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NCC '85: Big crowds, little action

By Kathleen Sullivan
CW West Coast Bureau

CHICAGO — Although the 1985 National Computer Conference here attracted 8,000 more attendees than last year's show, it will leave behind an otherwise undistinguished record. Since few companies chose this city as the backdrop for product introductions, the show lacked the excitement of previous NCCs.

When asked to comment on their impressions of NCC '85, visitors interviewed by *Computerworld* gave the show — both the exhibits and the technical seminars — mixed reviews. NCC lacked excitement, many said. Though some visitors gave the



A bird's-eye view of the NCC '85 show floor at McCormick Place

technical seminars high marks, others complained that the quality of the presentations was uneven.

Vendors registered a different set of complaints, centering on their dealings with the city's trade unions (see story page 6). Representatives from several firms told stories of mishandled equipment, damaged computer systems and abrasive contact with union members.

Yet a spokesman for the American Fed-

eration of Information Processing Societies, Inc., the prime sponsor of the show, said that, in his estimation, exhibitors were pleased overall with NCC '85. "The reaction to this year's NCC has been more positive than I've seen in years," said Donald G. Dowd, NCC '85 communications chairman.

Dowd said the show's increased attendance could be interpreted as an optimism-

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Union rules rile
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Wang to offer bridge to IBM?

By John Desmond
CW Staff

LOWELL, Mass. — Wang Laboratories, Inc. here has developed products that allow the IBM Personal Computer to run Wang Word Processing and the IBM Personal Computer to link to Wang VS minicomputers, according to Wang internal documents obtained by *Computerworld*.

Wang Word Processing for the IBM Personal Computer would include a Wang keyboard and software for a price of \$695.

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Slump snares mainframe makers

By Peter Bartolik
and Clinton Wilder
CW Staff

Evidence of the continuing computer industry slump was in sharp focus last week as IBM and four of the five Bunch mainframe vendors reported second-quarter profit declines. Sperry Corp. was the three-month period's lone winner, posting a 23% earnings gain over its results from one year ago.

IBM reported that second-quarter profits were down almost 13% from the year-earlier quarter, as revenue growth continued at the dismal pace set in the first quarter. Results from the four other Bunch

companies showed that profits declined by 5.6% at Burroughs Corp.; 13% at NCR Corp.; 84% at Control Data Corp., with a \$24.9 million operating loss from computer sales; and 29% at Honeywell, Inc.

IBM's financial results for the first six months of the year reflected the dramatic downturn that has thrown the industry into turmoil following two years of overall record growth.

Although much of this year's financial adversity was attributed to the strength of the U.S. dollar abroad, IBM said it estimated that if currency rates had equaled those of the first half of 1984, the company's

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Poll shows mini mart saturated

Sales drop-off attributed
to heavy 1984 purchases

By Tom Henkel
CW Staff

DELRAN, N.J. — For mini and super-minicomputer vendors wondering why their products have suffered a sales drop-off recently, the answer may rest in the heavy sales of the past year.

A recent survey conducted here by Datapro Research Corp. of 1,702 minicomputer users revealed that most of these users replaced an older system during the past 11 months. A Datapro survey of main-

frame and mainframe users said their then-current systems averaged slightly more than 40 months old.

On the whole, the minicomputer users polled this year said they were more pleased with their systems now than they were last year. This conclusion is derived from Datapro's "overall satisfaction" category, a composite score based on several

Datapro charts on pp. 24-26

factors, including ease of operation, reliability, vendor services and vendor-supplied software. Most minicomputer vendors included in the 1985 Datapro survey showed a moderate improvement in overall user satisfaction. Some, like Harris Corp. and Honeywell, Inc., showed significant improvements.

TOP OF THE NEWS

The U.S. Navy is scrutinizing its computerized inventory control system following the arrests of five people charged with diverting stolen jet fighter parts to Iran. [Page 2.](#)

Net results. Apple lost \$17 million in the second quarter as its revenue plummeted nearly \$50 million from last year's figure. [Page 4.](#)

Communications standards are crucial to the future of networking, but NCC-goers view the short-term implications critically. [Page 8.](#)

Seek and ye shall not find. They're trying all sorts of ways to provide end-user access to mainframe data, but DP managers are finding there is no perfect solution. [Page 10.](#)

NEWS

Stolen parts spur Navy probe

By Bryan Wilkins
CW Washington Staff

WASHINGTON, D.C. — The U.S. Navy last week began conducting a head-to-toe investigation of its computerized inventory control system in the Naval Supply Systems Command, following the arrests of five individuals who were charged with diverting to Iran stolen weapons systems parts for F-14 aircraft.

U.S. Customs Service special agent John Hensley said last week, "We don't know how they did it. We were afraid during the investigation to push up inquiries into the [computerized inventory] system because we were afraid we would tip them off. We are really in the dark."

Meanwhile, the Naval Investigative Service was busy beginning a more thorough effort to establish the trail used by four Filipino nationals and an Iranian living in England. The Iranian allegedly stole the parts for F-14 aircraft and smuggled them to Iran in containers identifying them as medical supplies and auto parts.

The ring was broken by Federal Bureau of Investigation, Customs Service, Navy and U.S. Department of Justice investigators who were supposedly tipped off to its existence last fall during a routine audit of exports leaving the U.S.

Last week, Navy officials in Washington, D.C., were unavailable for comment on the security, level of personnel access and the architecture of the computerized inventory control system used by the Naval Supply Systems Command.

"We just don't want to comment on this until we are able to find out more about what happened on the [aircraft carrier *USS Kitty Hawk*] and in San Diego," a Navy spokesman said.

Meanwhile, Winston Kuehl, regional director of the Naval Investigative Service, shed some light on the difficulty that investigators faced trying to determine how the stolen-parts ring operated.

"It is logical to assume that since there is a highly computerized system in operation — the standard supply system for the Navy is computerized

— that they were using it in some fashion," Kuehl said.

He said the investigators accumulated a lot of information during the breakup of the ring that is still being pieced together.

No clue as to how parts were removed from system

"We have no certainty to conclude how the parts were getting out of the system. We don't know if they were ordering parts up on the system and then diverting them or just taking parts from existing inventory or as they came in," according to Kuehl.

Kuehl said the Navy "was not in the position to check its system inventory to see if parts were missing. We can't say whether or not the parts were listed as missing." He added that the existing inventory control system was not an integrated one but rather a system of collateral parts that served particular functions.

One of three San Diego residents arrested was a Navy enlisted man, Baluyat Cayahyab, 36, working on board the *Kitty Hawk*. A second was a civilian, Pedro Manansala Quito, 60, employed by the Navy at its Air Logistics center in San Diego where aircraft engines were reworked; a third, Franklin Pangilinan Agustin, 47, ran an insurance business.

The two others arrested were Edgardo Pangilinan Agustin, 45, of Jamaica, N.Y., brother of Franklin Agustin; and an unidentified Iranian national living in England. Court papers identified Saed Asefi Inanloo, 36, of Middlesex, England, as communicating with the other four.

The stolen-parts smuggling ring was traced back to San Diego through Virginia, New York and London.

Navy officials said they have also traced stolen parts from the aircraft carriers *USS Curt Watson* and *USS Ranger* and indicated there may be more persons involved in the ring.

"We think they were a bunch of thieves. Their motivation was money," said Quintin Villanueva, Customs Service regional commissioner.

”
“We don't know how they did it. . . . We were afraid we would tip them off. We are really in the dark.”

— John Hensley
U.S. Customs Service

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REPORTER'S NOTEBOOK

Rambblings from the floor of the 1985 National Computer Conference:

■ William Steele, Sytek, Inc.'s OEM Programs director, borrowed a page from political science to explain why he does not expect a major role for diskless personal computers on local-area networks.

Networked diskless micros will not fly if DP uses them in an attempt to return to a highly centralized computing environment, Steele said. In his view, users will no longer accept overly centralized computing plans, which share many defects with socialist centralized economic plans. "You have your five-year plans, which never work, and you have your annual crop failures," he explained.

■ IBM has changed its stripes — pinstripes, that is. It seems the company's attempt to slunk the image of being stodgy and bureaucratic was reflected in the attire of Big Blue's booth personnel. There was not a three-piece navy blue pinstripe suit or women's two-piece navy ensemble on any of the 20 or so booth attendants. In fact, light-colored suits with brightly colored ties, penny loafers (cordovan colored, no less) and open-toed women's shoes were the dress of the day. And the presentations at the booth, clearly one of the busiest on the floor, were lighter and breezier than we have seen at other shows. It makes us wonder what they did with all that pinstripe wool.

■ Televideo Systems, Inc. is expected to announce a laser printer in time for the Comdex/Fall '85 show, but the machine will not use the popular Canon USA engine. According to a Televideo source, "Canon has a very poor price-performance factor." Canon's engine has a frequency of repair problems, the source said, adding, "We are looking at several Japanese manufacturers of better laser engines."

■ At the press conference introduction of its new and enhanced Control Manufacturing and Control/Financial applications, Cincom Systems, Inc. also announced that it intends to develop specific versions of those manufacturing/financial systems for the aerospace and defense industries. Cincom President Dennis Yablonsky said the targeted industries represent a massive marketplace that no vendor is adequately addressing.

Cincom also said that, as a result of its recently penned joint marketing agreement with Digital Equipment Corp., it is currently at work on a VAX-compatible version of its Netmaster network control software.

The company also announced that it is developing general ledger and order entry packages for its Business Control System line and will likely be introducing them within the upcoming year.

■ Nonprofit organizations that got free counter-top space from the American Federation of Information Processing Societies, Inc. (AFIPS) in past years were out of luck this year. AFIPS — reportedly annoyed that some of those counter-tops were left unattended and became messy — made it a rule that only AFIPS-affiliated organizations could have the counter-tops for free. The rest of the organizations had to purchase space — an option some of those organizations could not afford.

■ In the "best-laid-plans-go-awry" category, the 12-by-12-ft frog used by Charles River Data Systems, Inc. was not able to sit atop his customary pad this time. The giant amphibian would not clear the ceiling over the booth he usually sits on, so AFIPS gave him his own floor space this time around. This was the frog's second unseating, the first occurring in January of 1984 at the Federal Computer Convention in Washington, D.C. There, the frog was relegated to the lawn and got snowed on, according to one of his keepers in the booth.

■ The burning man who demonstrates halon

COMMUNICATIONS

DATA STREAM

SBS: Making its way back to the MCI nest

By John Dix
CW Staff

Satellite Business Systems (SBS), 16 years in the making, has come back to roost with MCI Communications Corp.

A little-remembered fact in the recent deal — where IBM sold SBS to MCI in exchange for 16% of MCI's stock — is that MCI was one of the three companies that founded SBS back in 1969.

The history of SBS is interesting. John D. Goeken, one of the original founders of Microwave Communications, Inc., said in an interview [CW, Oct. 29] that "MCI thought that satellites would be ideal for long-haul telecommunications services. To try to make MCI into a more uniform company, in 1969, we formed a company with [Communications Satellite Corp. (Comsat)] and Lockheed Corp. called CML."

Faced with legal battles against established communications giants like AT&T — the monolith feared the goat and, in retrospect, rightly so — MCI sold CML to

IBM and Comsat General in July 1974.

Under the terms of that deal, Comsat General was to up its stake in the company to 45%, and IBM was to obtain a 55% share for \$3.2 million. It was not to happen. Bowing before the hue and cry raised by competitors, the Federal Communications Commission blocked the acquisition in February 1975. In that ruling, the FCC established conditions under which the sale would be allowed.

Enter Aetna Casualty and Surety Co. On September 26, 1975, this subsidiary of Aetna Life and Casualty Co. joined the former partnership, diluting IBM and Comsat's interest in the company as required by the FCC. Three months later, the newly named Satellite Business Systems had submitted a system proposal to the FCC.

In January 1977, the FCC approved the SBS application. After a few court battles brought by competitors and an antitrust investigation conducted by the U.S. Department of Justice, SBS was

ready to fly.

Eight years later, the investment in SBS topped the \$1 billion mark, with most of that money coming from the original three investors. But the company had yet to earn a profit. In 1984, SBS revenue was \$290 million, and losses were estimated at \$100 million.

The financial burden was getting too heavy, and last July, Comsat bowed out, selling 20% of its share to Aetna and the remaining 80% to IBM, giving the mainframe maker a controlling interest.

IBM replaced the SBS president with a Big Blue veteran, who didn't turn, and really couldn't have turned, the company around. The fundamental problem with SBS was that it was founded on the belief that demand for data communications, particularly high-speed data, was about to explode.

SBS believed that by 1980 it would have 126 earth stations installed, 375 by

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MCI

SBS

■ Astrocom announced a seven-port statistical intelligent multiplexer that supports up to seven asynchronous terminals at speeds of 9.6K bit/sec./64

■ TCL introduced a repeater for use with Ethernet-type networks that enables cables to be interconnected/64

■ Analytics Communication Systems has announced Sherlock, a programmable encryptor/68

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Equatorial unveils two-way satellite service

MOUNTAIN VIEW, Calif. — Equatorial Communications Co. has announced the addition of two-way satellite services to its one-way packet-switched satellite network product line.

Featuring a 4-ft transmitting and receiving micro earth station, the network service is designed for private corporate data networks with large central processing sites and hundreds or thousands of dispersed sites. Geared primarily to transaction response and data collection applications, the system supports terminal-to-host and terminal-to-terminal communications, the vendor reported.

Four application areas are being targeted by Equatorial — financial transactions, process monitoring and control, retail point-of-sale and branch office administration.

The company's C-200 transmit and re-

ceive micro earth stations have been tested since December 1984. Earlier this year, the company reached an agreement with Farmers Insurance Group of Los Angeles to sell an Equatorial interactive network to support data transactions from 3,000 agent and branch claim offices, a spokesman said.

Once equipped with an earth station, interactive network customers purchase the amount of network capacity required in each direction, reflecting the differences between transaction inquiries and the typical response. Capacity is available in increments of 9.6K bit/sec. Terminal reception of data sent over the network from the host computer may be continuous at up to 19.2K bit/sec.

Customer networks are operated from the company's Network Control Center here. The center provides redundant

transmitting and receiving electronics, an uninterruptible power source and continuous network monitoring and diagnostic analysis. Customer data is transmitted via Equatorial-owned and operated satellite transponders, 12 on Galaxy II and four on Westar IV.

In a typical packet-switched interactive network, users at remote locations use the C-200 micro earth stations to communicate through a geostationary satellite, which relays the message to a customer's central data base or to another micro earth station via an Equatorial master earth station. The 36-ft master earth station receives the response, packetizes the incoming data and transmits the signal to the designated receiving site.

The company's use of spread spectrum transmission technology permits the use of

See NET page 68

Telebit introduces asynchronous error correcting modem

Trailblazer offered in circuit card, stand-alone versions

CUPERTINO, Calif. — Telebit Corp. announced recently an asynchronous error correcting modem for use with dial-up lines that is said to provide an average throughput of 10K bit/sec.

The Trailblazer, targeted at Fortune 1,000 corporations, is available as a stand-alone device or as a circuit card for IBM Personal Computers and compatibles.

Trailblazer is based on a Motorola, Inc. 68000

that enables it to transmit in half or full duplex.

At high speeds, Trailblazer uses a Dynamically Adaptive Multiple Carrier Quadrature Amplitude Modulation, a proprietary technique the company developed. At lower speeds, which the modem falls back to in 100-bit increments as line quality degrades, the device uses Differential Phase Shift Key or Frequency Shift Key modulation.

Trailblazer also relies on a patented technology that divides the bandwidth of a voice-grade dial-up line into 512 communications carriers, according to Telebit President H. R. Johnson. Other modems typically use only one or two carrier signals, the president claimed.

company reported. Individual carriers may be of a lower quality and may be capable of supporting only two bits.

Incoming data, which is sent in the form of packets, is analyzed by a receiving modem to find out whether the transmission has been corrupted. If an error is detected — using a cyclical redundancy check character — the receiving modem rejects the contaminated packet and requests a retransmission.

After each packet is successfully sent, the modems reanalyze each channel and, if necessary, adjust the data rate to conform to any interim changes in its signal-to-noise ratio, Johnson said.

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COMMUNICATIONS

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A minimum of 96 bits will always be transmitted.

The repeater restores the original signal fidelity by removing timing, symmetry and amplitude distortions before transmitting the repeated signal.

The Model 2210 repeater is available in either 115V/60Hz or 230V/50Hz models and is priced at \$1,795.

TCL, 47829 Albrue St., Fremont, Calif. 94538.

AUXILIARY EQUIPMENT

■ Analytics Communication Systems has announced Sherlock, a programmable encryptor.

The product reportedly works for

end-to-end or link applications on dedicated or multipoint circuits. Sherlock uses the Data Encryption Standard and meets U.S. government Standards 1026 and 1027 for link encryption applications, according to the vendor.

It works with half-duplex or full-duplex, asynchronous and synchronous transmission at rates from 50 to 9.6K bit/sec.

The encryptor features a 24-char. LCD. Physical security includes three pick-resistant locks to protect key entry and logic and locked-in cables. The product reportedly includes automatic testing as well as diagnostics.

Sherlock costs \$2,495, the vendor said.

Analytics Communication Systems, 1820 Michael Faraday Drive, Reston, Va. 22090.

■ Bytex Corp. has added packet switching and baseband interfaces to its line of electronic matrix switches.

An X.21 interface enables a user to patch, switch and monitor up to eight ports at speeds up to 38.4K bit/sec. for each card and a maximum line speed of 307.2K bit/sec.

The baseband card supplies full-duplex, synchronous and asynchronous transmission at speeds up to 19.2K bit/sec. It interfaces with digital service units and channel service units. Sixteen ports can be supported on the card, and the card's maximum transmission speed is 76.8K bit/sec.

The baseband port card is priced at \$2,640, and the X.21 port set costs \$1,760.

Bytex, Southboro Office Park, 180 Turnpike Road, Southboro, Mass. 01772.

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2,800Hz for most competing products, Johnson said. The greater bandwidth, in turn, results in increased communications speeds.

Broadened bandwidth also enables the modem to transmit data even over low-quality phone lines and opens up applications that, until now, have remained technologically or financially impractical, the company reported.

Ten large corporations are said to be using Trailblazer already, all of which served as beta test sites for the product. They reportedly credited the modem with delivering an average throughput of 10K bit/sec.

In addition to being manufactured and sold directly by Telebit as Trailblazer, the modem will be marketed by Digital Communications Associates, Inc. under the name of Irma's Fastlink.

Trailblazer costs \$1,995 and is available for immediate shipment.

Telebit is headquartered at 10440 Burb Road, Cupertino, Calif. 95014.

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small earth stations and C-band (4 GHz and 6 GHz) frequencies. The spread spectrum transmission is said to provide protection against interference from other satellites, from terrestrial microwaves and from signal degradation during rainstorms.

Company spokesmen estimated the savings over leased telephone lines to be approximately 25%. Costs are broken down as follows: \$5,800 for the earth station, \$900 for the installation, \$45 per month for maintenance, \$20 to \$100 per month for satellite services and \$35 per month for network management providing maintenance of the master earth station.

More information is available from Equatorial Communications, which is located at 30 Ferguson Drive, Mountain View, Calif. 94043.

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1983 with two satellites in the air and 600 with three satellites and improved technology.

Today the company has achieved roughly what it expected to have achieved back in 1980. And much of the growth in revenues has come from carrying traffic other than high-speed data as was the company's original intent. For example, in 1983, of the 30 transponders on three SBS satellites, only six were being used for the company's Customer Network Services. Of the remaining capacity, 40% was used for cable TV, 10% for SBS' Skyline voice service and 30% was reserved for backup.

SBS based its predictions on detailed case studies involving 415 companies from the Fortune 500. These studies showed the risk the company was taking.

In fact, a company spokesman once admitted that the fate of the company might hinge on the creation and acceptance of new applications such as electronic mail, teleconfer-