher capacity," said Jim Ousley, vice president of operations for Con-

trol Data's data storage products group.

The Sabre Series is offered with a choice of SMD-E, IPI-2, or SCSI interfaces, which Ousley said will make it "easy for customers to integrate the drive into their computer system configuration."

The Sabre 750's seek times of 16 milliseconds or less are made possible by the Sabre's low-mass, straight-arm actuator, according to Control Data. The actuator precisely positions the drive's thin-film read write heads over the data surface.

The product is designed for applications which require high transfer rates such as CAD/CAM, graphics imaging, office automation, science, medicine, communications and artificial intelligence.

Control Data's Sabre 750 is the company's fourth 8-inch product to use an embedded SCSI controller with 4-Mbyte per second synchronous data transfer capabilities. It offers a mean time between failure rating of 30,000 hours and a three-year warranty on the head-disk assembly.

—June Altman

Tandem Earnings Zoom

CUPERTINO, Calif.—NonStop computer maker Tandem Computers Inc. last week reported a 41 percent hike in net income, on a 31 percent jump in revenue, for its third quarter, ended June 30.

The company said revenue grew to $263.97 million, compared with $200.85 million posted in the third fiscal quarter of 1986. Net income for the quarter increased to $25.6 million, or 26 cents per share, compared to $18.1 million, or 20 cents per share, earned in the like quarter of the previous year.

For the nine months ended June 30, revenue increased 36 percent to $744.38 million, compared with $547.24 million in the year-ago period. Net income improved 78 percent to $75.1 million, or 77 cents per share, up from $42.1 million, or 48 cents per share, earned in the first nine

months of fiscal 1986.

Per share amounts reflect a 2-for-1 stock split effective during the third quarter.

President James G. Treybig said, "Tandem continues to post strong results. Our growth is attributable to gains in both domestic and international markets. International business was healthy, contributing 44 percent to the quarter's revenue. Domestic business continues to grow.

"Our success is tied to product and industry strate-gies," Treybig noted. "Tandem Alliance partnerships are generating strategic wins in targeted industries. For example, in the securities industry, Tandem and Data Architects Inc. won new business with Euro-Clear Operations Centre, run by Morgan Guaranty Trust Co. in Brussels, Belgium.

Tandem Buys Stake in SNA Firm

CUPERTINO, Calif. — Tandem Computers Inc. has purchased a minority stake in Netlink Inc., a Raleigh, N.C.-based developer of Systems Network Architecture products.

Although terms of the deal were not disclosed, a Tandem spokeswoman said the investment in privately-held Netlink was under 20 per cent. Tandem made a similar minority equity investment last year when it purchased a 19.5 per cent stake in Integrated Technology Inc. (ITI), a privately-held communications firm in Plano, Tex. (EN, Feb. 17, 1986).

Tandem and Netlink agreed to jointly develop and market products to improve the integration of Tandem NonStop computer systems in the on-line transaction processing market with IBM systems using Systems Network Architecture (SNA).

Tandem invested in Netlink primarily for the firm's expertise with SNA products, Tandem's vice-president of marketing Gerald Peterson said. "The challenge with SNA is tracking IBM in what they're doing and announcing. Netlink brings even more strength," he noted.

Tandem and Netlink will work together to bolster Tandem's network management capabilities. "That obviously is one of the keys these days in building large networks," Mr. Peterson said.

Tandem has no plans at this time to increase its stake in the company, he added.

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Advanced Manufacturing Technology
(formerly Industrial Robots International)

July 13, 1987

**CORPORATE
INFORMATION CENTER**

SECTION: Vol. 8, No. 13; Pg. 3

LENGTH: 156 words

HEADLINE: INTEGRATE FACTORY DATA ONLINE

BODY:
   Computer integrated manufacturing (CIM) is still largely a hope, not a
reality, but vendors are addressing the problem with a lot more intensity this
year than in years past. The problem, of course, is that they want the whole
system to be made up of bits and pieces of their own proprietary hardware,
rather than going the MAP/TOP generic standards route.

   Tandem has put together its own: T.I.M.E., a set of standards and mechanisms
for integrating 1) product and process document management, 2) device control
and management, and 3) factory control and management. Each control function
connects to its appropriate computer or network (business planning, engineering,
and factory floor). System is based on Tandem's OLTP (online transaction
processing) technology to keep company-wide database up-to-date on a realtime
basis.

   Details: Tandem Computers Inc., 19333 Vallco Parkway, Cupertino, CA 95014.
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Jeffry Canin
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July 22, 1987

TANDEM COMPUTERS INCORPORATED (NYSE-TDM) $28 1/2

52-Week Range	Market Val. (mil.)	Fiscal EPS			Calendar P/E		Trend–Line Growth Rate
		1986A	1987E	1988E	1987	1988	
$14–38	$2,840	$0.72	$1.08	$1.45	26	20	25%

Year Ends: September 30   **DJIN:** 2470.18   **SPIN:** 360.94   Note: f

Revenues (12 mos):	$965 million	**Return on Avg Equity:**	17%
Shares Outstanding:	100 million	**LT Debt/Total Capitalization:**	1%
Annual Dividend:	nil	**Current Yield:**	nil

- o Third quarter results reported in line with expectations.
- o Fault-tolerant processor line broadened.
- o Fiscal fourth quarter estimates increased slightly.

Third Quarter Results in Line with Expectations

Tandem Computers, a leading vendor of distributed fault tolerant on-line transaction processing (OLTP) systems, announced fiscal 1987 third quarter results in line with expectations (see Exhibit 1). Record quarterly revenues of $264 million increased 31% relative to last year's revenues and 9% sequentially. Product gross margins, at 73.9%, were the second-best ever, reflecting increasing proportional sales of the company's high-margin VLX systems. Service margins dropped from the immediately preceding quarter's 25.5% to 19.9%, due in part to a specific large consulting contract in which Tandem served as the prime contractor. Reflecting these lower service margins, overall gross margins dropped slightly from the second quarter's 64.9% to 64.7%—slightly below our estimate of 65.6%. R&D and SG&A expenses were up moderately, yielding operating margins of 15.5%. These results compare favorably with the previous quarter's 14.6% and last year's 15.2%. Net interest income of $3.9 million yielded pretax margins of 17.0%, up over 1% relative to the second quarter but below the first quarter's record 20.3%. Net income of $25.6 million increased 41% compared with last year's net income and 14% sequentially. Earnings per share were on target at $0.26 and compare with last year's $0.20.

Exhibit 1
TANDEM COMPUTERS INCORPORATED
Fiscal Third Quarter 1987 Results

	THIRD QUARTER RESULTS				YR-TO-DATE: 9 MONTHS		
	6/30/87	6/30/86	% CHG	H&Q EST	6/30/87	6/30/86	% CHG
Revenues (000)	263,978	200,853	31%	260,000	744,381	547,241	36%
Pretax Income (000	44,958	32,655	38%	44,926	131,872	76,003	74%
Net Income (000)	25,617	18,124	41%	25,608	75,158	42,182	78%
Earnings per Share	0.26	0.20	28%	0.26	0.78	0.48	60%
Average Shares(000	99,652	90,006	11%	100,000	97,098	87,043	12%
Gross Margin	64.7%	65.0%		65.6%	65.1%	63.0%	
Operating Margin	15.5%	15.2%		15.9%	16.4%	12.8%	
Pretax Margin	17.0%	16.3%		17.3%	17.7%	13.9%	
Tax Rate	43.0%	44.5%		43.0%	43.0%	44.5%	
Net Margin	9.7%	9.0%		9.8%	10.1%	7.7%	

Tandem's reported cash levels increased $10.8 million during the quarter. Accounts receivable increased $2 million but decreased in terms of days outstanding from 88 to 80. Inventory levels increased by only $4.2 million, improving inventory turns from 4.4 in the second quarter to 4.6 in the third quarter. Headcount increased by 6% in the quarter to 6,680.

Tandem enjoyed continued growth in four of its focus industries; over the last twelve months, sales increased approximately 77% in the communications sector, 73% in the health care sector, 63% in the retail industry, and 45% in the securities industry. Compared with second quarter results, sales to the banking industry (one component of Tandem's financial sector) fell slightly as a percentage of revenues, from approximately 21% to 17%. Exhibit 2 highlights the revenue composition of Tandem's shipments for the first nine months of fiscal 1987.

Tandem added 45 new accounts during the third quarter, yielding a base of 1,476 customers. Significant new customers for the company included the Euro-Clear Operations Center in Brussels, Belgium; St. Joseph's Hospital in New Jersey; and two of the top three retailers in Japan. Compared with those in the second fiscal quarter, international sales grew from 42.7% to 43.9% of total revenues; during the third quarter, European shipments increased sequentially by 12.7%, Pacific Basin revenues were up 10.4%, while U.S. business increased only 6.6%.
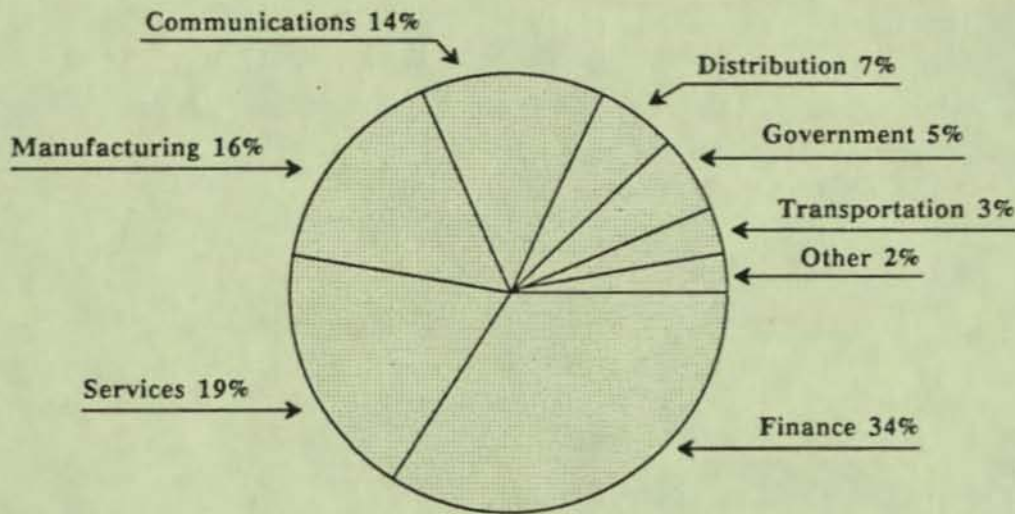
Tandem announced two new computer systems during the quarter. The entry-level NonStop CLX family, based on proprietary CMOS VLSI technology, is priced between $57,000 and $240,000 and offers claimed performance of from 2.5 to 15 SQL transactions per second (tps). The LXN, supplied by Altos, is a 32-bit multiuser UNIX-based system base-priced at $23,700. Shipments of the LXN, the company's first non-fault-tolerant offering, began during the third quarter; the NonStop CLX will be available by calendar year-end. In addition, Tandem's high-end mainframe-class offering, the NonStop VLX, was expanded upward to include eight- to 32-processor models priced from $2.1 million to $8.6 million and supporting up to 200 SQL tps. The NonStop VLX was also expanded downward to include two- and three-processor models. Simultaneously, the company

enhanced its mid-range **NonStop EXT** system, reducing prices by up to 25% for it and the TXP system; volume pricing of the entry-level EXT10 now starts below $60,000. The VLX, representing the highest-margin products in Tandem's line, is contributing an increasing portion of total revenues. The two-processor VLX accounted for seven of the company's new customers in the third quarter.

Exhibit 2

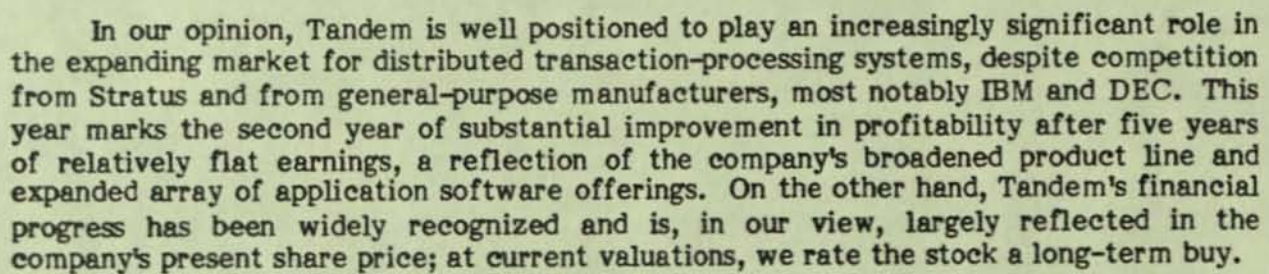## Tandem Computers Incorporated

Fiscal 1987: Percentage of Revenue Generated in the First 9 Months

Communications 14%

Distribution 7%

Manufacturing 16%

Government 5%

Transportation 3%

Other 2%

Services 19%

Finance 34%

Source: Tandem Computers Incorporated

Fourth Quarter and Fiscal Year Projections Raised Slightly

We have raised our fourth quarter revenue projection for Tandem by $7 million to $282 million, representing a 28% increase relative to the fourth quarter a year ago. We assume gross margins of 65.2% and operating margins of 17.4%. We have raised our EPS estimates by $0.01 to $0.30, up 30% over last year's per-share earnings. Our current estimates for fiscal 1987 are $1.03 billion in revenues and $1.08 in earnings per share, increases of 34% and 50%, respectively, relative to 1986 results. Fiscal 1988 revenue projections have been increased $14 million to $1.26 billion; EPS projections remain unchanged at $1.45. Exhibit 3 highlights the company's reported quarterly revenues and pretax profits since fiscal 1985.

Exhibit 3
TANDEM COMPUTERS INCORPORATED

Revenues & Pretax Earnings: F1982–3Q87

Legend: □ Revenues   + Pretax Earnings

In our opinion, Tandem is well positioned to play an increasingly significant role in the expanding market for distributed transaction-processing systems, despite competition from Stratus and from general-purpose manufacturers, most notably IBM and DEC. This year marks the second year of substantial improvement in profitability after five years of relatively flat earnings, a reflection of the company's broadened product line and expanded array of application software offerings. On the other hand, Tandem's financial progress has been widely recognized and is, in our view, largely reflected in the company's present share price; at current valuations, we rate the stock a long-term buy.

NOTE   (f)   Options are available on this issue.

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Fiscal: September

	REV $	YR-TO-YR REV CHG %	GROSS MARGIN %	OPER INCOME $	OPER MARGIN %	PBT $	PBT MARGIN %	TAX RATE %	NET INCOME $	NET MARGIN %	EPS $	YR-TO-YR EPS CHG %	SHARES
1984-1Q	126,369	34%	60.1%	16,878	13.4%	17,954	14.2%	44.0%	10,054	8.0%	0.24	36%	41,841
2Q	111,236	16%	57.5%	2,006	1.8%	3,148	2.8%	37.3%	1,974	1.8%	0.05	-70%	41,794
3Q	141,924	29%	59.3%	14,342	10.1%	15,585	11.0%	40.6%	9,250	6.5%	0.23	10%	41,039
4Q	153,090	30%	58.6%	11,111	11.7%	19,597	12.8%	39.1%	11,930	7.8%	0.29	36%	40,923
YEAR(A)	532,620	27%	58.9%	51,101	9.6%	56,284	10.6%	41.0%	33,208	6.2%	0.80	6%	41,399
1985-1Q	159,653	26%	57.1%	22,509	14.1%	24,397	15.3%	42.5%	14,028	8.8%	0.17	-29%	82,768
2Q	146,489	32%	56.2%	9,703	6.6%	11,276	7.7%	39.3%	6,841	4.7%	0.08	72%	84,312
3Q	144,165	2%	55.4%	540	0.4%	1,838	1.3%	-29.9%	2,388	1.7%	0.03	-87%	83,792
4Q	173,831	14%	58.7%	17,329	10.0%	18,839	10.8%	41.0%	11,117	6.4%	0.13	-54%	83,246
YEAR(A)	624,138	17%	57.0%	50,081	8.0%	56,350	9.0%	39.0%	34,374	5.5%	0.41	-49%	83,530
1986-1Q	170,061	7%	61.1%	19,315	11.4%	20,988	12.3%	44.5%	11,648	6.8%	0.14	-19%	84,354
2Q	176,327	20%	62.4%	19,998	11.3%	22,360	12.7%	44.5%	12,410	7.0%	0.14	76%	86,770
3Q	200,853	39%	65.0%	30,601	15.2%	32,655	16.3%	44.5%	18,124	9.0%	0.20	607%	90,006
4Q	220,552	27%	65.0%	36,064	16.4%	38,479	17.4%	43.9%	21,584	9.8%	0.23	75%	92,474
YEAR(A)	767,793	23%	63.5%	105,978	13.8%	114,482	14.9%	44.3%	63,766	8.3%	0.72	75%	88,402
1987-1QA	238,035	40%	65.8%	45,541	19.1%	48,388	20.3%	44.0%	27,097	11.4%	0.29	110%	93,586
2QA	242,368	37%	64.9%	35,293	14.6%	38,526	15.9%	41.7%	22,444	9.3%	0.23	60%	98,056
3QA	263,978	31%	64.7%	41,024	15.5%	44,958	17.0%	43.0%	25,617	9.7%	0.26	28%	99,652
4QE	282,250	28%	65.2%	35,293	12.5%	53,216	18.9%	43.0%	30,333	10.7%	0.30	29%	100,500
YEAR (E)	1,026,631	34%	65.1%	171,074	16.7%	185,088	18.0%	43.0%	105,491	10.3%	1.08	49%	97,949
1988 (E)	1,262,000	23%	66.0%	223,404	17.7%	237,404	18.8%	37.5%	148,378	11.8%	1.45	34%	103,000

BALANCE SHEET	9/86	6/87
Assets:		
Cash & Equivalents	239,819	296,295
Accounts Receivable	197,658	232,675
Inventories	64,229	81,422
Other Current Assets	17,505	21,829
TOTAL CURRENT ASSETS	519,211	632,221
PP&E	175,022	230,763
Other Assets	10,792	20,121
TOTAL ASSETS	705,025	883,105
Liabilities & Stockholders Equity:		
Current Liabilities	133,991	174,218
Long Term Debt	6,526	7,290
Deferred	29,828	27,408
Stockholders Equity	534,680	674,189
TOTAL LIAB & S/E	705,025	883,105

QUARTERLY RATIOS	6/86	9/86	12/86	3/87	6/87	4-QTR AVG
Return on Sales	9.0%	9.8%	11.4%	9.3%	9.7%	10.0%
Return on Assets	11.7%	12.8%	14.6%	11.1%	11.9%	12.6%
Return on Equity	15.2%	16.8%	19.6%	14.9%	15.7%	16.5%
R&D/Sales	11.1%	10.7%	10.2%	10.7%	10.4%	10.5%
Days O/S A/R	93	82	93	88	80	83
Inventory Turns	4.2	4.8	4.9	4.4	4.6	4.5
Days Sales in Inv	88	76	74	83	80	81
Book Value	$5.50	$5.78	$6.13	$6.47	$6.77	$6.09
Cash per Share	$1.97	$2.59	$2.50	$2.91	$2.97	$2.47
Current	4.2	3.9	3.4	3.6	3.6	3.9
Quick	3.4	3.3	2.9	3.0	3.0	3.2

Notes:
(f) Options are available on this issue.

EXECUTIVE SUMMARY

Communications

To better integrate its products and **IBM** systems, **Tandem Computers Inc.** has purchased 20% of Netlink Inc., a Raleigh, N.C., company that develops communications hardware and software products for **SNA** connectivity. Eighty percent of Tandem's customers also use IBM.

Donald Guinn, chairman, president, and chief executive of the **Pacific Telesis Group** in San Francisco will take early retirement. That catapults Sam Ginn, president of subsidiary PacTel Corp., into the president's chair. Pacific Bell chief executive Theodore Saenger also announced his early retirement.

Former **Intelsat** director general Richard Colino and several others pleaded guilty to conspiring to obtain $4.8 million in illegal kickbacks from the global satellite consortium. The scheme centered on the construction and financing of Intelsat buildings in Washington. Colino told a U.S. District judge that he personally had profited by over $1 million.

The **Federal Financial Institutions Examination Council** will run a pilot program through CompuServe for computerized bank call-report information. Electronic reporting would speed up the quarterly reporting process for commercial banks to federal regulators.

New voice/data workstations for telephone company operators will soon be developed by **Rockwell International Corp.** and **Computer Consoles Inc.** The new machines will provide combined voice/data capabilities for directory assistance, call intercept, and call processing. The design will consist of an interface linking Rockwell's Integrated Switching System with CCI's Listing Services Gateway.

Network Software Associates Inc. announced modifications to its line of PC communications software packages so they can run on **IBM PS/2.** The software includes PC-to-PC, PC-to-minicomputer, and PC-to-mainframe applications.

AT&T is seeking to allow customers to access Software Defined Network through the public telephone network, eliminating the need for private lines. SDN allows businesses to use the long-distance network's intelligence to set up call routing in their **voice/data networks.**

Centrum, a subsidiary of Sun Microsystems Inc. that develops microcomputer LANs, upgraded the Macintosh version of its **Tops Network** to include a LaserWriter spooler and a data translation application. The Tops network links Macintoshes and PCs running MS-DOS or Unix.

VMX Inc. has introduced VMXTalk, a software package that converts **DEC** All-In-1 electronic-mail messages into synthesized voice messages. Businessmen using the package will be able to pick up their messages from a telephone located anywhere in the world.

Ericsson won contracts to provide cellular phone service in Madison, Wis., valued at $2.3 million, and in Oxnard, Calif., valued at $1.5 million. The company hopes to provide region-wide cellular services in California and the Great Lakes region.

Equatorial Communications Co., recently purchased by **Contel ASC,** received a $2 million order from Nova-Net Communications for satellite earth stations and services.

Supercomputing

Responding to U.S. complaints, Japan announced procedure changes that would make it easier for American companies to **sell supercomputers in Japan.** Starting August 1, Japanese government agencies must declare their intent to buy or lease a supercomputer in the Government gazette.

Economic Indicators

For the first time since 1978, real growth in R&D spending by U.S. industry will slip behind real growth in GNP next year, according to a recent **Data Resources/McGraw-Hill** survey in which 463 companies participated. The report notes that U.S. business has been concerned mainly with improving short-term profits.

CORPORATE
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EXECUTIVE SUMMARY

Quarterly Reports

IBM sales are up, but second-quarter profits declined (see story, page 9).

AT&T's second-quarter profits rose 41.2% over last year's second quarter—when the company was hit by a costly strike—earning $596 million. Earnings reflect strength in the long-distance telephone business and offset an estimated second-quarter loss of $100 million in the firm's computer business.

ITT Corp. reported $5 billion in sales and revenue for this year's second quarter vs. $4.4 billion for the same period last year. This quarter's figure includes a $28 million net gain from the sale of Virgin Islands Telephone Co.

Intel Corp., which provides chips for 80286 and 80386 microprocessors, reports record quarterly revenue of $439 million and net income of $46 million for the three-month period ended June 27. For that period in 1986 Intel saw a net loss of $20 million.

For the seventh consecutive quarter, **NCR Corp.'s** quarterly growth rate increased by a double-digit percentage. This year's second-quarter revenue, $1.4 billion, is a 16% increase over last year's.

Tandem reported earnings growth of 41% in its most recent quarter compared to last year, attributing the growth to gains in international and domestic markets.

Contel Corp. lost more than $1 million in its second quarter this year. For the same period last year, it earned $5.5 million.

Mergers & Acquisitions

National Semiconductor Corp., parent of PCM maker NAS, and Sand Technology Systems (Canada) Inc. will form a joint venture called **NAS Canada Inc.** to sell large-scale mainframe and peripheral systems.

Corporations

After its initial reluctance to provide details of the **foreign-exchange scandal** that broke open in March, **Volkswagen A.G.** said that data tapes were apparently erased and entire programs altered to cover up the fraud that cost the company $259 million. The government's investigation is continuing.

Lawrence Harris, an analyst with Bateman Eichler, Hill Richards Inc., thinks **Lockheed Corp.** will sell portions of its **information systems division** for **$400 million** as part of a restructuring plan.

Apple Computer says that proposed legislation banning imports of **Toshiba** products—a response to the Japanese company's sale of submarine parts to the Soviet Union—would hurt Apple financially and competitively. Toshiba makes desktop printers for Apple. The proposal, called the Toshiba amendment, is part of the sweeping 1,013-page trade bill that's been before the Senate since June 25.

Follow-Up

On the heels of **Allegis Corp.'s** intentions to build a reservation system with three European airlines, **American Airlines'** parent company, **AMR Corp.,** reportedly has offered its **Sabre** system to European carriers as a model of a rival system. Also, AMR will merge with Aircal and build a $30 million reservation center in Cary, N.C.

Another hitch in the **Computer Associates/Uccel** marriage: While CA announced that it signed the 550th company to license CA Uniservice, its worldwide on-line service and support network, users yawned. CA users spurn the product, which is bundled free with other software. Uccel users say they don't need it.

This Week

Prime Computer Inc. is adding a new member to its 50 Series of minicomputers. Like the other 50 series systems, the new 2455 can be linked through Prime's version of Ethernet with hardware from a variety of vendors.

Quote Of The Week

"We knew that the progress would be amazing, but we were still amazed at how amazing it actually was."—Patrick Winston, president of AAAI and director of MIT's AI Lab, addressing AAAI on hardware advances in AI during the past decade (see story, page 10).

CORPORATE INFORMATION CENTER

cycles (see Essay on page 43 of this issue) will, some observers believe, play a major role in expanding the library-management market to as much as $250 million by 1990.

How Change Control Works

"With change-control tools, the key term is 'integrity'," says John F. Burton, executive vice president of Business Software Technology Inc., (BST) Westborough, Mass., one of the companies which have entered the library-management market in the past two years and made it more competitive.

According to Burton, a former Cullinet Software marketing executive, the key task of change control is to create a link between original software-source code, whether Cobol or fourth-generation language (4GL) and executable code in machine language.

Typically, the machine language level is where programmers, using manual procedures, have tended to run into trouble, losing track of changes made to applications, Burton notes. "There is nothing in machine code," he says, "that points back to its source."

In addition, the machine code itself can be altered, so that applications can rapidly get out of synchronization with other system components at any phase of the life cycle—from development through testing, production and maintenance."

The anticipation of a boom in change-control software has doubled the number of significant players in the library-management market, with the recent entry of

imately 2,000 Panvalet and 700 Panexec systems now installed. "We have sold well in excess of 100 CMFs. Our objective is to encourage as many customers as possible to migrate from the Panvalet-Panexec environment to the change-control environment,"Gagnard stressed.

Furthermore, Gagnard foresaw the expansion of the change control approach to include "configuration management," where the effects of a change in a given system component would be tracked to monitor its consequences on other components.

"We are going to expand our revenues by building on our customer base. The only way these other companies can grow is by taking away our customers. In the library environment market, this is very difficult," Gagnard concluded.

No Future Shock at ADR

According to Richard J. Parente, product manager for ADR's Librarian system, "change-control is the next evolutionary phase of library management." ADR's change-control facility, rather than being sold separately, is being integrated in current Librarian releases (starting with release 3.5) running in ADR/Roscoe environments, and it will be expanded to support ADR/Vollie, CMS and TSO.

"We are also adding capabilities for configuration control to change control technology," Parente added.

"The next logical step, "he said " is to encompass 4GL applications. This is the direction in which the Librarian and our

Other advantages of Endevor systems vs. ADR or Pansophic products include, according to Burton, easier and effective connections with security packages, such as Computer Associates's ACF2 or IBM's RACF. Similarly, the older systems still

It is reasonably apparent that the comfortable and placid niche market for library-management systems has been abruptly widened, and that it has become an arena in which companies, possibly in growing numbers, will make loud competitive noises in the years to come.

Tandem Bids to Expand Market

By IRWIN GREENSTEIN

CUPERTINO, Calif.—Tandem Computers Inc. has made two announcements highlighting its drive to expand the use of Tandem NonStop fault-tolerant computer systems in networking and in manufacturing environments.

The company disclosed last week that it had entered into an agreement to acquire a minority equity interest in Netlink Inc., a Raleigh, N.C. developer of network software running within IBM's Systems Network Architecture (SNA).

Tandem had earlier targeted manufacturing industries by announcing the development of a framework within which the company and its third-party applications developers can expand the use of NonStop systems in manufacturing organizations.

Under the terms of the acquisition agreement, Netlink will jointly develop and market products to enhance integration between Tandem NonStop fault-tolerant systems and systems that use IBM's SNA.

Gerald Held, Tandem vice president of new business ventures, said SNA network

system developer Netlink had "some complementary products oriented toward connectivity, whereas Tandem tends to emphasize transaction processing. Our products are in different parts of SNA."

Held noted that Tandem currently has an existing line of SNA offerings, the SNAX product line. "Over 50 percent" of Tandem's products are shipped with a SNAX implementation, he said.

Paul Wood, Netlink's chief executive officer, said that from Netlink's perspective, "we look to SNA as a pervasive architecture that tends to generate transactions to IBM mainframes. Since SNA is an important and strategic resource and should go to different (vendors') processors, our view is let's take SNA networks and make them more general-purpose."

Netlink and Tandem will jointly market and develop products as well as "swap personnel," Held said. He added that the two companies would share a customer-presentation center in order to to exploit Netlink's proximity to IBM's SNA center in nearby Research Triangle Park, N.C.

"As people come to Raleigh to hear the gospel of SNA from IBM, they can listen to us, too," Held concluded.

July 18, 1987, Saturday

SECTION: SECTION I; International Companies & Finance; Pg. 10

LENGTH: 49 words

HEADLINE: North American Quarterly Results

BODY:
Tandem Computers
Computer systems

	1987	1986
Third quarter	Dollars	Dollars
Revenues	264 m	200.9 m
Net income	25.6 m	18.1 m
Net per share	0.26	0.20
Six months		
Revenues	744.4 m	547.2 m
Net income	75.2 m	42.2 m
Net per share	0.77	0.48

GRAPHIC: Table, no caption

July 17, 1987, Friday, Home Edition

SECTION: Business; Part 4; Page 4; Column 1; Financial Desk

LENGTH: 64 words

HEADLINE: EARNINGS

BODY:
    Tandem Computers announced a 41% gain in income for the third quarter. The
Cupertino, Calif., company made $25.6 million, with 44% of revenue coming from
international sales. The company cited its "product and industry strategies,"
singling out as an example a partnership between Tandem and Data Architects
Inc., which won new business from Euro-Clear Operations Centre of Belgium.

TYPE: Column; Corporate Earnings

CORPORATE
INFORMATION CENTER

July 16, 1987, Thursday

DISTRIBUTION: Business Editors

LENGTH: 1728 words

HEADLINE: TANDEM-COMPUTERS;   (TDM)   Tandem Computers   reports financial results

DATELINE: CUPERTINO, Calif.

BODY:
   Tandem Computers Inc. (NYSE:TDM) Thursday announced that revenue in the
third quarter of fiscal 1987, which ended June 30, grew 31 percent to
$263,978,000, compared with $200,853,000 posted in the third fiscal quarter of
1986.

   Net income for the quarter increased 41 percent to $25,617,000, or 26 cents
per share, vs. $18,124,000, or 20 cents per share, earned in the like quarter of
the previous year.

   For the nine months ended June 30, revenue increased 36 percent to
$744,381,000, compared with $547,241,000 in the year-ago period. Net income
improved 78 percent to $75,158,000, or 77 cents per share, vs. $42,182,000, or
48 cents per share, earned in the first nine months of fiscal 1986.

   Per share amounts reflect a 2-for-1 stock split effective during the third
quarter.

   Commenting on the quarter, Tandem President James G. Treybig said, ''Tandem
continues to post strong results. Our growth is attributable to gains in both
domestic and international markets. International business was healthy,
contributing 44 percent to the quarter's revenue. Domestic business continues
to grow.

   ''Our success is tied to product and industry strategies,'' Treybig noted.
''Tandem Alliance partnerships are generating strategic wins in targeted
industries. For example, in the securities industry, Tandem and Data Architects
Inc. won new business with Euro-Clear Operations Centre, run by Morgan Guaranty
Trust Co. in Brussels, Belgium.

   ''Solutions developed by Knowledge Data Systems contributed to Tandem
obtaining significant business with St. Joseph's Hospital and Medical Center.
During the quarter, two of the top three retailers in Japan became Tandem
customers and both Target Stores and May Co. added to their Tandem network
installations.

   ''We also continue to gain ground in the telecommunications market. Our
networking products and strategy are important factors in our cross-industry
success.

   ''During the quarter we reaffirmed our product leadership and reinforced our
position as a major supplier of large networks,'' Treybig added. ''We

announced two distributed computer systems designed to extend Tandem's on-line transaction processing networks to departments and branch offices.

''NonStop CLX systems, based on CMOS technology, are compatible with Tandem's larger systems. LXN systems offer Tandem's traditional high reliability, data integrity and access to Tandem OLTP networks to customers with UNIX applications. We also expanded the high end of our product line, adding two- and three-processor models to our NonStop VLX mainframe systems family.

''We are pleased Tandem achieved strong revenue growth this quarter while continuing to control expenses and manage assets,'' Treybig concluded. ''We are confident in our ability to support the products and programs that lead to continued growth in fiscal 1987 and beyond.''

Tandem Computers Inc. manufactures and markets NonStop computer systems and large networks for the on-line transaction processing marketplace.

Note to editors: Tandem, NonStop, NonStop VLXX, VLX, NonStop CLX, CLX and LXN are trademarks of Tandem Computers Inc.

Tandem Computers Inc. and Subsidiaries
Consolidated Interim Statements of Income
(unaudited)
(In 000s except per share data)

| | Three Months Ended | |
	6/30/87	6/30/86
Revenue:		
Product revenue	$218,838	$163,361
Service and other revenue	45,140	37,492
Total revenue	263,978	200,853
Costs and expenses:		
Cost of product	57,028	43,431
Cost of service and other	36,164	26,924
Research and development	27,416	22,337
Marketing, general and administrative	102,346	77,560
Total costs and expenses	222,954	170,252
Operating income	41,024	30,601
Interest income, net	3,934	2,054
Income before income taxes	44,958	32,655
Provision for income taxes	(19,341)	(14,531)
Net income	$25,617	$18,124
Earnings per share	26 cents	20 cents
Weighted average shares outstanding	99,652	90,006

Tandem Computers Inc. and Subsidiaries
Consolidated Interim Statements of Income
(unaudited)
(In 000s except per share data)

Nine Months Ended
6/30/87   6/30/86

© 1987 Business Wire, July 16, 1987

Revenue:		
Product revenue	$619,573	$449,763
Service and other revenue	124,808	97,478
Total revenue	744,381	547,241
Costs and expenses:		
Cost		
of product	165,521	128,241
Cost of service and other	94,062	74,499
Research and development	77,598	63,471
Marketing, general and administrative	285,342	211,116
Total costs and expenses	622,523	477,327
Operating income	121,858	69,914
Interest income, net	10,014	6,089
Income before income taxes	131,872	76,003
Provision for income taxes	(56,714)	(33,821)
Net income	$75,158	$42,182
Earnings per share	77 cents	48 cents
Weighted average shares outstanding	97,098	87,044

Tandem Computers Inc. and Subsidiaries
Consolidated Interim Balance Sheet
(unaudited)
(In 000s except share data)

	6/30/87	6/30/86
Assets:		
Current assets:		
Cash and cash investments	$ 296,295	$ 177,243
Accounts receivable	232,675	205,064
Inventories	81,422	67,716
Prepaid expenses and other	21,829	20,770
Total current assets	632,221	470,793
Property, plant and equipment, at cost	367,627	271,545
Accumulated depreciation and amortization	(136,864)	(103,470)
Net property, plant and equipment	230,763	168,075
Other assets	20,121	9,927
Total assets	883,105	648,795
Liabilities and stockholders' investment:		
Current liabilities:		
Current portion of long term debt and		
capitalized lease obligations	$ 1,099	$ 5,882
Accounts payable	66,363	40,036
Accrued liabilities	92,245	56,159
Income taxes payable	14,511	9,893
Total current liabilities	174,218	111,970
Long term debt and capital lease		
obligations	7,290	6,356
Deferred income taxes	27,408	35,198

Stockholders' investment:
Common stock, $.025 par value;
 authorized 200 million shares;
 outstanding 92,100,865 in 1987

and 84,279,274 in 1986	2,303	1,079
Additional paid-in capital	352,587	271,635
Retained earnings	319,299	222,557
Total stockholders' investment	674,189	495,271
Total liabilities and stockholders' investment	$883,105	$648,795

Note: Certain prior period amounts have been reclassified to conform with the current period presentation.

Contact: Tandem Computers   Inc., Cupertino
           Bobbi Blake, 408/725-2362 (financial)
           Jeri Eaton Flinn, 408/725-5462 (media)

SECTION: Financial

DISTRIBUTION: California

LENGTH: 233 words

HEADLINE: Tandem Computers earnings up

DATELINE: CUPERTINO, Calif.

KEYWORD: Earn-Tandem

BODY:
    Tandem Computers   Inc. said Thursday earnings rose 41 percent to $25.6
million or 26 cents a share in its third fiscal quarter, compared with $18.1
million or 20 cents a share in the 1986 third quarter.

    Revenues for the Cupertino-based maker of on-line processing systems used in
banking, retailing and manufacturing grew by 31 percent to $263.9 million in the
third quarter, compared with $200.8 million in the third quarter of 1986.

    For the nine months ended June 30, net income rose 78 percent to $75.1
million or 77 cents per share, compared with $42.1 million or 48 cents a share
for the first nine months of fiscal 1986.

    Revenue in the nine-month period increased 36 percent to $744.3 million,
compared with $547.2 million for the nine-month period last year.

    Tandem's earnings rise was the latest in a series of bullish financial
reports by Silicon Valley computer firms in recent days, including Apple
Computer Inc. of Cupertino.

    Tandem President James G. Treybig attributed the earnings rise to gains in
both domestic and international markets. Tandem's foreign operations, including
sales in Japan and Belgium, accounted for 44 percent of the company's quarterly
revenue, the company said.

    Also during the first quarter, Tandem announced two new computer systems
aimed at widening the scope of its on-line processing network and also expanded
its family of mainframe computers.

July 15, 1987, Wednesday, BC cycle

CORPORATE INFORMATION CENTER

SECTION: Financial

DISTRIBUTION: California

LENGTH: 191 words

HEADLINE: Mounties to use Calif. computers

DATELINE: CUPERTINO, Calif.

KEYWORD: Mounties

BODY:

The Royal Canadian Mounted Police always get their man -- with a little help from Silicon Valley, if necessary.

Cupertino-based Tandem Computers Inc. said Wednesday it has been awarded a contract to supply the mounties with six TXP computer systems worth $5 million during the next two years.

The mounties hope to expand their existing nationwide information network to offer instant access by federal, provincial and municipal police to police records, according to Al Hagerman, project manager.

SHL Systemhouse Inc., in Ottawa, will supply custom software valued at $2.5 million, and has been designated the primary contractor in charge of bringing the system on line.

''We're expanding our capabilities a little bit with a little larger system, and making a little better use of the system,'' said Hagerman.

Hagerman said that the system will link police in regional centers in Vancouver, British Columbia; Edmonton, Alberta; Winnipeg, Manitoba; Toronto; Ottawa; and Halifax, Nova Scotia.

Tandem is already supplying $15 million in computers and software to the Royal Hong Kong Police Force under a ten-year contract awarded in April.

**CORPORATE
INFORMATION CENTER**

July 15, 1987, Wednesday

DISTRIBUTION: Business Editors

LENGTH: 378 words

HEADLINE: TANDEM; (TDM) Royal Canadian Mounted Police to install Tandem NonStop
computer systems

DATELINE: CUPERTINO, Calif.

BODY:
   Tandem Computers Inc. (NYSE:TDM) announced Wednesday that its NonStop
computer systems will be installed by Canada's federal police force, the Royal
Canadian Mounted Police, Ottawa, to replace their national communications
network for law enforcement agencies.

   Under a two-year agreement, SHL Systemhouse Inc., in Ottawa, will combine
Tandem NonStop systems, valued at more than $5 million (U.S.), with SHL custom
developed software, valued at $2.25 million (U.S.), to implement RCMP's
Integrated Data Network, an on-line network of information available to police
departments throughout the country.

   When complete, the network will link together 4,000 personal computers and
remote terminals to regionally placed Tandem NonStop TXP computer systems in
Vancouver, British Columbia, Edmonton, Alberta, Winnipeg, Manitoba, Toronto,
Ottawa and Halifax, Nova Scotia.

   Federal, provincial and municipal departments will be able to gain instant
access through RCMP's Tandem network to centrally stored police records.

   ''Our operations must be available 24 hours a day, seven days a week,'' said
Al Hagerman, RCMP project manager. ''Downtime creates problems for the police
community. Tandem systems help meet this key criterion.''

   Hagerman also cited Tandem's modular expandability as a key reason for its
selection.

   ''Tandem's modular expandability allows us to grow easily by adding
processors instead of replacing or adding whole computer systems and rewriting
the software,'' Hagerman added.

   Based in Ottawa, SHL Systemhouse Inc. is a systems integrator with 16
locations in North America. Established in 1974, SHL develops custom application
solutions, specializing in integrated data networks, in all stages from initial
design to implementation and operations.

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

Note to Editors: Tandem, NonStop and TXP are trademarks of Tandem
Computers Inc.

CONTACT: Tandem Computers Inc., Cupertino
           Glenn LaFrank, 408/725-6435

July 13, 1987, Monday

DISTRIBUTION: Business Editors

LENGTH: 452 words

HEADLINE: TANDEM/NETLINK; (TDM) Tandem purchases minority interest in Netlink to further strengthen integration with IBM networks

DATELINE: CUPERTINO, Calif.

BODY:

Tandem Computers Inc. (NYSE/TDM) Monday announced it has made an equity investment in Netlink Inc., Raleigh, N.C., a privately held company. Under the terms of the agreement, Tandem has purchased a minority interest in Netlink. It has also agreed with Netlink to jointly develop and market products to enhance integration between Tandem NonStop systems and IBM systems through the use of Systems Network Architecture solutions. Other terms were not disclosed. Gerald D. Held, Tandem vice president of new ventures, commented, ''Netlink's expertise in providing solutions for the evolving SNA communications environment is a good match with our experience processing large volumes of transactions in SNA networks. ''This relationship is part of our on-going effort to develop strategic partnerships with organizations whose strengths complement our corporate goals and extend Tandem product capabilities,'' Held said. The agreement will enhance Tandem's ability to provide solutions for IBM systems users who want the benefits of Tandem systems for on-line transaction processing applications, according to Held. Held added that the benefits of Tandem systems for OTLP include high availability, modular growth, high performance, distributed relational database and ease of networking. Tandem software products have provided connectivity between Tandem systems and IBM systems using IBM's SNA protocols since 1983. Paul Wood, Netlink chief executive officer, stated, ''We believe that Tandem's leadership in OLTP systems and networks fits naturally with Netlink's charter to provide enhanced SNA connectivity. Our products will operate with Tandem systems serving as highly reliable processors of transactions in distributed, often hetergenous, networks.'' Netlink Inc. develops communications hardware and software products for enhanced SNA connectivity. Netlink networking products have been in use within IBM SNA networks since 1982. The company headquarters are located at 3214 Spring Forest Road, in Raleigh, with offices in Sydney, Australia, and London. Tandem Computers Inc. manufactures and markets computer systems and networks for on-line transaction processing. Company headquarters are located at 19333 Vallco Parkway, Cupertino.

Note to editors: Tandem and NonStop are trademarks of Tandem Computers Inc. IBM is a trademark of International Business Machines Corp.

CONTACT: Tandem Computers Inc., Cupertino
           Tom Waldrop, 408/725-7191
           or

Netlink Inc., Raleigh
Richard Buckle, 919/878-8612

Tandem seeks leadership role in CIM market

BY JEAN S. BOZMAN
CW STAFF

CHICAGO — Tandem Computers, Inc. claims it can put its own experience to work for customers in the developing market for factory computer systems.

At the Advanced Manufacturing Systems show here last month, Tandem positioned itself as a systems integrator for end users in the computer-integrated manufacturing (CIM) arena. The company outlined its systems integration architecture, called the Tandem Integrated Manufacturing Environment (TIME).

The architecture will combine Tandem hardware and systems software with third-party applications software solutions, Tandem said.

Making TIME

"The thing that really drove the development of TIME within Tandem was that our systems were able to track the things we made, instead of using the paper tags attached to products," said John Despotakis, manager of manufacturing industry marketing for Tandem. "It will track our customers' products, whether they are jet engines, printed-circuit boards or pharmaceuticals."

Although TIME packages will not be ready for shipment until next year, they will be based on the Tandem Nonstop fault-tolerant processors, Tandem's Nonstop SQL relational data base management system, a Tandem-IBM Systems Network Architecture communications facility called SNAX and Tandem's new Unix workstation, the LNX processor. Tandem said it will also announce a consulting service for its manufacturing customers, who accounted for 21% of Tandem's 1986 revenue of $768 million.

Tandem decided to sell its own approach to others following a prediction that the need for seamless CIM solutions would grow to a $20-billion plus market in the 1990s. And Tandem's own experience had shown that fault tolerance, a key customer requirement in buying Tandem systems, is also a critical CIM requirement.

"Fault tolerance is a manufacturing requirement," Despotakis said. "We're providing the specifications for three factory environments and then preconfiguring them to fit together with complementary pieces." The three environments are product and process document management, factory control and device control.

Using elements of the TIME system at its Austin, Texas, terminal manufacturing plant saved Tandem nearly $25 million in overhead, an amount nearly equal to 4% of its 1986 revenue of $768 million, Despotakis said.

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July 1, 1987

SECTION: IN BRIEF; Vol. 10, No. 13; Pg. 6

LENGTH: 166 words

BODY:
The AVAIL regional ATM network has tapped Tandem Computers Inc. to install
a NonStop VLX mainframe computer to handle the Georgia-based network's switching
operations, Tandem officials have announced. The in-house arrangement replaces
a 3-year contract with Citizens & Southern National Bank of Atlanta, which will
continue to process AVAIL transactions until its contract expires in December.
AVAIL President Ron Dennis praised the service given to the network by C&S, but
said that growing transaction volumes now make an in-house arrangement more
economical.

AVAIL is the 11th largest EFT network in the United States. It's new Tandem
system will process transactions from 2,500 ATM and point-of-sale terminals
belonging to more than 145 AVAIL member institutions throughout Georgia.
Operated by Georgia Interchange Network Inc., a consortium of 12 Georgia
financial institutions, AVAIL has 2.4 million cardholders and reportedly handles
more than 2.2 million transactions a month.

CORPORATE
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July, 1987, National Edition

SECTION: VENDOR UPDATE; Pg. 98

LENGTH: 309 words

HEADLINE: ACQUISITIONS/AGREEMENTS

BODY:
   Computer Associates International Inc. and UCCEL Corp. have signed a
definitive merger agreement under which CA will pay a total of approximately
$800 million in stock for all outstanding UCCEL common shares. The resulting
company will retain the name Computer Associates International Inc.

   IBM and The Kirchman Corp. have signed a complementary marketing agreement.
Under the agreement, Kirchman will join IBM's finance industry marketing
assistance program, allowing the two companies to conduct joint marketing
efforts directed at community banks nationwide.

   Inter Innovation AB has signed a letter of intent regarding an acquisition of
LeFebure, based in Cedar Rapids, IA. LeFebure markets and services bank
security systems.

   Tandem Computers Inc., Cupertino, CA, has signed an agreement with Systeme
Corp., Orlando, FL, to jointly market retail banking delivery systems that
include on-line teller and platform services, and loan origination and
processing.

   Hogan Systems Inc., Dallas, has announced the acquisition of GDK Systems
Inc., of New York. GDK markets the International Money Management System (IMMS)
and provides systems consulting services for the financial industry. The IMMS
product will be marketed by Hogan with assistance from IBM under an industry
marketing assistance program.

   Broadway & Seymour Inc., Charlotte, NC, and National Financial Computer
Systems Inc., Atlanta, GA, have announced an agreement to jointly develop a
PC-based teller system. The initial system will be developed for IBM equipment
and will be available fourth quarter of 1987.

   Software Alliance Corp., Berkeley, CA, has acquired the complete operations
of Bankmatic Systems, Beaverton, OR. In 1986, Software Alliance acquired the
exclusive rights to Bankmatic's products and services with an option to acquire
the entire operation.

EXECUTIVE SUMMARY

Communications

The National Telecommunications and Information Administration, an agency of the **Commerce Department,** urged the FCC to completely deregulate **AT&T.** Currently AT&T and RBOCs are allowed to recover costs and earn a fixed percentage as profit.

Federal Express sold five of its 12 satellite uplinks from its ill-fated Zapmail venture to Teleport Denver. The remaining earthstations are in New York, Washington, Los Angeles, San Francisco, Atlanta, Orlando, and Chicago.

Communications vendor **Contel** will form a separate customer-support division. Initially the division will service PBXes, PCs, and DEC environments. Contel recently bowed out of a planned merger with satellite provider **Comsat.**

Rolm's Rolmbus 295 is the first patented high-bandwidth bus in the PBX industry. The patent was awarded for switching capabilities in the Rolm CBX II 9000 AE when used with the Rolmbus; the product can also handle more calls than any other bus.

Chase Manhattan Bank is the first New York bank to disclose plans to offer a video banking service that subscribers can access without special software from any computer with a modem. The plan would upgrade **Spectrum,** its 3-year-old home banking product.

McDonnell Douglas Payment Systems is terminating an agreement to support MasterCard's point-of-sale network. The company, which competes against MasterCard's data communications network **Banknet,** will market directly to financial institutions and credit-card processors. It has signed 35 contracts with financial institutions and associations representing more than 300 banks.

The U.S. Navy will begin equipping as many as 118 ships with ATMs and point-of-sale terminals by year's end. The automation will facilitate deposits, dispense cash, and ease purchasing for officers and enlisted personnel.

US Sprint has announced a "Daylight Savings Time Sale" that gives eligible customers a 10% discount off its day interstate rates. The discount is available to new customers and existing customers who use additional services.

IBM

Models 20 and 60 of IBM's midrange **9370** computer line have hit the shipping lines two months ahead of schedule. The first of the 9370s went to the Phoenix, a life insurance company in Hartford, Conn. IBM will ship to the U.S. and worldwide simultaneously, a first for the company.

Mainframe Software

Tandem Computers has developed a new programming language, called **Tandem Ada,** for its NonStop processors. Also, a Tandem Ada compiler has been validated both by the U.S. Department of Defense and the Ada Joint Program Office.

Cullinet Software has just sent two major products into beta test: the **Cullinet Banking System** and **IDMS/SQL,** a DBMS for VAXes and PCs adapted from the products of San Jose-based Esvel Corp., which Cullinet acquired last year. Look for fall availability.

Midrange Computing

Britton Lee introduced new high-end and low-end database processors at last week's National Financial Computer and Automation Conference in New York. Also announced were an interface to Information Builders' Focus DBMS that will provide links to IBM's VM and a new version of Integrated Database Manager software, which conforms to industry standards such as ANSI SQL and IBM's DB2.

End User Computing

Leading Edge announced three configurations of the new Model D2, a **286-based IBM compatible PC.** In addition to a single floppy drive version, there's a 20-Mbyte hard-disk version and a hybrid that features a Bernoulli Box.

Software designed specifically for laptops is rare, but now there's Office Solution's **OfficeWriter Express,** which combines word processing with document communications functions in a single package.

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INFORMATION CENTER

By THERESA CONLON

FORT LEE, N.J.—There are software tools available that convert C language code to Assembler code, and tools that convert Fortran to C, but according to Software International Inc., its new series of cross compilers is the only software on the market that converts code written in fourth-generation languages (4GLs) to third-generation Cobol.

On-Line Software said its new cross-compiler series, Cross Code, will enable IBM mainframe users to take programs developed using leading 4GLs— beginning with Applied Data Research Inc.'s Ideal (ADR) and, later, Cincom Systems Inc.'s Mantis and Cullinet Software Inc.'s Application Development System/OnLine (ADS/OnLine)— and turn them into IBM standard Cobol programs.

The benefits of Cross Code, according to On-Line Software, is that users can take advantage of the rapid development made possible by 4GLs but also get the performance provided by Cobol.

"Because 4GLs are interpreters instead of compilers, large-volume transaction applications developed with 4GLs can be slow and place excessive demands on computer system resources. Cross Code gives companies a way of making these applications run up to 10 times faster in production," said Rick Holtmeier, senior executive vice president of On-Line Software.

The first product in the Cross Code series, available immediately, will enable users to convert programs created using ADR's Ideal and turn them into third-generation Cobol programs. On-Line Software expects to have ready cross-compilers with the same function for Cincom's and Cullinet's products by year-end.

Eventually, the Cross Code series will address On-Line Software's own 4GL product—UFO Productivity System, acquired from Oxford Software last year— and enable users to transform programs developed with that product to Cobol.

The Cross Code license fee lists at $60,000. However, it is now available for an introductory fee of $40,000.

Other Advantages

Besides offering decreased execution time, Cobol code derived from 4GLs offers several other advantages for organizations, said Holtmeier, including the flexibility to maintain their applications in either Cobol or 4GL. Holtmeier warned, however, that once a company starts maintaining programs and making changes in Cobol, there is no path back. "That organization has made an irrevocable decision to move away from 4GLs," he said.

According to Holtmeier, an organization that abandons 4GLs altogether after using Cross Code will be a rare breed. "Based on our own market feedback, we believe 10 percent of Cross Code users will walk away from 4GLs completely, and 90 percent will continue to develop and maintain programs using 4GLs and use Cross Code to gain the execution efficiencies of Cobol," he said.

George Schussel, president of Digital Consulting Inc., in Andover, Mass., does not see 4GLs disappearing because of a product such as Cross Code. In fact, he predicts a product such as this could encourage their use. "This is quite a good idea, and I think it will make 4GLs more versatile," he said.

Holtmeier also noted that Cobol is one of the languages designated by IBM as strategic, and as such will offer users a full range of connectivity under Systems Applications Architecture (SAA). "The moment an organization has its programs in Cobol, it can be assured it will be able to port those programs between the IBM's PS/2, its midrange processors, and mainframes—there's less dependency on the 4GL vendor," he said.

Schussel called Holtmeier's dependency point a "false argument" and said it is more a marketing slant for the product. "It's like offering an insurance policy so the user can sleep better, but it is not a real reason for the product," Schussel said.

Joe Farrelly, vice president of research and development at ADR, said the technology offered in Cross Code was not something that ADR's clients had been asking for. "We don't have anything to motivate us to generate such a product ourselves," he said. Farrelly also noted that three recent releases of Ideal had all involved significant performance enhancements to the product.

As for the question of porting Ideal-based programs to different platforms, Farrelly said ADR has been enhancing Ideal through SQL, which will provide portability to personal computer local area networks (LANs) and mainframes.

Holtmeier said Cross Code does not contain any proprietary code from any of the primary 4GL vendors, and no agreements have been made between On-Line Software and the companies.

Tandem Fields Ada Compiler

CUPERTINO, Calif.—Tandem Computers Inc. has announced an Ada compiler for its NonStop fault-tolerant systems. Validation of the Tandem Ada compiler by the U.S. Department of Defense Ada Joint Program Office was also announced.

The Tandem Ada compiler fully complies with the American National Standards Institute and Military Standard ANSI/MIL-STD-1815A (1983) and the International Standards Organization's standard ISO/8652-1987 Programming Languages-Ada.

Four programming tools are provided with the Tandem Ada language. They include a compiler, library manager, binder and symbolic debugger.

Tandem Ada supports large programs with up to 4 Mbytes of instruction code and can manipulate up to 128 Mbytes of data per single process within a NonStop system.

Tandem Ada for NonStop VLX,TXP and NonStop II systems costs $20,900 per system and has a monthly license fee of $800. Pricing for NonStop EXT and CLX systems is $10,475 per system, with a $400 monthly license fee.

CORPORATE
INFORMATION CENTER

MIS Week 7/27/87 p 34

marketing, Holtmeier said.

Cross Code gives development houses and programmers a way of making applications programs written in a 4GL execute 10 times faster, according to On-Line.

Tandem And Momentum Ink Marketing Pact

CUPERTINO, CALIF. — Tandem Computers Inc. has signed an agreement to jointly market Momentum Systems Corp.'s data entry software.

Momentum's Key Base package lets up to 750 terminals on a Tandem computer systems network share a common data entry database.

The software is particularly useful in the insurance and government markets, which require large volumes of on-line data entry.

As part of the agreement, Momentum, Morris Plains, N.J., will market Key Base directly to Tandem users.

ComputerSystemsNews
7/27/87 p 31

CORPORATE INFORMATION CENTER

uct line, according to a Celerity spokesman.

Under the multiyear agreement, which the Celerity spokesman valued

priced from $5000 to $10,000, depending on the system. VCL, due out by year's end, will be priced from $1995 to $7500.

Tandem Introduces Ada Language Offering

CUPERTINO, CALIF. — Tandem Computers Inc. last week introduced its first Ada programming language, giving the company an entree into certain military markets in which Ada is a required feature.

Tandem's Ada compiler has been validated by the U.S. Department of Defense Ada Joint Program Office. It also complies with requirements set up by ANSI and the International Standards Organization, the company said.

Ada is a required language for all mission-critical computer systems used by the DOD, and is also widely used by other government and military agencies. Tandem has not yet taken any additional sales or marketing steps to penetrate the Ada market,

a Tandem spokeswoman said.

Four programming tools are provided with Tandem Ada, including a compiler, a library manager, a binder and a symbolic debugger. It can support programs having up to 4 Mbytes of instruction code and can manipulate up to 128 Mbytes of data per single process.

Tandem Ada, developed by Tandem, will run on all of the company's NonStop systems. It will be available in this year's fourth quarter.

Tandem Ada for NonStop VLX, TXP and NonStop II systems is priced at $20,900 per system, with a monthly license fee of $800. Pricing for NonStop EXT and CLX systems is $10,475 per system, with a monthly license fee of $400.

**CORPORATE
INFORMATION CENTER**

ComputerSystems News
7/27/87 p17
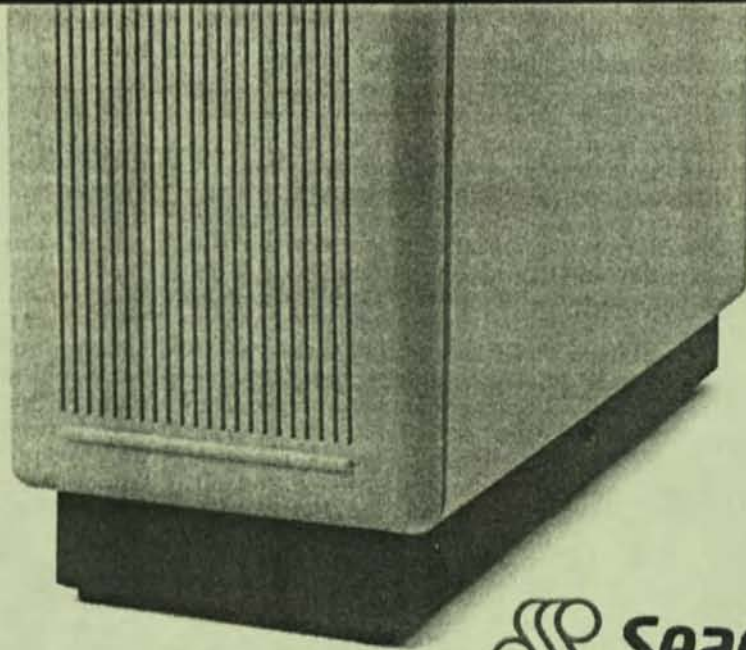
TOMORROW

The S.V.I.C. telephone reference unit provides a direct link between users nationwide and the Center's services and resources. Photo by Art Green.

If you have questions regarding Silicon Valley and its high technology industry, the answers may be just a phone call away. Silicon Valley Information Center's telephone reference librarians are available 54 hours a week to tackle questions from anywhere in the world. (See box for details).

Since the Center's opening in September 1986, users of the telephone reference service have included the business community, journalists, politicians, students and researchers. Although the Center's focus is on Santa Clara County, nearly 30% of S.V.I.C. telephone reference calls are from outside California. During its first month of public service alone, S.V.I.C. received telephone inquiries from callers in New York, Cambridge, Detroit, Chicago, Salt Lake City, Houston, Seattle, and as far as Rio de Janeiro.

To respond to each unique telephone inquiry, S.V.I.C. staff members depend heavily upon the growing reference collection, extensive clipping files, corporate documents and state-of-the-art computer catalog. Also available to staff are additional resources of San Jose Public Library, other libraries (public, academic and corporate), as well as other contacts previously made by S.V.I.C.

INSTANT ACCESS TO SILICON VALLEY

Two special features of the telephone reference service are those of dialup access and document delivery (see box). With a personal computer and modem, callers may dial into the online catalog directly to examine the collection. There is no charge other than long-distance phone call rates. If materials from a search are desired, the requested items are copied and mailed to the caller for a nominal fee.

REFERENCE TELEPHONE:

408-277-5754
HOURS: (Pacific Daylight Time)
Mon.-Tues. Noon-9:00pm
Wed.-Sat. 9:00am-6:00 pm
24-HOUR DIALUP ACCESS:
408-277-5758
DOCUMENT DELIVERY FEES:
1-3 photocopies, $1.00
Each additional copy, $.40
1st class postage included

SILICON VALLEY INFORMATION CENTER

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S.V.I.C.

The bright, bold, multicolored S.V.I.C. poster is now available to readers of the "Tomorrow" newsletter. Photo by Art Green.

S.V.I.C. POSTER GOES TO PRESS WITH CORPORATE SPONSORS
AVAILABLE BY POPULAR DEMAND

With the sponsorship of six Silicon Valley companies, a special poster was printed commemorating the opening of the Silicon Valley Information Center.

Since its printing, the poster, designed by local graphic design firm Yamaguma & Associates, has become a popular request item by representatives of local companies and organizations. Readers may obtain a free copy when they visit S.V.I.C. and mention this article to the staff.

A special thanks from S.V.I.C. goes to the following corporations:

Adobe Systems, Inc.
Apple Computer, Inc.
Capitol Color Laboratory, Inc.
Fairchild Semiconductor Corp.
Hewlett-Packard Company
Westinghouse Electric Corp.

HATS OFF!
S.V.I.C. THANKS OTHER DONORS

S.V.I.C. has been the recipient of several other generous donations, including the following:

* 3-ring binders for storing S.V.I.C. collection materials, donated by Logisticon.

* Office equipment and partitions, donated by Excelan, Inc.

* Complete set of the *Hewlett-Packard Journal*, 1949-1986, by Mr. George A. Springer.

* Back issues (7/9/83 through 3/15/86) of Don Hoefler's *Microelectronic News*, by the library of Tandem Computers, Inc.

Such support for the project is greatly appreciated. Thank you, donors!

S.V.I.C REFERENCE CIRCUIT

Following is a brief sampling of the diverse inquiries received at the S.V.I.C. reference desk:

* A New York national television network, preparing a feature segment on Silicon Valley, required sources of photographs on the birth or early days of the area's high tech industry.

* For a series of community forums on import/export issues, a United States Congressman requested a comprehensive list of local manufacturers that export their goods.

* A Chicago newspaper journalist writing an article on semiconductor trade between the U.S. and Japan needed statistics on end user prices of 64K and 256K EPROM chips before and after the U.S.-Japan semiconductor pact.

* A San Francisco-based foreign consulate attaché has inquired about state-of-the-art information on (1) molds and dies, (2) amorphous foils, (3) Smart Cards, and (4) use of multiplexer in automobiles, as well as requesting 1986 statistics and 1987 projections on Silicon Valley development, start-ups, unemployment, housing costs and hazardous waste problems.

* To help develop a public relations brochure, a locally based national charity organization requested descriptions of corporate health care programs and their costs to local high-tech companies.

WE COLLECT BOOKS, TOO

In addition to clippings, videotapes, annual reports, product brochures and posters, S.V.I.C. also collects books. A vast array of topics is addressed in a variety of formats such as national industry profiles and overviews, legislative texts, local studies, biographies, "how-to" guides, and fiction.

Also available are the latest editions of the following popular directories: AEA Directory, Corporate Technology Directory, Datasources, Electronic Industry Telephone Directory, Pratt's Guide to Venture Capital Sources, Rich's Business Guide to Silicon Valley, and Santa Clara County Industrial Directory.

S.V.I.C. USERS DELIGHTED WITH SERVICE

Users of the Silicon Valley Information Center are enthusiastic about the Center and its services, according to an independent consulting firm.

In a preliminary report prepared by Cognos Associates of Los Altos (contracted by S.V.I.C. to evaluate the project), 93% of all users interviewed were satisfied by the level of service provided by S.V.I.C., while over half of the sample reported that S.V.I.C. was the best or only source of information they were seeking.

One satisfied user, happy with a search done by S.V.I.C. staff on the defense industry, was quoted as saying, "I couldn't get that information anywhere else, not even at the Pentagon." Another added, "They do a terrific job. It's good to know they are there."

The evaluation also covered a sampling of high tech company officials with whom the Center has had contact. While only half had actually used S.V.I.C. since the Center opened in September, nearly all those interviewed enthusiastically support the Center and look forward to a continuing relationship. They see S.V.I.C. as providing a valuable and "thoroughly needed" service to the community.

One company official stated, "S.V.I.C. is more interested in the community than other places that are compiling information of Silicon Valley."

The final evaluation of the project is due in September when grant funding ends.
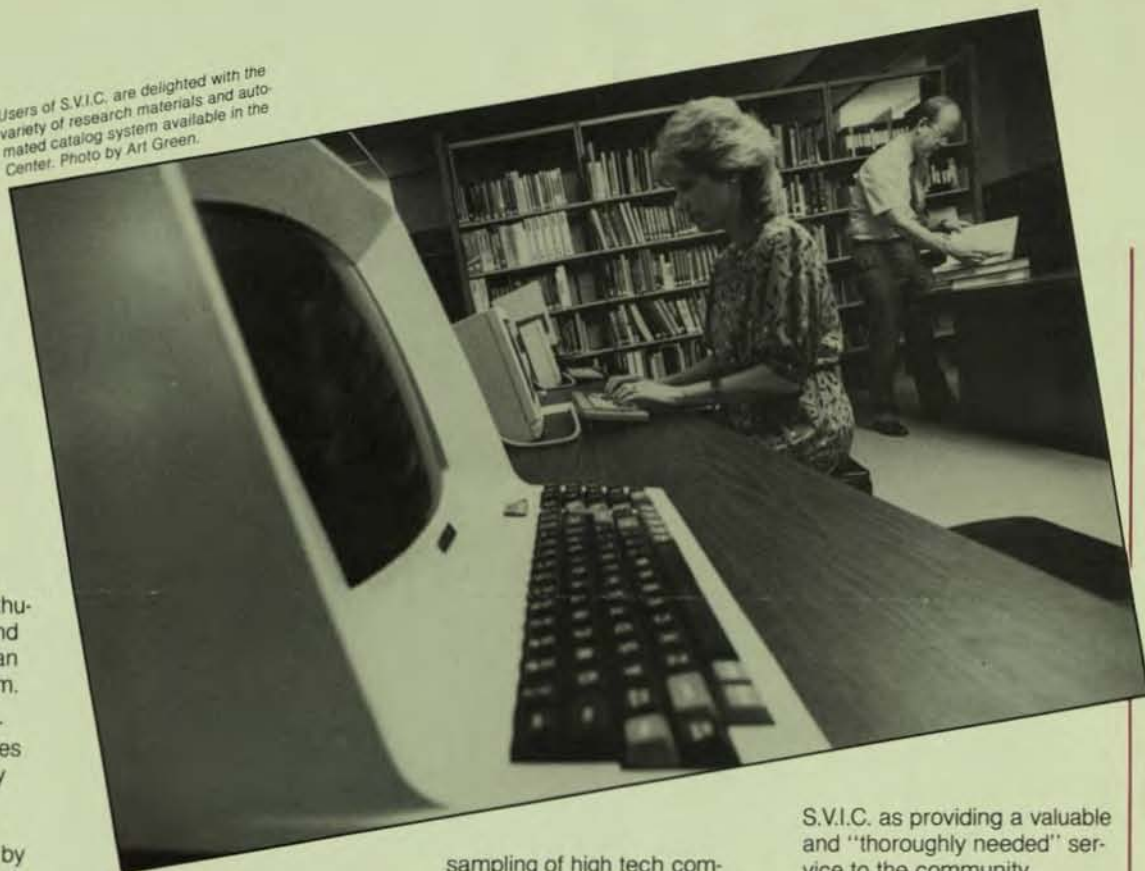
HOLLYWOOD FINDS S.V.I.C.

If, in the future, you happen to view a Hollywood feature film spoofing the Silicon Valley, remember this: part of the screenwriter's research was completed by S.V.I.C. librarians! Recently a telephone inquiry from a local high tech firm on behalf of the screenwriter requested verification of Silicon Valley company and street names. Unfortunately for the writer, there really is a "Terminal Parkway" and a "Disc Drive" (among others being sought), but we do look forward to discovering the names yet to appear in the film. Coming soon to a theater near you...!

BRANCHING OUT

The San Jose Public Library System is greatly enhancing its computer capabilities with the installation of 37 IBM PCs throughout the Main library and 17 branches. The microcomputers will be used by

Library Assistant Steve Smith and S.V.I.C. Librarian Ronna Nemer Chan inspect the latest delivery of 37 microcomputers prior to installation throughout the San Jose Public Library System. Photo courtesy of IBM Corporation.

library staff to support library programming, word processing and graphic design. Future uses may also include automated branch reference services and branch dialup access to S.V.I.C.

24-HOUR DIALUP ACCESS REQUIREMENTS:

Microcomputer system and modem with the following settings:
Speed: 300 or 1200 baud
Parity: None
Duplex: Full
Data bits: 8
Stop bits: 2
Answerback: Off
Emulate:DEC VT-100 terminal (using communications software such as CrossTalk, Smartcom, Framework, Mirror or Bitcom).
LOGON INSTRUCTIONS:
Dial 408-277-5758. After connection is established, press RETURN (ENTER or CR). When prompted with "Logon Please:" type PUBLIC (must be in upper case) and press CR. Then follow the instructions provided by the system. For assistance, call 408-277-5754 during S.V.I.C.'s open hours.

TOMORROW

HOW TO GET TO S.V.I.C.

Surrounded on all sides by construction activities in a rapidly redeveloping downtown, the San Jose Public Main Library remains open and accessible to the public. Free, 2-hour parking is now available at a large, new lot one block away. Simply bring your parking coupon to the first floor Information Desk for library validation after perusing the wonders of S.V.I.C.

Santa Clara County

WHAT THEY'RE SAYING ABOUT S.V.I.C....

"...This is a unique collection with special value to students, planners, researchers, job seekers, and others seeking information on Silicon Valley's high tech industry and culture. It offers a convenient one-stop source for such information."
—Bay Area Reference Center's *BARC Notes*, October 1986, page 10.

"...A recent inquiry into the system to find information on the Apple Computer Company identified dozens of references under such diverse subcategories as Finance, Employees, History, Management, Products, Trials and Litigation, and Marketing...Remember there is no charge for most of the services."
—*The Data Informer*, February 1987, page 1.

"...IT'S SLEEK. IT'S CHIC. IT'S S.V.I.C."

—*San Jose Mercury News*, September 5, 1986, page 3B.

"...Countless business people, jobseekers, students, journalists, and ordinary citizens are seeking information about silicon chip country. Silicon Valley may be suffering from a cyclical slump, but in the information center, business is booming."
—*American Libraries*, November 1986, page 746.

"...For businesses seeking information about competitors or trends, job seekers, or sociologists, the S.V.I.C. is now the richest source of information for any examination of the many aspects concerning the silicon industries... As an agency which centralizes information, thus making material more readily available, it augments the Chamber of Commerce and should be seen as an asset to the commercial community."
—*Santa Clara County Business*, October 1986, page 27.
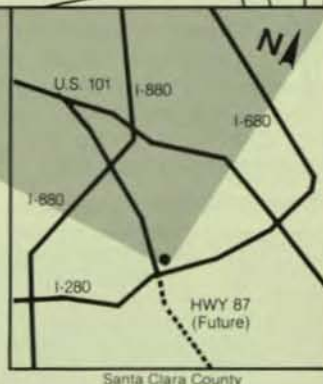
TOURS AND PROGRAMS

As a service to the community, S.V.I.C. staff make special presentations about the S.V.I.C. collection and services. Interested *Tomorrow* newsletter readers may request such presentations and tours of the Center. S.V.I.C. staff will tailor the program to fit the interests or needs of your organization. To request your own unique overview, please contact Project Director Mike Ferrero by mail or telephone. We look forward to hearing from you!

Tandem Adds Ada Compiler Validated by Defense Dept.

CUPERTINO, Calif. — Tandem Computers Inc. introduced an Ada compiler which it said had been validated by the Department of Defense.

Programming tools for using Tandem Ada with the company's NonStop fault-tolerant computers include the compiler, a library manager and a symbolic debugger.

Pricing for Tandem Ada on NonStop VLX, TXP and NonStop II systems is $20,900 per system with a monthly license fee of $800. For NonStop EXT and CLX systems, it is $10,475 per system with a monthly fee of $400. Tandem Ada will be available in the fourth quarter.

Electronic News
7/27/87 p35

Reminder: the following is now overdue.

Author	Title	C
Walker, B	Computer security and protection structures	

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Net Jumps 41% In Tandem Qtr.

CUPERTINO, Calif. — Tandem Computers Inc. posted a 41 per cent increase in profit to $25,617,000, or 26 cents a share, for the third quarter ended June 30, compared with the $18,124,000, or 20 cents a share, a year ago.

Revenues were up 31 per cent to $263,978,000 from $200,853,000.

The firm said international business was up 50 per cent, contributing to an overall 44 per cent growth in quarterly revenues.

For the latest 9 months, earnings jumped 78 per cent to $75,158,000, or 77 cents a share, from $42,182,000, or 48 cents per share, while overall revenues increased 36 per cent to $744,381,000 from $547,241,000.

Earnings per share, the firm noted, reflect a two-for-one stock split, effected June 12.

Tandem ended the 1987 quarter with $296,295,000 in cash and cash investments, up from $177,243,000 the previous year, while total current liabilities were $174,218,000 against $111,970,000.

James G. Trebig, president, attributed the company's results to substantial gains in both domestic and international markets. He credited Tandem's target marketing programs, including the Tandem Alliance Program for VARs, as a major contributor to the firm's continued domestic sales growth.

"Our success is tied to product and industry strategies," Mr. Treybig said. "Tandem Alliance partnerships are generating strategic wins in targeted industries."

Reminder: the following is now overdue.

Author	Title	C
	PC Tech Journal - 6/85	

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July 23, 1987, Thursday, Late City Final Edition

SECTION: Section D; Page 5, Column 1; Financial Desk

LENGTH: 66 words

HEADLINE: TANDEM COMPUTERS   INC(M) reports earnings for Qtr to June 30

BODY:

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                          ** COMPANY REPORTS **
                          TANDEM COMPUTERS   INC(M)
Qtr to June 30                      1987                     1986
Revenue                      263,978,000              200,853,000
Net inc                       25,617,000               18,124,000
Share earns                          .26                      .20
Shares outst                  99,652,000               90,006,000
9mo rev                      744,381,000              547,241,000
Net inc                       75,158,000               42,182,000
Share earns                          .77                      .48
Shares outst                  97,098,000               87,044,000
```

TYPE: Statistics

SUBJECT: COMPANY REPORTS

Proprietary to the United Press International 1987

July 22, 1987, Wednesday, PM cycle

SECTION: Regional News

DISTRIBUTION: Arizona-Nevada, California, Idaho, Montana, Oregon, Utah, Washington

LENGTH: 342 words

HEADLINE: Tandem, GTE developing communications systems

BYLINE: By BEATRICE MOTAMEDI, UPI Business Writer

DATELINE: CUPERTINO, Calif.

KEYWORD: Tandem

BODY:
    Tandem Computers Inc. and a subsidiary of GTE Corp. Wednesday will jointly develop and market a large-scale telecommunications system for use by government and business, a spokesman said.

    Financial terms of the joint marketing agreement were not disclosed in Wednesday's announcement.

    The agreement was seen as a boost the Cupertino-based Tandem's telecommunications business, its third largest source of revenue.

    Tandem is best known for its large-scale data networks linking far-flung businesses and agencies such as multi-branch banks and the Royal Canadian Mounted Police.

    GTE-Northwest, based in Everett, Wash., is a subsidiary of telecommunications giant GTE Corp., and operates 760,000 customer service lines in Washington, Oregon, Idaho, western Montana and northern California.

    According to an agreement signed in Cupertino, Tandem and GTE-Northwest will seek to use each others' products in a single, comprehensive telecommunications network, such as GTE's Network Management Control Center System.

    The multimillion-dollar systsem enables large organizations to keep track of inventories, directories, repair and service orders and billing.

    A $10 million version of the system adapted for military use is being installed for the Department of Defense on the island of Oahu, and another is being installed at the U.S. Naval Air Station on Whidbey Island, 60 miles north of Seattle in Puget Sound.

    The companies said the joint marketing venture will combine GTE's knowledge of the telecommunications market and Tandem's strength in designing on-line data processing systems.

GTE-Northwest President Paul Nolan called the venture ''a significant step toward the further development of our proven network management system.''

''Tandem is pleased to join with GTE-Northwest in this endeavor,'' said Tandem chief operating officer Robert C. Marshall.

''This agreement will help to combine Tandem networking and on-line transaction processing offerings with GTE-Northwest's products and knowledge of the telecommunications market.''

CORPORATE
INFORMATION CE▸

July 22, 1987, Wednesday, AM cycle

SECTION: Regional News

DISTRIBUTION: California

LENGTH: 340 words

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BYLINE: By BEATRICE MOTAMEDI, UPI Business Writer

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business, its third largest source of revenue.

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linking far-flung businesses and agencies such as multi-branch banks and the
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July 22, 1987, Wednesday

DISTRIBUTION: Business Editors

LENGTH: 500 words

HEADLINE: TANDEM/GTE-NORTHWEST; (TDM) Tandem Computers, GTE-Northwest sign
joint business agreement

DATELINE: CUPERTINO, Calif.

BODY:
    Tandem Computers Inc. (NYSE:TDM) and GTE-Northwest, Everett, Wash.,
Wednesday announced that they have signed a memorandum of understanding to
cooperate in developing a business relationship for the integration of each
company's products into a comprehensive product offering for the management of
telecommunications functions within large organizations.

    The agreement, signed in Cupertino by GTE-Northwest President Paul Nolan, and
Tandem Chief Operating Officer Robert C. Marshall, calls for the two companies
to evaluate GTE-Northwest's Network Management Control Center system as a
possible product for joint marketing. No financial terms of the contract were
disclosed.

    Integrated by Tandem NonStop computer systems, the GTE-Northwest Network
Management Control Center system provides large organizations with essential
telecommunications functions for their internal use. Among the functions
included are systems for managing service orders, telecommunications facilities,
inventory control, directories, repair orders and billing.

    It also allows a customer to perform switch maintenance, traffic analysis and
to monitor and control network alarms.

    The system was developed when GTE-Northwest and GTE Communication Systems
were awarded a $15 million contract for a state government application. The
state government application has since been implemented and has been modified
into a military version that is currently in operation at two military
installations.

    Nolan said, ''This agreement is a significant step toward the further
development of our proven network management system. We at GTE-Northwest see it
as a means of enhancing our full service provider position by allowing us to
offer complete telecommunications system administration and control, in addition
to other services.

    ''It presents a unique opportunity for GTE-Northwest and Tandem to maximize
the marketplace potential of this telecommunications network management control
system,'' Nolan added.

    Marshall said, ''Tandem is pleased to join with GTE-Northwest in this
endeavor. This agreement will help to combine Tandem networking and on-line
transaction processing offerings with GTE-Northwest's products and knowledge

of the telecommunications market.''

GTE-Northwest, a subsidiary of the GTE Corp., worldwide leader in telecommunications, serves more than 760,000 customer lines in Washington, Oregon, Idaho, western Montana and Northern California.

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

CONTACT: Tandem Computers Inc., Cupertino
           Joyce Strand, 408/725-6516
           or
           GTE-Northwest, Everett
           Tom Borgford, 206/258-5847

COMPILED BY DEBORAH PFEIFFER, ASSISTANT EDITOR

75 YEARS AGO . . .

"Telephone service will be established at the summit of 'Old Baldy,' 11,000 feet above sea level, says a dispatch from Pomona, Cal. The government is installing the service for the use of W.B. Dewey, a former guide, who maintains camp at the mountain top. In return the aged guide will give instant information to the rangers in case of fire. The smallest fire at any point near the mountain is visible to those at the summit." *From TELEPHONY, July 13, 1912, page 35.*

"Judge E. Ray Stevens, in the circuit court at Madison, Wis., has sustained the action of the Railroad Commission in ordering the Chicago & North Western Railway Co. to install a telephone at its depot at Fox River. The court held a telephone is necessary for public convenience." *From TELEPHONY, July 20, 1912, page 80.*

"The youngest telephone operator in the country has been discovered at Gerald, Ohio, a small town near Napoleon. She is Florence Sworden, daughter of Charles Sworden, and she is but five years old. Little Miss Sworden actually operates the board of a mutual company, which has its headquarters in the Sworden home, and she is said to be extremely businesslike about it too. . . she has a remarkable memory for names and her personal acquaintance with a considerable number of patrons of the system enables her to make connections with astonishing accuracy. She knows the rings of all the business houses, as well as the toll line and has recently felicitated herself upon putting through two check calls to Napoleon, although it is some tax on her small voice to handle long distance business. When in doubt, she calls her mother." *From TELEPHONY, July 27, 1912, page 101.*

50 YEARS AGO . . .

"Radiotelephone service between Alaska and the United States was inaugurated July 8, when American government officials participated with representatives of the American Telephone & Telegraph Co. and Alaskan government officials in conversations over the newly-opened communication channel between Seattle, Wash., and Juneau, Alaska." *From TELEPHONY, July 17, 1937, page 28.*

"The experience of Mrs. Bertha Muller, a telephone operator in a small town on the banks of the Ohio River, who remained at her post long after the flooded river drove other inhabitants to safer quarters, was dramatized as Charles Martin's 'Thrill of the Week' on Johnny the Call Boy's radio program, Tuesday evening, July 6, over the NBC red network. Mrs. Muller, who spoke after the conclusion of the dramatization, sat in a rowboat when the water flooded the telephone exchange and continued to operate the lines, making possible calls for relief and first aid." *From TELEPHONY, July 10, 1937, page 23.*

"The Ohio Bell Telephone Co., Cleveland, Ohio, has issued a 48-page booklet, 'Looking Ahead,' containing a checking list of what to do before starting a trip, and space for a day-by-day record of expenses, interesting happenings, and other data. Absent-minded vacationists and tourists, who usually return home to find a dozen or so bottles of milk on their doorsteps, will welcome this new travel log being given away by the Ohio Bell Telephone Co." *From TELEPHONY, May 22, 1937, page 12.*

25 YEARS AGO . . .

"The value of modern communication was demonstrated to doctors attending a New York Medical Society meeting recently when x-rays and electrocardiograms were sent from one point to another over telephone lines. This demonstration was a feature of the New York Telephone Co.'s exhibit at the meeting. An electrocardiogram of a patient from the telephone company's medical department was transmitted over conventional telephone lines by Dataphone service to the hotel where the meeting was held. The electrocardiogram was recorded at the receiving end for the doctors to read." *From TELEPHONY, July 7, 1962, page 25.*

"A standard directory-cover design employing a Pacific Coast theme, was unveiled this month by the West Coast Telephone Co., Everett, Wash. The initial issue of the new four-color series went to some 5,900 West Coast customers in Oregon's Union and Wallowa counties. The cover—featuring the Oregon grape, the California golden poppy and the coast Rhododendron of Washington in conjunction with a map of West Coast's serving area—represents the company's first standard directory offering." *From TELEPHONY, May 12, 1962, page 54.*

5 YEARS AGO . . .

"American Satellite Co. and Tandem Computers Inc. announced they have reach an agreement to market the Infosat system which will send computerized information via satellite. Under the terms of the agreement American Satellite will supply the earth station and satellite capacity, and Tandem Computers will supply equipment needed for its computers to transmit data to a satellite, a spokeswoman for Tandem Computers said." *From TELEPHONY, July 5, 1982, page 16.*

"Jet setting executives in British Columbia, Canada, can now enjoy long distance telephone service even when they are aboard their company aircraft. British Columbia Telephone Co.'s new service offering, Air-to-Ground Radiotelephone Service, provides a two-way radiotelephone link in the ultra-high frequency band between customer provided radiotelephones in private aircraft and the land based public switched telephone network. This service allows a long distance call to be placed from the aircraft to almost any place in the world." *From TELEPHONY, July 12, 1982, page 24.*

"Starting Oct. 2, Illinois Bell customers in Chicago and surrounding suburbs in the 312 area code must dial 1 before calling long distance or other 10 digit numbers such as 800 or 900 numbers. The increase of customers and new services in the area has diminished the number of new telephone numbers. The new dialing procedure will allow Illinois Bell to alleviate the shortage by using area code combinations as local prefixes." *From TELEPHONY, July 19, 1982, page 22.*

> *The Way We Were will run in the first and third issue of every month.*

**CORPORATE
INFORMATION CENTER**

July 20, 1987, Monday

DISTRIBUTION: Business Editors

LENGTH: 461 words

HEADLINE: TANDEM-COMPUTERS; (TDM) Tandem Computers announces validated Ada compiler

DATELINE: CUPERTINO, Calif.

BODY:
   Tandem Computers Inc. (NYSE:TDM) Monday unveiled its newest programming language for NonStop systems, Tandem Ada. Validation of the Tandem Ada compiler, by the U.S. Department of Defense Ada Joint Program Office, was also announced. Ada is an advanced structured programming language mandated by the DOD as a standard for its mission-critical computer systems. Mission-critical DOD applications include command-and-control systems, embedded computers in weapons systems and systems critical to the direct fulfillment of military/intelligence missions. Ada is also widely used by international government and military agencies and is gaining wider usage by the business sector of the programming community. The Tandem Ada compiler fully complies with the American National Standards Institute and Military Standard ANSI/MIL-STD-1815A (1983) and the International Standards Organization's standard ISO/8652-1987 Programming Languages-Ada. ''Tandem Ada provides a powerful programming language for the Department of Defense and other government agencies,'' stated Dennis L. McEvoy, Tandem vice president of software. ''For the first time, Ada programmers can take advantage of parallel processing benefits and distributed database capabilities of the wide range of Tandem systems,'' said McEvoy. Four programming tools are provided with the Tandem Ada language: a compiler, a library manager, a binder and a symbolic debugger. Tandem Ada supports large programs that can have up to four megabytes of instruction code and can manipulate up to 128 megabytes of data per single process within a NonStop system. The Tandem Ada language runs on all NonStop systems. Additional Tandem programming languages include COBOL85, COBOL(74), C, FORTRAN, Pascal, MUMPS, BASIC and TAL. All prices are in U.S. dollars and consist of an initial license fee and a monthly license fee. Tandem Ada for NonStop VLX, TXP and NonStop II systems is priced at $20,900 per system with a monthly license fee of $800. Pricing for NonStop EXT and CLX systems is $10,475 per system with a monthly license fee of $400. Tandem Ada will be available in the fourth calendar quarter of 1987. Tandem Computers Inc. manufactures and markets computer systems and networks for on-line transaction processing. The company's headquarters are located in Cupertino.

   Note to Editors: Tandem, NonStop, NonStop II, NonStop VLX, CLX, TXP, NonStop EXT and TAL are trademarks of Tandem Computers Inc. Ada is a registered trademark of the U.S. Department of Defense (Ada Joint Program Office).

CONTACT: Tandem Computers   Inc., Cupertino
           Sally R. Smith, 408/725-7515

BODY:

Tandem Computers, Inc. said it has purchased a minority investment in Netlink, Inc., a privately held vendor of Systems Network Architecture hardware and software.

Terms call for the two to develop and market products that will integrate Tandem Computers Nonstop systems and IBM systems over SNA.

CORPORATE
INFORMATION CENTER

July 20, 1987

SECTION: TOP NEWS; Joint Development; Pg. 2

LENGTH: 408 words

HEADLINE: Tandem buys into Netlink

BYLINE: By Mary Linehan, Staff Writer

DATELINE: CUPERTINO, Calif.

BODY:
   Tandem Computers, Inc. last week purchased a minority interest in Netlink,
Inc., a Raleigh, N.C.-based developer of concentration products for IBM Systems
Network Architecture networks.

   Under the terms of the agreement, Tandem and Netlink will jointly develop and
market products designed to better integrate Tandem fault-tolerant Nonstop
computers into IBM SNA networks.

   Although details of the deal were not revealed, Tandem officials said it
acquired less than 20% of Netlink.

   "Netlink is a leading SNA connectivity supplier and, in keeping with the
continued development of our SNA products, will complement our corporate goals
and extend our product capabilities," said Gerald D. Held, Tandem vice-president
of new ventures.

   Netlink networking products include the SNA Hub, a microprocessor-based
concentrator that resembles an IBM 3274 terminal controller but supports up to
256 sessions. Netlink products have been used in IBM SNA networks since 1982.

   "In general, it is a good investment because development of SNA products is a
market requirement for Tandem," according to Lee Doyle, a consultant at
International Data Corp., a Framingham, Mass.-based market research firm.
"Although [Tandem] has made strides in that area, all minicomputer vendors will
have to put expanded resources into SNA to gain results."

   Company officials at Netlink, which is funded by venture capital, said they
are pleased with the Tandem investment. "From our point of view, it shows that
the products we have developed to date have a long-term life and [the
investment] certainly adds to our credibility," Netlink Chief Executive Officer
Paul Wood said.

   "[Tandem] sees the relationship as an opportunity to enhance integration
between Tandem and IBM systems," Wood continued. "We have the communications
process products, while they have [on-line transaction processing]. They have
had a commitment to their SNA product line for a number of years now, but the
relationship with us furthers that integration with IBM."

Held said Tandem instituted a new ventures program two years ago and has since made numerous investments.

"Our investments over the last 18 months have not been diversification or venture capital investments, but investments aligned with product, industry and geographic strategies," Held said.

Held said Tandem and Netlink are working on specific joint developments but would not disclose any of the details.

THE BACK PAGE

Computer Industry Potpourri

● LISTS ●

A Billion Or So

Companies likely to eclipse the billion-dollar revenue mark for revenue in the near future.

1. Seagate Technology: Just finished fiscal 1987 with $958 million. That's a lot of disk drives.

2. Lotus Development Corp.: Although its revenue in the past 12 months is a mere $300 million, it'll get there eventually, by hook, crook or acquisition.

3. Microsoft Corp.: Having accumulated sales of $308 million in the recent 12 months, it'll probably reach the magic mark around 1989—and probably won't even have to sell hardware to do it.

4. Sun Microsystems:

The right market at the right time.

5. Apollo Computer: Lagged a bit behind Sun, but seems to be back on track.

6. Compaq Computer: King of the clones.

7. Prime: Seems to get lost in the shadow of DEC, DG and Wang.

8. Tandem: Will it hold its biggest beer bash ever when it goes over the billion-dollar mark next year?

9. Western Digital: Recent acquisitions have put it into several new growth markets.

10. Computer Associates: With its acquisition of Uccel, it will be more than halfway there.

MISCELLANY

Verbatim .

This week's nomination for worst lead sentence in a press release:

"Phoenix Technologies Ltd., world renowned for its line of IBM PC-compatible systems software, most notably the ROM (Read Only Memory) BIOS (Basic Input/ Output System), Monday announced that under contract to Symbolics Inc., it has designed an 80386 co-processor board that will provide three different modes of operation for the LISP operating environment and the 3600 series of workstations from Symbolics Inc., the world leader in symbolic processing technologies for artificial intelligence (AI) and other advanced computing techniques."

In case you're interested, that lead sentence totals an awesome *seventy-nine* words. Journalists—and PR people—typically are taught to keep lead sentences of a story to less than half that total.

Another rule of thumb for

a good lead sentence: Take a breath, then read it out loud. If you've written the lead tightly, you should be able to complete the sentence without taking another breath. Anyone who can read that sentence without taking an extra breath is probably in the circus, sticking his head underwater for five minutes without coming up for air.

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OEM Trivia Question

Answer to last week's question: Of Data Disc, Poly Disc, Ultra Disk and Brown Disk, only Brown Disk is still around today . . . . This week's question: Everyone knows Q.T. Wiles is investment banking firm Hambrecht & Quist's turnaround expert. But with which computer company is Wiles currently affiliated that has not been a turnaround situation?

ARCHIVES

One Year Ago ...July 21, 1986

IBM's second-quarter net income drops nearly 15 percent, precipitated largely by a steep erosion in operating margins.

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Two Years Ago ...July 22, 1985

Big Blue's second-quarter profits fall by almost 13 percent, due in part to customer hesitancy to purchase older mainframes in anticipation of new models.

●

Three Years Ago ...July 23, 1984

Seagate lays off most of its U.S. production work force as part of a program to shift more of its disk drive production to Singapore.


Random Access

A few random thoughts that pop into a computer industry journalist's head on a slow summer's day:

Last week's biggest "non-news" news story: Compaq will use Microsoft's Operating System/2 in future personal computers. It had to hold a press conference for that? What operating system did Compaq expect us to think it would use—Oasis?

One of the computer industry's most surprising turnarounds of the past two years has got to be MAI Basic Four. I wouldn't have given you a nickel for its chances after Asher Edelman got done with it, but they were able to pull the company together, go public, make it grow and turn a profit. It remains to be seen if they can keep it up, but it's a good trick so far . . . . One of the bigger disappointments has got to be Concurrent. I would have figured it to be more successful than it's demonstrated so far in its short life outside the womb of Perkin-Elmer.

Speaking of parent companies, so much for the credibility of Allegheny-Ludlum, which for months denied it was entertaining acquisition offers for its Kennedy tape drive subsidiary. Now, it appears that just about every company with any connection with tape drives has been around to see the operation . . . . Are we about to witness a thunderous crash in disk drive stocks similar to the great fall of 1984? Just when that sector was starting to regain credibility, bad news struck companies such as Maxtor and Quantum, and now everyone seems to be taking a hit. Heaven help a company like Seagate—which has done just about everything right

● PERKOWSKI ●

CSN Illustration by Tim Robinson
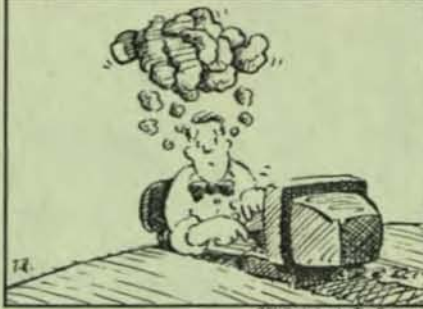
lately—if it stumbles any time soon.

While on the subject of Wall Street's tendency toward "herd" reactions, can anyone tell me the logic of knocking down the stock prices of Tandem and Stratus in the wake of a company like Alliant finding a glitch in its business? . . . . What are Apple and DEC going to do with all that loose cash hanging around? One suggestion from this corner: Invest heavily in erasable optical disk drive technology. The technology has too much promise for computer companies to pass up, but venture capitalists probably are scared of all the capital required. Capital is one thing Apple and DEC have plenty of. Think what erasable optical disk storage would do as a point of further distinction between the Macintosh and IBM and its copycats.

The only people ultimately to benefit from the rash of merger-and-acquisition activity in the software industry are investment bankers. When you acquire a software company, what you're really buying is people, and I can't imagine talented software people hanging around too long once the company they're working for is acquired by some bigger—and presumably more bureaucratic—company.

Wouldn't it be great if you could gain the number one benefit of going public—becoming a millionaire—without going public? Going public may be one of the worst things to happen to any company, particularly in the computer industry . . . . To me, the idea of Rodime—or any company—trying to claim a patent on a 3.5-inch Winchester disk drive form factor is more than a bit dubious. The U.S. Patent Office must have been out to lunch on that one.

Ironic: The Justice Department wanted more information on the Computer Associates-Uccel merger, while for the past year the entire mainframe software industry has been screaming that IBM was unfairly competing in the banking software market by its exclusive marketing deal with Hogan Systems . . . . Speaking of Computer Associates, do you wonder how they're going to digest all the products, marketing progams and employees of these companies they're acquiring?

A harbinger of things to come: Fortune selling off its hardware division to SCI Systems. The market is sending clear signals that we sure don't need a flood of competing systems vendors whose products' main point of differentiation is the faceplace.

Mike Perkowski is group projects editor of CMP Publications' Information Group.

Tandem Buys Stake In SNA Provider

BY ERIC NEE

CUPERTINO, CALIF. — Tandem Computers Inc. has purchased a minority equity position in SNA communications provider Netlink Inc., and is nearing completion of joint development and marketing agreements with the company.

Tandem is making the moves because Systems Network Architecture connectivity is strategically important in the markets Tandem sells to, said Tandem software development vice president Dennis McEvoy.

Netlink specializes in SNA peer-to-peer communications links, including Advanced Program-to-Program/LU 6.2 connections, which IBM recently positioned as a key element in its data communications strategy.

The stake in Netlink, Raleigh, N.C., is the latest in a series of investments by Tandem during the past year-and-a-half in companies involved in markets it views as strategic.

Tandem also has taken equity positions in Integrated Technology Inc., a Plano, Texas, manufacturer of the Signaling System 7 line of telecommunications products; and Triplex Inc., Torrance, Calif., a maker of fault-tolerant programmable logic controllers for industrial machinery. Tandem also formed two joint ventures in that period.

Tandem has provided SNA capabilities for its systems for about four years through its SNAX software, which lets Tandem systems connect with devices such as IBM 3270 terminals and SNA subhosts. More than 400 Tandem customers use SNAX, McEvoy said.

Netlink offers several SNA hardware and software products, including SNA Hub, a concentrator and routing device, and SNA Gate, an interface product that allows connection of non-SNA devices to an SNA network. The company has sold some products to Tandem customers.

The company also is said to be set for a fall announcement of a product that supports more communications transport protocols than comparable IBM systems without having to go through taxing protocol conversions. According to sources, the offering will give OEMs and other users leverage in accessing IBM SNA devices.

Joint work by the companies on SNA products began in February, even though the companies' joint development and marketing pact has been agreed to only in principle, said Netlink chief executive Paul Wood.

Neither Wood nor McEvoy would comment on the nature of the joint development work, when the resulting products will be released, or which company will own them.

Tandem and Netlink also plan to open, by year's end, an SNA information center in Raleigh for customers. The center will be staffed by both companies. IBM also has an SNA center in Raleigh.

Under the agreements between Netlink and Tandem, Netlink will remain free to sign joint development and/or marketing agreements with other computer vendors, McEvoy and Wood said. The development and marketing agreements with Tandem are Netlink's first.

Tandem's investment in Netlink was made in the SNA company's second round of financing, which raised an undisclosed amount of funds. In its first round, completed about three years ago, Netlink garnered about $3 million.

The precise size of Tandem's investment in Netlink was not disclosed, but McEvoy said Tandem owns less than 20 percent of Netlink. The other investors in Netlink are all venture capitalists.

Netlink, formed in 1982, has not yet turned a profit, Wood said. He would not reveal the company's revenue. Netlink, which has 90 employees, sells directly to end users.

Microlytics Eyes Mac Software Fray

BY MARIANNE KOLBUSAK

EAST ROCHESTER, N.Y. — Microlytics Inc., an independent vendor with close ties to Xerox Corp., said it will enter the Macintosh software market next month.

Microlytics, formerly Writing Consultant Inc., recently announced a version of its popular Word Finder computerized thesaurus for Apple Computer Inc.'s Macintosh computers.

The company said it has sold more than 250,000 copies of earlier Word Finder versions for the IBM Personal Computer and compatible systems. Microlytics also licenses Word Finder to other software developers—including MicroPro International Corp. and Microsoft Corp.—for use in their word processing packages, said Micolytics president and founder Mike Weiner.

"We're very high on the Mac—there'll be other software from us for it," said Weiner, who started the company in 1985 with $1 million in venture capital after 10 years at Xerox as a sales and marketing executive.

Weiner said he left Xerox with "the support of Xerox management." That relationship has resulted in Xerox becoming a minority equity investor in the company and in developmental ties with the Xerox Palo Alto Research Center (PARC), he said.

"Actually," Weiner said, "Microlytics was started with the goal of capitalizing on—or finding ways to market—PARC technology that was being underutilized."

Microlytics licenses technology from Xerox PARC in addition to doing joint development, Weiner said. He declined to say how developmental costs are shared, "because it's too complicated."

One technology licensed from the PARC is the Type Write advanced spelling checker. Microlytics found a way to encase the technology in a hardware device that plugs into personal computer keyboard receptacles.

Xerox markets Type Write hardware for the IBM PC and for Xerox's own 600 Memorywriter typewriters, Weiner said.

"We have several business strategies," Weiner said. "We sell our own products under our own label in the retail channel, and we also license our technology to other software and hardware vendors."

Microlytics will announce agreements to license the technology to several major OEMs within the next six months, he said. He would not name the companies.

Although Weiner would not disclose earnings for privately held Microlytics, he said, "Reports that we had 1986 sales in excess of $3 million are pretty fair."

Word Finder for the Macintosh, which features a thesaurus with 220,000 synonyms, will sell for $60 when it becomes available Aug. 1 through resellers.

Former DG Execs Exit Software Start-Up

WESTBORO, MASS. — Two former Data General Corp. executives have left a software start-up they helped found two years ago after the company failed to acquire venture capital.

John Crawford, former vice president of DG's Desktop Division, has joined Harris Corp. as marketing vice president for its Data Communications Division in Dallas. James Tuttle, former development director of the Desktop Division, has rejoined DG in its Advanced Manufacturing Technology Group.

Crawford was laid off in a 1300-person cutback at DG two years ago. He then co-founded Envyr Corp. with Tuttle and three other former DG employees—Ralph Jordan, Dan Prims and Lou Dernosek. Envyr reportedly plans to help value-added resellers port minicomputer software to desktop publishing systems.

Crawford and Tuttle, who were president and executive vice president of Envyr, respectively, said they left the start-up because it could not obtain venture capital. "We made the commitment to give it to the

Crawford: Exiting Envyr for marketing post at Harris.

first of June," Crawford said.

Jordan, formerly DG's software development director and now Envyr president, said he and the others will continue trying to launch Envyr, Raleigh, N.C. "We had big plans," Jordan said. "We were looking for $7 million for a company of about 50 to 60 people. Now we're starting small and building for the future."

—*Maura McEnaney*

in the U.S. District Court for the Northern District of California on behalf of shareholders who purchased CMI common stock during the period May 4, 1983, through Jan. 31, 1984.

Although CMI agreed to settle, it denied all liability and allegations of wrongdoing, according to court documents. CMI "considered it desirable to settle the class action to avoid the further expense and burden of this complex and lengthy litigation," the documents said.

Besides CMI, defendants named in the suit included eight present or former senior-level CMI executives; Intel Corp., a CMI investor; Peat Marwick Mitchell & Co.; Prudential-Bache Securities Inc.; Cable Howse & Ragen; and Ladenburg, Thalmann & Co. Inc.

CMI, which exited the disk drive business shortly after IBM dropped it as a customer, is currently in merger negotiations with Hemdale Film Corp., Los Angeles.

Tandem Net, Sales Jump In 3rd Qtr.

CUPERTINO, CALIF. — Tandem Computers Inc. last week reported jumps in both revenue and profits for its third quarter ended June 30.

Quarterly revenue totaled $263,978,000, up 31 percent from $200,853,000 for the prior year's third quarter. Net income was $25,617,000, or 26 cents per share, up 41 percent from the $18,124,000, or 20 cents per share, earned in the comparable 1986 quarter.

The per-share figures reflect a two-for-one stock split effective during the recent quarter.

For the first nine months of fiscal 1987, Tandem reported revenue of $619,573,000, up from $449,763,000 for the first three 1986 quarters. Nine-month profits reached $75,158,000, or 77 cents per share, compared with last year's $42,182,000, or 48 cents per share.

Tandem ended the quarter with $296,295,000 in cash and cash investments, as opposed to $177,243,000 at the same time last year.

Overseas revenue, accounting for 44 percent of the quarterly total, jumped 50 percent over last year, while domestic revenue was up 19 percent.

"Tandem's results were better than I had expected," said analyst Richard Edwards of Robertson Colman & Stephens, San Francisco. Edwards had projected that Tandem would post revenue of about $260 million and per-share net income of about 24 cents.

"Tandem had a strong end of the quarter," Edwards said. "The U.S. market picked up more than was expected."

Edwards attributed the strong sales increases during the recent quarters largely to initial shipments of Tandem's high-end NonStop VLX systems. Tandem probably will post sales increases in the mid-20-percent range for the next few quarters, he said.

In the June-ended quarter, Tandem began shipping its low-end, Unix-based LXN systems, and will begin shipping its low-end CLX systems later this year. However, those systems, because of their lower price, probably will not cause as great a sales increase as resulted from the VLX, Edwards said.
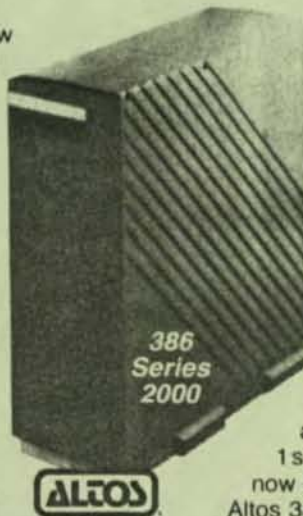
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