Burroughs Tries Separate Prices

**COMPUTERWORLD**

**Faster Univac 9200, 9300**

Systems Are Announced

PHILADELPHIA - Univac upgraded its 9200 and 9300 systems last week by introducing Mark II models of each, for delivery starting in six months. The 9200, which had been a card-oriented system, can now handle tape units and, optionally, disk systems. It has a typical price of somewhat over $3000 a month.

The 9300, which has twice as fast a central memory as the 9200, has had disk units added to its current tape capabilities. It typically rents for approximately $4000.

The form said that the new systems were "highly compatible" with the current 9200 and 9300 in both hardware and software.

**Other Changes**

Major changes also were made in the printers, which now offer five print speeds varying from 250 to 1600 lines per minute. Both systems can use paper-tape devices for input and output and can operate with a choice of two data communication subsystems. The Univac 8411 Direct Access Subsystem provides industry-compatible variable-record-length disk storage of from 7.25 to 58 million bytes.

The Univac 9200 II includes as standard equipment a multiplexor channel to accommodate an array of input and output devices. A multiaccess channel with a center rate of 350,000 bytes per second is available as an option. The 9300 also includes an Access Subsystem. Both multiaccess and deaccess channels are integrated as standard equipment with the 9300 II.

**Software**

Software for the two new computers includes the Basic, Card, Tape, and Disk Operating Systems. The 9200 II and 9300 II Systems, with 24.756 or 32.768 bytes of main storage offer versions of the Tape and Disk Operating Systems providing concurrency. The simultaneous running of one main program and up to five peripheral programs is possible.

The software complement includes, under the Tape Operating System, Assembly Language and Report Program Generator in addition to Cobol and Fortran language processors. The Disk Operating System includes Assembly Language, RPG, and Cobol. Also provided as a full range of utility programs, tape and disk sorting, and Control System to minimize operator intervention.

**Joan Van Horn Elected Chairman Of Adapso's Time-Sharing Section**

NEW YORK - Joan Van Horn, president of VIP Systems, Washington, D.C., has been elected chairman of the new Time-Sharing Section of the Association of Data Processing Service Organizations (Adapso). T.J. O'Rourke, president, Tymshare Inc., Los Alamos, Calif., was elected vice chairman, and Norman Schueckler, general manager, Graphic Controls Corp., Buffalo, N.Y., was elected treasurer.

The immediate goals of the new section, said J.L. Dreyer, executive vice-president of Adapso, include increasing the membership, now 21, and developing Washington representation to meet the needs of the Federal Communications Commission and to maintain strong relations with the legislative and judicial branches of the government.

**ACM Curtails Some Services, Calls Special Council Session**

NEW YORK - The Association for Computing Machinery, beset by a growing financial crisis, has closed its information center and drastically curtailed conference-coordination support.

The ACM Council, not scheduled to meet again until May, has been called into emergency session to consider other cost-cutting adjustments. Donn Madden, ACM executive secretary, told Computerworld that ACM was in a situation which now offered range of utility programs, tape and disk sorting, and Control System to minimize operator intervention.

Madden said that printing of all publications was continuing despite rumors that publication cuts were being made. Northeast Surprised

News of the crisis particularly surprised ACM members in the Northeast. They had just received a newsletter which reassured them about the society's financial situation. The newsletter said that the current proposal to send funds without being limited by the approved budget had been made simply because the society now has a $1.2 million-a-year budget and the council needed more flexibility.

**World Wide Procurement Quiz Renewed by Brooks**

WASHINGTON, D.C. - Serious doubts about the wisdom of moving ahead with the Defense Department's planned World Wide Military Command and Control System (WWMCCS) have been raised by Rep. Jack Brooks, D-Tex., in a letter to Defense Secretary Melvin R. Laird. The WWMCCS, a huge computer project involving an estimated procurement of between $100 million and $500 million worth of equipment and services over a five-year period, was first announced last year. When the proposed system was first announced last year, Brooks urged then Defense Secretary Clark Clifford to get his agency working on development of commodity in machine languages to help assure that more than one manufacturer would land the big order.

Last week the Texas Democrat revealed that investigation by his government activities subcommittee during the past several months has raised new questions which merit consideration prior to finalization of this procurement, rather than after firm commitments have been made. Points of Concern

He cited the following:

1. Despite the magnitude of the proposed expenditure, no one office or individual in the entire Defense Department seems to have overall jurisdiction over the processing of the procurement.

2. His subcommittee has been unable to determine the existence of any feasibility study or evaluation of the equipment now in use that supported the immediate need for the acquisition of new hardware.

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CDC’s Ban on Disk Packs Attacked by Independent

By a C.W. Staff Writer

Bedford, Mass. — Are disk packs made by independent manufacturers likely to damage Control Data disk drives? At least one independent manufacturer thinks not, and it is ready back this belief with a warranty covering any damage to a disk drive caused by a manufacturing defect in any of its disk packs.

Control Data has a policy of voiding its warranty on its disk drives when they are used with nonapproved disk packs meaning any packs other than those made by Control Data and IBM. This policy has forced the large British computer company, International Computers Ltd., to increase maintenance charges 50% when its Control Data-supplied drives are used with nonapproved packs.

Warranty Based on Tests

BASF Computer, the independent manufacturer, said its warranty is based on “our experience by testing our packs ourselves on IBM and CDC drives in-house.”

Should a drive be damaged, “the responsibility for determining probable cause is between the drive manufacturer and the disk pack manufacturer,” a BASF Computer spokesman said.

Control Data said its policy is based on the possibility of poor quality components produced by independent manufacturers. While admitting that many independent producers do produce quality packs, the cost of evaluating their quality control procedures probably would cost $125,000 and upward, the company said (C.W., Feb. 12).

Cost Called Unreasonable

“Based on our experience,” the BASF Computer spokesman said, “and the experience of our parent company, we feel that the costs quoted by CDC for their pack evaluation are unreasonable.”

Honeymoon told Computerworld (Feb. 19) that it had “only occasional problems” with its Control Data-supplied drives when used with nonapproved packs. The company said it had not found it necessary to void its warranties or increase maintenance charges.

IBM told Computerworld that it had never found it necessary to void its warranties even when a drive was damaged by a non-IBM pack. The company said it simply asked its customers to pay the cost of rehabilitating the drive.

Memory System Prices Cut 30%

Los Angeles — Standard Memories Inc. has cut the price of its Ecom 2.5 line of core memory systems by 30% to $335.

The price of a completely packaged 4k x 16 memory system has been cut from $3357 to $2369.

In moderate production quantities, the cost will approach $2 per bit, according to W.B. Barnes, vice-president of marketing.

Standard Memories is a subsidiary of Applied Magnetics Corp., Goleta, Calif.

U.S. Surplus Computers Can Be Bargain

BATTLE CREEK, Mich. — Government surplus, first and second generation computers offer schools, colleges, and other time users a chance to get hardware at very reasonable prices.

Surplus Department of Defense computers are sold by sealed bid by the Defense Surplus Offices of the Defense Logistics Services Center. The center recently sold an

Diction Cuts

Keypunch Error

New York — When analysts dictating Cobol programs instead of writing them, keypunching errors can be reduced.

At least that’s the experience of the International Playes Corp., which has assigned three typists to transcribe programs for 30 analysts.

Charles Hagadero, DP manager at Playes, said the system improved output in two ways. First, an analyst can dictate faster than he can write, and, second, keypunch operators had problems with analysts’ handwriting which resulted in nearly 1.5 errors in every 25 lines.

The typists were given six one-hour sessions on Cobol format, punctuation, and syntax, he said.

IBM 704 to four college students and now has an IBM 705 and a Univac II for sale.

Further information on surplus computers may be obtained by writing: Department of Defense Surplus Sales, Dept. BC-91, P.O. Box 1370, Battle Creek, Mich. 49016.

Abacus-Assisted Instruction

Not everything is computerized these days. At the Gladie View School, Lower Burwell, Pa., streamlined abacuses are used to teach math in the first through fourth grades. Using the “modern” device are teacher Patricia Rupert and fourth graders Megan Merarell and Daniel Squire, both 9. The abacuses were homemade using stainless steel wire supplied by Allegheny Ludlum.

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1410-ES-12K tape system, 1402 reader punch, 1403 printer, 1406-2 storage and 4 7330 tape drives

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Wanted: 024 Modulus 10, 55/Mod 1, 059 Mod 2
255-Word Audio Response System Serves 256 Channels

By a CW Staff Writer

PENN SAVEN, N.J. - An audio response system with a vocabulary capability of 255 words, a data line capability of 256 channels, and an interface for the IBM S/360 has been released by Technitrend, Inc.

Large Vocabulary Size

The unit, called the VM-1400, has the capability of handling any vocabulary size up to 255 words, providing extensive sentence and special word capabilities for any application, the company feels. Credit verification, applications, inventory and order entry, and other applications requiring audio response for simplification can all be implemented with this system.

The channel capacity of the unit permits it to handle up to 256 local key-sets of the touchtone type, and provides direct connection and response. With a price tag starting in the $30,000 class for a unit with a 31-word vocabulary, the company feels that its unit is highly competitive with the IBM 7770-3 ARU, according to Richard Jenk, director of marketing.

Jenk also pointed out that none of the competition provides the same flexibility and maximum capacity as the VM-1400. The addition of a S/360 interface provides compatibility for users without any complex interfacing problems. It is believed that this system is the most flexible and powerful system of its type currently available.

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Page Reader Billed As Least Expensive

By a CW Staff Writer

SPRINGFIELD, Va. - "The lowest-cost optical page reader in history" was announced last week by Farrington Manufacturing Co. The new unit leases for under $2500 per month while the nearest competitor starts at $3400 per month, the company said.

The unit, designated the 3050, lessees for $3495 per month with a 7- or 9-track multiplex tape drive (200, 556, 800 bpi) and accepts any standard tape reel up to 2400 feet.

The 3050 reads alphanumeric information on tape sizes up to 0-1/2" by 1" with either the Farrington 12L or any of the IBMASCI code types.

Extreme Speed

The device reads at speeds up to 400 characters per second, 30 characters per second faster than the next competitive unit, according to the company. The unit can also be connected to any major computer as an on-line page reader, according to James F. Benton, a company spokesman. He pointed out that the unit has a optional interrupt generating capability which would enable it to interface with most existing computers. The unit can operate as a stand-alone device anywhere.

According to Farrington President Peter F. McCloskey, "Any company which has a key punch section of 10 or more operators is a prime prospect for the device. It fulfills the requirements of other devices in the Farrington line to significantly broaden the market. It provides the data processing user with a truly low-cost input device. The system utilizes itself without a lengthy system evaluation." The general areas where the company feels the device most useful are inventory control and order entry, billing, cost accounting, job-shop accounting, and other areas where most of the inputs are similar to each other.

"With a list price of $120,000 as compared to the nearest competitor unit price of about $143,000, the unit is felt to be an excellent buy, a company spokesman added.

New Census Cuts Totals

NEWTON, Mass. - A new computer census, which Computers and Automation states is more accurate than its previous censuses, appeared in the February issue last week and indicates that the share of the computer market held by many of the manufacturers previously had been grossly overstated.

A number of the new figures, however, have been disputed by knowledgeable industry sources.

In the new census, the figures for Honeywell, for instance, showed a dramatic change. The population of 1200 in the U.S. was down from 65 to 260, a drop of more than half, while the successful Honeywell 200 line actually dropped from 800 installations to 44, a 40% drop. Other Honeywell systems were equally adversely affected.

Burroughs was hit in the figures for the 8000 series, dropping from 370 installations to 183. Some of the reduction was understandable because the new figures included only U.S. installations and apparently were five months old, while the original census had dealt with worldwide figures and the situation in the middle of December.

Even so, Honeywell reacted strongly on hearing of the changes and characterized them as being "completely absurd." A Burroughs spokesman also strongly disagreed with the new 8000 figures.

Ed Berkeley, editor of Computers and Automation, said that the new figures, described as more accurate than the old ones, was a Mr. J. Parkash of D.P. Data Corp., in Mari- boro, Parkash, when contacted, said that he had not examined the January Computers and Automation figures in detail, but that he was aware of all of the published material which he described as being "junk." He said that the data was gathered from many sources including employees of Burroughs who had him who set up separate businesses and who wished to repay him, contacts with suppliers who made vital parts such as keypunch motors, and contacts with the manufacturers.

He said that he was cer- tain that the figures were accurate because the manu- facturers had confirmed them and were satisfied. He particularly mentioned that both Honeywell and Burroughs were repeat cus- tomers for his services.

The actual figures that turned out, had been derived from dol- lar volume figures which had been published earlier in the new- letter, D.F. Focus, using an "average installation" as a base to translate from the dollar volume figures the numbers that were quoted in the article.

Please Circle A Number and A Letter:

YOUR TITLE AND OR FUNCTION?
A. Operational Management (Engineering)
B. Computer Professional Staff
C. Corporate Office
D. Engineering Management
E. Marketing (Sales)
F. Productive/Marketing
G. Sales/Marketing
H. Other

COMPANY BUSINESS:
A. Making or Construction of Components or Data System
B. Manufacturing Other
C. Utility
D. Wholesale/Retail
E. Finance
F. Consultant/Off Service
G. Business Service (except DP)
H. Other

RETURN TO COMPUTERWORLD 48 Austin Street, Newton, Mass, 02160
Seasomal Nature of Taxes Hinders IRS

WASHINGTON, D.C. — People, both taxpayers and EDP employees, continue to curse the most problems for the Internal Revenue Service's vast computer operation.

IRS reported last week that its EDP operations added $134 million to Federal tax collections last year, and have brought in $300 million in additional revenues since its computers first went operational on a limited basis in 1962.

But the agency has problems, particularly in staffing of low- to medium-level people, because of the seasonal nature of income tax filing.

Its force of professional computer people, programmers and up, is fairly stable throughout the year, but the hiring and training of production people — from envelope openers to key¬- punch operators — for the few peak months from January through April, creates a "massive recruitment problem," according to IRS officials.

This seasonal low-level work force must be trained and con¬ stantly supervised by permanent EDP staff. Permanent em¬ ployees at IRS' seven regional service centers number about 13,000, but this force nearly doubles to approximately 25,000 at tax return time.

Agency officials report that they are looking at optical read¬ ing techniques, but don't feel that this area has been developed enough to meet the service's needs at present.

1964 Pilot Program

IRS has inaugurated a pilot program and is processing some 1968 returns with an input system which utilizes a General Electric GE-PAC 4020 process computer equipped with a large number of GE DataNet 760 termi¬ nals with keyboards and CRT displays.

The system eliminates punched cards as well as handling some arithmetic and verification oper¬ ations. When installation of the system, called Direct Data En¬ terns, is complete, it will eliminate the punching and processing of about 400 million cards a year, according to IRS.

87 Million Accounts

Last year was the second full year IRS processed all tax re¬ turns, both individual and busi¬ ness, under EDP. At the close of 1968, a total of 81 million indi¬ vidual accounts and 7 million business accounts were on file at the IRS National Computer Center in Martinsburg, W.Va.

The agency claims that its com¬ puter operation has shortened the time it takes to process and issue income tax refunds, and also has solved the problem of the hundreds of thousands of refund checks that formerly went unclaimed because taxpayers moved and left no for¬ warding address.

These refunds are now held in the taxpayers' accounts and is¬ sued as soon as IRS obtains a current address for the taxpayer either from a return filed or from correspondence.

Of the 248,000 checks re¬ turned by the Post Office as undeliverable last year, more than half were recalled when a correct address was obtained, while the rest were credited to the taxpayers' accounts.

Far and away the major prob¬ lem encountered in its computer operation, IRS officials said, is caused by the taxpayer. Errors on returns, particularly arith¬ metic and identification errors, account for most of the throw¬ outs.

Surplus Strain

The agency admits that it will probably run into some particu¬ lar difficulties this year because of the surplus which must be calculated on returns for the first time.

More than 1000 businesses re¬ ported wage, interest, dividend, and other payments to IRS on magnetic tape rather than paper documents last year, the agency reported. A total of 37 million information reports were re¬ ceived on tape from businesses, about 10% of the total informa¬ tion documents filed.

Watts School Graduates

Have Placement Problem

LOS ANGELES - A recently-opened training center in the Watts curfew area has graduated its first class of computer programmers but is having trouble placing them.

The graduates, many of whom are unemployed, under¬ employed, or on welfare, completed a 12-week course in busi¬ ness programming at the Urban League Data Processing Training Center, 7226 S. Figueroa St.

The Urban League is now try¬ ing to place the 12 students in computer programming jobs with Los Angeles area businesses.

Dr. Clarence Littlejohn, presi¬ dent pro tem of the Los Angeles Urban League, said placement is difficult because most firms would prefer one or two of the on-the-job experience.

The training center is spon¬ sored by the Urban League, the Bank of America Foundation, and IBM. The center also has had upward of 40 students train¬ ing for positions as computer operators and keypunch oper¬ ators.

"The center was established to train disadvantaged members of the community for employment in a rapidly-growing field," Littlejohn said. "The courses are open to those who need jobs the most — many of whom are trying to support themselves with¬ out welfare aid.

"Many students worked through their lunch hours and well into the night writing pro¬ grams and running them on the computer," he said.

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Mobile Teletypewriter Built for Time Sharing

A new portable teletypewriter, Datasert 730, comes as a keyboard manual and remote unit, for an automatic send/receive unit equipped with a punched paper-tape option for transmission of messages. The complete terminal comprises the portable teletypewriter, an acoustic coupler, and a conventional telephone for access to a time-sharing computer.

The character set and keyboard layout is a standard 31 Teletypewriter Prices, including installation, run up to $2200 for a single terminal, with monthly rentals to $120. Delivery is one week. General Electric Co., Information Systems Sales & Service, 3500 N. Central Ave., Phoenix, Ariz. 85012.

Alignment System

A new alignment system, Micon, is said to reduce the time required for alignment and calibration of magnetic tape recorders and eliminate a number of knobs.

Rep. Brooks Questions World Wide Procurement

(Continued from Page 1)

3. Despite the complicity of the proposed system, the Defense Department separately has decided to select those hardware systems that acquire hardware in anticipation of systems that meet the future needs, rather than the present needs.

4. Although it appears that the principal increase in computer capability expected from this procurement would correspond to a higher level of hardware performance, there is no indication that the procurement proposes a new computer system significantly better in capability or versatility as compared to its present output.

“A telling factor,” Brooks commented, “is that the so-called ‘data management’ package (that part of the software the subcommittee understands allows for the updating and extraction of data from the system) that would be utilized in the proposed new equipment, is a new manual keypunch. Model AC1-960, priced under $100, will punch numeric, alpha, or compiler codes and can be used hand to perform computer input/output operations. It is used for program changes, corrections, or additions. Delivery is available at 50% of the original price.

Card Reader

A new card reader, NCR 682-500, priced at $5000 reads standard 80-column punched cards photoelectrically at a rated speed of 300 cards per minute. All card movement, either with single or dual reader systems, is time-shared with internal processing and input/output operations. Processor time is required only when data is transferred from the reader buffer to processor.

New Products

A new programmable calculator, Model 700, priced at $4900 has 120 data registers which add, subtract, multiply, and divide. It has a capacity of 12 digits plus 2-digit exponent with a 2-digit register display.

Three separate approaches are available to the customer for acquiring software: 1. He may buy standard application packages at a lesser price and a larger system. Each of the application programs uses these facilities and automatically resets the control for the operations being performed. 3. The customer can do his own programming after receiving training from Burroughs. Training courses, which are available to only those people who have some experience in programming, last for two weeks and are charged at the rate of $200.

AMA Sets Management Briefing

NEW YORK - A management briefing, “Planning for Information Market Opportunities,” sponsored by the American Management Association, will be held March 10-12 by the American Management Association.

The role of the computer industry will be discussed by Robert E. McDonald, president of Honeywell, during the session on applications in communication. The subcommittee will discuss by date soon, an examination of the computer industry and the role it will play in the future.

Three separate approaches are available to the customer for acquiring software: 1. He may buy standard application packages at a lesser price and a larger system. Each of the application programs uses these facilities and automatically resets the control for the operation being performed. 3. The customer can do his own programming after receiving training from Burroughs. Training courses, which are available to only those people who have some experience in programming, last for two weeks and are charged at the rate of $200.

Burroughs Testing Separate Pricing

(Continued from Page 1)

larger systems. Each of the application programs uses these facilities and automatically resets the control for the operation being performed. 3. The customer can do his own programming after receiving training from Burroughs. Training courses, which are available to only those people who have some experience in programming, last for two weeks and are charged at the rate of $200.
Cardboard System Helps Teach EDP

MURRAY HILL, N.J. - "Understanding Computers," the fifth in a series of Bell System Aids to High School Science programs, will introduce students to "the computer age" via a do-it-yourself, cardboard computer.

Cardiac (Cardboard Illustrative Aid to Computer), a small, hand-operated, cardboard model computer, is one of the features of the new program, the first in the Bell System series to provide, among other items, student work kits for general class use. Program materials are distributed to high schools by the 23 Bell System operating telephone companies. Several of the operating companies have already begun demonstrating the new computer program to high school teachers.

Cardiac can be assembled in a matter of minutes. It has most of the equivalent parts of larger, digital computers -- accumulator, instruction register, memory cells and input/output system -- and a repertoire of 10 instructions, enabling it to solve some surprisingly difficult problems.

Designed to illustrate the operation of a computer and serve as an introduction to programming, Cardiac is accompanied by a 13-page manual which relates the device to larger and larger computers and leads the student through 10 programs, ranging from simple addition to complex computer game playing.

"Understanding Computers" was prepared by Bell Telephone Laboratories' Educational Programs and Exhibits Department with the aid of Bell Labs' technical staff and educators throughout the country. Cardiac was developed by David Hagelbarger, a member of Bell Labs' Information Processing Research Department.

For the high school teacher, the new program features "Understanding Computers," an introductory book by Thomas H. Crowley, formerly director of the Computing Science Research Center and now executive director of the Systems Design Division at Bell Laboratories.

Other materials included in the computer program are:
- A 15-minute color film, "The Thinking Machine," designed to create classroom interest and discussion.
- A voicograph of Cardiac which provides the teacher with a step-by-step method of working out Cardiac problems with his class.
- Five short super-8 film loops which are correlated with the Cardiac manual.

High schools may obtain information on availability dates for this free material from their local telephone company.

We think the line is great... but with an SCC 4700 front end it's even greater.

Put an SCC 4700, 16-bit 1C computer up front and you not only save valuable 1108 time -- you gain fully buffered communications, an expanded I/O structure and a pre-processing capability. All of this costs less than your present I/O equipment.

The flexible I/O structure of the 4700 provides up to four channels — each capable of handling 64 devices. This means a capability of handling up to 128 full duplex communications lines ranging from 2000 Baud up to 230.4 Kilobaud. And while we're handling the voice grade and above speeds, we can also service an additional 64 low speed lines.

Two types of I/O channels plus direct memory ports are offered: multiplexor or selector. The multiplexor accepts data from up to 64 devices operating simultaneously from a block transfer mode. The selector operates on a direct memory access principle providing very high speed data transfer for up to 64 devices.

SCC also offers a comprehensive line of high speed peripherals that tie onto the 4700.

Make a great multi-processor even greater. Contact SCC to arrange a demonstration of the 4700.
Full Explanation Needed

The position of the various professional societies in the computer world is one that interests and affects all of us. Societies have traditionally interfaced between the professional and the outside world. As they are strong, so is the profession strong in the eyes of outsiders; as they are weak, so is the profession influential; and as they are weak, so is the profession.

Currently, it has been realized that the Association for Computing Machinery is in more serious financial trouble than had been appreciated even as recently as December. However, in December the president had received a report from the treasurer that the society was broke. It is hard to conceive of anything more serious than that.

Despite this fact, the ACM Council in January approved the new constitution for the American Federation of Information Processing Societies and that constitution is now in effect. ACM members were not told about the new constitution until after the ratification had taken place.

In the old Afips constitution, the amount of money that was to be distributed to the member societies was decided by the directors, including those of ACM. There were no constitutional limits on how much of the surplus should be held in reserve. One hundred percent of the surplus could have been distributed provided, naturally, that it was distributed equally. This might have seen ACM through the current financial storm.

The new constitution is, however, different. Here the limits are prescribed and only 40% of the surplus — less than half of it — is now available for distribution. This may prevent ACM from avoiding financial catastrophe.

It is not known by many ACM members why this step has been taken. Instead, in the February issue of the ACM Communications, in which the subject was introduced for the first time, no mention of this limitation on the distribution of funds was made.

Under the circumstances, CW feels that a full explanation should be offered as to why the ACM did not earlier foresee the financial problems it was heading into and why the president has apparently agreed to a measure which may well result in a major loss of ACM assets or income. If it is not offered, or if it is unsatisfactory, CW feels that a "citizens' committee" of members not affiliated with the current ACM leadership should investigate and report.

360 Programs and The 4th Generation

When asked if he saw the "fourth generation" computer as having program compatibility so that IBM customers could avoid the essential reprogramming which occurred at the introduction of the System/360, George Beitel, IBM vice president, avoided a direct answer. Instead of answering "yes," or "no," he said that although there was a great debt to maintain some consistency, IBM would not hesitate to introduce incompatible systems if that was the way to get better price/performance into the marketplace.

Subsequently, when he had, in his letter to us published today, a second chance to answer the question clearly, he failed to reveal the question his statement was supposed to be answering — while accusing us of taking his reply out of context! An unclear or evasive answer to such a significant question is a disappointment to employees, customers, and stockholders alike. It takes several years to plan a new generation of computer systems. A man in Mr. Beitel's position is certainly

IBM Official Says He Was Quoted Out of Context

The Feb. 12 Computerworld article headlined "IBM Executive Warns, 4th Generation May Be Incompatible" was based on a quotation totally out of context and could mislead your readers.

It attributes to me this statement: "IBM would not hesitate to introduce the data processing community 'to reset to zero' and accept program incompatibility 'if something comes along and we think is a substantially better way to get price/performance into the market,'" as if I were speaking this in February.

In fact, the actual statement I made - in an employee publication - reads:

"When we announced the System/360, we asked the data processing community to 'reset to zero.' We did this because of the proliferation of languages, machine architecture, and input and output devices. Incompatibility and proliferation meant customers were paying a premium price to go much further in computing. That was our judgment. It has been more than vindicated by System/360's reception in the marketplace." Where do we go from here? We have a great debt to ourselves and to our customers to maintain some consistency between where they are today and where they are going to be in the future. But I don't think we will do this in any easy way. If something comes along we think is a substantially better way to get price/performance into the market we would not hesitate to change."

Despite Computerworld's speculation, IBM's view of the future has not changed. As we have publicly stated in the past, we expect that new technology will make possible significant advances in the price/performance of systems, while maintaining an evolutionary trend in architecture and machine organization. This should assure users of a high degree of program compatibility, thus serving to protect the substantial investments that have been made in programming and to ease the transition to more advanced equipment.

George B. Beittel
IBM
White Plains, N.Y.

See editorial "360 Programs and the 4th Generation." Ed.

Basic Reform Is Still Seen As ACM's Greatest Need

I did not intend my Viewpoint article, "ACM Reform," (CW, Jan. 22) to be an attack on any individual including D.B. Parker [CW, Feb. 5], but rather a broad indictment of the inadequacies of the methods, programs, and goals of the ACM in general and its council in particular.

I am sorry that Mr. Parker has taken my comments to reflect on him personally. I am sure Mr. Parker is a competent individual and attempts to discharge his duties as ACM secretary in a conscientious manner. This, however, does not alter my opinion that "...the minutes that are kept are frequently unable to resolve such basic questions as what was the motion voted upon."

It is always more difficult to prove conclusively the absence of some quality, and a letter to the editor of CW is not the place to go into a lengthy analysis of the ACM minutes to justify my opinion. The minutes themselves are the best evidence, and I'm sure that anyone sufficiently interested could obtain copies from the ACM national office.

However, it would be unfair to Mr. Parker to let the matter drop without at least one specific example. The most illuminating example is one that involves a motion introduced by Mr. Parker, amended by Mr. Parker, and recorded by Mr. Parker.

D. Parker moved, L. Hayward seconded, that the ACM establish a new publication in the form of a newspaper to be published bi-weekly beginning January, 1969... D. Parker amended his motion to delete the term "newspaper." The main motion passed. For: 20. Opposed: 0. Abstentions: I.

The ambiguity of the above motion from the minutes of the ACM Council, Friday, Nov. 17, 1967 (Section 46) became the basis of the confusion concerning the beginning of the so-called "news publication."

As Mr. Parker well knows, through my attendance at council meetings, I have been aware of the efforts toward the establishment of the Procedures and Policy Guidelines. As Mr. Parker should know, these guidelines are merely an attempt to codify the existing policies and procedures, commendable as these efforts may be, it was the point of my article that these policies and procedures are inadequate and that their basic reform (and not codification) is what is required.

Carol Ann Sampson
Arlington, Va.

This correspondence is now closed. Ed.

Students Have a Right To Hear Diverse Views

In comment on your editorial of Jan. 15, 1969 ["The Job of Pioneers"] I may say you are proposing a system that would give all students the same viewpoint on all material studied. I believe the student has the right to hear the same information from diverse sources, all of it's bias that makes this world tick both ways, good and bad. Remove the bias and you remove

(Continued on Page 9)

"I Don't Think He Wants To Learn The New Dance!"

Letters to the Editor
'Bocol' Useful Tool for Simple Jobs

By Peter L. Bridges

A twist of words describes a new general-purpose data processing language developed by Fimaco for the Honeywell 200 and the IBM 360. The language, called Bocol, provides a useful tool for writing the type of programs which makes up the bulk of the programming industry's work—"quick-and-dirty" programs.

Bocol Machine Independent

Bocol has been developed to be a machine and generation-independent, Marketing Director Julius T. Cocozza told Computerworld. The type of programming required, and the technique of implementation present no problems when confronted with different machine environments. When the for-...
Get out a pencil.

Jot down what it would cost you in-house to rewrite your 1400 programs to 360.

Divide it in half.

That's exactly what we'll charge to do them.
We mean it.


When you've documented the figures, simply reduce them by one-half. That's exactly what we'll charge you to do the same work.

We don't care how many programs you're trying to get on the air. We don't care what types of programs they are.

You know the problems as well as we do. There's the serious lack of skilled 360 programmers. The time it takes to develop and checkout programs. The cost of running your 360 system in emulation. The lack of test time.

To do what we say we'll do, means that we must have solved a lot of hang-ups.

In fact, we have. Not by emulating. Not by translating. Not by taking over some or most of the conversion — and then handing you back the tricky stuff to do on your own. We're ready to convert complete programs, from listings or write-ups, using third generation concepts. We can give you standard DOS, TOS or OS modules, or BPS stand-alone programs.

We have to be incredibly good to come out with a flat offer of one-half off on your conversion costs.

We are. Send us the coupon — or phone us — and see for yourself.

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We'll show you we're serious.

It sounds incredible . . .

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Waltham, Massachusetts 02154

Send in the coupon or call us at (617) 891-6725.

Commonwealth Computing Inc.
Split Screens Allow Two To Use One CRT Unit

COLUMBUS, Ohio - A new on-line, split-screen data display system has reduced from two or three minutes to 20 seconds the time it takes to authorize BankAmerica transactions at City National Bank and Trust Co., bank officials report.

City National acts as a data center for subfranchised community banks, providing technical assistance in the form of marketing and computer services. One of the bank's services is a statewide authorization system for transactions which exceed pre-determined BankAmerica credit limits.

Operating by means of an "enterprise" telephone system, City National previously relied on daily computer printouts to provide authorizations. However, with a rising volume of accounts and transactions, this procedure had to be revised in order to speed up transactions at the retail level.

Last November, City National installed an electronic authorization system consisting of six on-line, split-screen data display devices. Another two data display devices were installed for customers' inquiry purposes.

Each of the NCR 795 data display systems is connected to two input keyboards. The two keyboards operate independently and simultaneously while controlling one-half of the unit's display screen. Screen halves display up to 512 characters of information under format character control.

Each data display system enables two operators simultaneously and directly to communicate with City National's NCR 315 Com computer and obtain visual presentations of requested information. The keyboards can also be used to correct or update computerized data.

City National uses the data display system to retrieve BankAmerica authorizations, credit referendums, credit and collection, installment loans, and customer satisfaction. A cross-reference customer account file is currently under development.

On keyboard request, the system authorizes merchandise purchases and cash advances, overrides or reverses authorizations, changes credit limits, blocks ac-

EDP Helps Agency Choose TV Spots

NEW YORK - Com-Step is the name given to a process for evaluating the relative merits of various television spots offered to advertising agencies by station representatives. What sets it apart from the system used since TV advertising began is the use of a computer to do the involved analysis of these spots.

Com-Step (Computerized Spot Television Evaluation and Processing), developed by Grey Advertising Inc., is believed to be the first such system perfected in the industry. Others have been proposed or suggested for industry-wide study, but this one is already in use.

The system uses the available data from the representatives and audience specifications supplied by the agency to compute ratings and cost-per-thousands against targeted audiences and produces a ranking of the various spots and/or packages being considered. It does the drudgery but leaves all final decisions up to the buyer in negotiation with the rep. Clerical costs are cut the agency says.

It prints the rankings and, after buyer decisions are made, provides a printed schedule and formal estimate and goes on to print a bill for the clients. Post analysis of schedules are immediately available.

Processing of spot television campaigns is the most costly operational media department expense for agencies.

When we decided to build a Portable Data Communications Terminal, we checked first with the people whose computer/communications systems require truly portable access terminals. You told us which features you would most like to see combined in a single unit. We took your design suggestions and produced the PortaCom 703. Here’s what it’s like: and what it can do.

**Integral Modem**
A “103-compatible” direct-connect or acoustic/magnetic data modem is built right into the PortaCom 703 terminal. Not a separate piece of equipment, but an integral part of the complete 26-pound unit.

**Interface Flexibility**
PortaCom 703 operates at 110 bps (10 characters/sec.) with 8-level ASCII code and is directly compatible with Model 33 and 35 TTY equipments. Interfaces are provided to accommodate a wide variety of peripheral devices, including: an RS-232B data interface, for direct connection to any standard dote terminal device or processor unit; an output circuit for driving a serial card punch/reader; parallel data input/output for use with card punches and readers, magnetic tape systems and paper tape punches and readers; an output circuit for driving a plot recorder.

**Realistically Priced**
Price range: Under $2,000 in the U.S.

**Engineering By Stelma**
For more than 18 years, Stelma has been a leading independent producer of electronic telecommunications equipment. Stelma products are recognized throughout the industry for rugged reliability and advanced design. The PortaCom 703 incorporates all the qualities which have established Stelma’s reputation in the communications industry.

**Computerized Railroad Becomes Teaching Aid**

AMHERST, Mass.—The day is fast approaching when even model railroading will be automated. Instructors and graduate students at the University of Massachusetts are currently working on a project that will place an elaborate HO gauge layout under the control of a computer. The layout, which would take up about half of an average-size basement room, contains several stations, a railroad yard, and lumber mill. The job of the computer will be to locate trains, route them to desired locations, change cars, and keep constant track of where the trains are.

The purpose of the task is to teach students of the university’s Computer Sciences Department process control, one of the most rapidly-growing areas for the general-purpose digital computer. In charge of the project is Dr. J.A.N. Lee, head of the department.

“Four or five of my graduate students came to me after learning the department was getting its own computer and said they wanted to learn something about process control,” Dr. Lee said. “The problem was finding some process to control. We could not very well go around disturbing things at the university. Being a model railroad buff, I got the idea of interfacing the computer to a set of trains. I first thought of using my own but did not want to give them up. A time-sharing terminal in my office was ruled out because it would give the students no hands-on experience and building our own layout would take too long.”

Then, Lee continued, “I learned that a friend in Canada was going from HO gauge trains to models of a larger size. He let me have his layout for the cost of shipping it to our campus.”

The university is using a PDP-11 with 16,000 words of core memory and 90,000 words of drum memory, a CRT display, analog-to-digital and digital-to-analog converters, a magnetic tape storage unit, two electric typewriters, two teleprinters, two clocks, a relay output register, and a paper tape reader and punch.

“Already,” Lee said, “I can see about 10 masters’ theses: such things as routing the trains by visual display; deciding what type of sensors should be installed on the trains and how should they be installed; how to select and distribute the railroad cars; how to prepare a way list, and the development of a coding scheme for the various railroad cars.”

**Jerusalem Mapped With Help of EDP**

JERUSALEM, Israel — Hebrew University geographers have recently completed a survey of East and West Jerusalem using the university’s CDC 6400 computer to prepare an urban atlas.

Dr. Sh. Shahar, head of the geography department, which in six months will be published as a divided city without any connection between its two parts.

The survey started in September, 1967, a few months after the Six-Day War, and lasted until October, 1968. The topographers are now processing the material which in six months will be published as a divided city without any connection between its two parts.
Software Developed to Cut Debugging Time on IBM 360

WINSTON-SALEM, N.C. - A new supplementary software package, specifically developed to reduce System 360 debugging time by 30% to 50%, has been announced by Arista. The package, called Datatrap, works with Cobol, PL/I, RPG, and Assembly Language on IBM 360 computers.

The module operates under either the Disk or Tape Operating Systems, providing a routine which can be directly incorporated into the object module library for linkage editing into any program. The function of Datatrap is to recognize and note all data exceptions and other housekeeping errors during execution of the program under test, while intercepting the errors to prevent an abnormal end-of-job.

This faster, more powerful version includes new capabilities for Catalogued Requests and Free Form, in addition to several expanded extensions to the system, Postley said. A new reference manual and changes to the operations guide will be issued to reflect the large number of changes to the system.

Automatic Table Lookup

Automatic table lookup, an optional feature, is now completely implemented with Release II. Other new features include: faster run times, better run statistics, rejected transaction files, and over 400 diagnostic messages.

Mark IV, a proprietary product developed and marketed by Informatics, was first available last April. The company plans to install 100 more by July. The package includes training.

PDP Symbolic Assembler Planned For Compiling Programs on S/360

ANN ARBOR, Mich. - A program will be available within the next month or two which can assemble PDP-8 or PDP-9 Symbolic programs on the IBM 360, providing large time savings. The compiler, being developed by Information Control Systems, will provide one-pass assembly, card input rather than tapes, and rapid compilation when compared to the PDP machines. The assembler produces paper-tape output which will be directly loadable into the PDP-8 or 9.

The assembler will run on any model of the 360 line, according to the developer.

FILE EXEC

A Total File Management System

File-Exec, written entirely in COBOL, has the capability of performing File Creation, File Maintenance and Information Retrieval on either Tape or Disk files.

The System provides for the creation of files from basic card input, addition of complete records, adding data to existing records, changing portions of records, deleting entire records, and generating unique record ID numbers.

The information retrieval capability of the system allows the user to select complete records, or parts of records, based on up to fifty sets of "AND/OR" conditions. Conditions of selection can be greater than, less than, equal to or not equal. File-Exec allows for re-formatting of complete output records or selected data to either tape or disk and/or printer.

PRICE: $3,000

File-Exec provides an efficient, straightforward and economical means of file management. The ways in which File-Exec can be applied are limited only by the imagination of its users. If you wish to add new dimensions to your installation's capabilities, please contact us.

FILEMAKE

a new debugging aid for program testing

Why use voluminous "live" data sets, which often fail to completely test a program? Filemake lets the programmer specify and automatically generate test data sets which thoroughly test all program options.

- OPERATES WITH S/360 OS AND DOS
- COMPATIBLE WITH PL/I, FORTRAN, COBOL, AND ALC
- UP TO 256 FIELDS PER RECORD
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To shorten your overall test time and get more complete testing, try Filemake.

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File Management System

SHERMAN OAKS, Calif. - Table Lookup and run statistics have been incorporated into the latest release of the Mark IV File Management System, Release II, significantly extending the features of this System 360-oriented general-purpose software system developed by Informatics, Inc., according to Vice-President John A. Postley.

"This faster, more powerful version includes new capabilities for Catalogued Requests and Free Form, in addition to several expanded extensions to the system," Postley said. A new reference manual and changes to the operations guide will be issued to reflect the large number of changes to the system.

Automatic Table Lookup

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Mark IV, a proprietary product developed and marketed by Informatics, was first available last April. The company plans to install 100 more by July. The package includes training.

Sir, You're Pregnant!

GLOUCESTER, England - Despite some rather strange output (the computer told an armorer he was pregnant and recommended his discharge, then awarded pilot's wings to a carpenter), the Royal Air Force has decided to keep its new $2.4-million system designed to handle the work of 700 clerks.

March 5, 1969
**ADVANCED MANAGEMENT SYSTEMS, INC.**

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A new computer program that

- Selects records from any source
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repetitive reporting.

If you are considering converting programs, Mr. System will replace report generat ors.

**COBOL—DOS—32K minimum.**

Selects, Sorts, Accumulates, and Prints report to your specifications.

Installed by mall only $2500 with complete User and Programmer Manuals.

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**NEW**

- brings an EDP program on line in 20 minutes.
- uses quick conversion techniques.
- no compiling.
- uses on 360 model 30 and up.
- fully documented, ready to use.

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- cuts down the variables and find blocking factors which reduce track, cylinder and core requirements while giving optimum access speed.

**Report/Compile GENERATOR for CLERKS**

- controls cards produce listings, summary reports, edit and file control.
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- use for quick conversions.
- no compiling.
- use on 360 model 30 and up.
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**GENERAL LEDGER**

- designed by accountants.
- prepares detailed transaction records, general and special ledger reports, P & L, and comparative statements.
- fully documented for data processing and accounting departments.
- installation support included.
- available on model 360 or 2200 (COBOL).
- Price $2,500.00 to $3,600.00 depending on order selected.

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- payroll reports, journal entries, balance sheet.
- Union election roll, full employee payroll.

**ORDER**

- on model 360 or 2200 with 30 day approval.

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**EASYTREIEVE-300**

An inexpensive, easy-to-use manage ment reporting system.

**Order for**

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**FORFLO-1 IBM 1130/1800 DOCUMENTATION SYSTEM**

**System Consists of 2 Parts**

- prepares FORTRAN statement statements by fixing, adjusting all branch and 13-statement numbers accordingly. Replicates constant capital until numbers with variables for easy program conversion (user option). Puts source data disk file and numbered in columns 1-110.

**Flowcharts any 1130/1800 FORTRAN program from source disk file, 1300 loop setup, defines complete flowcharts. Separates put and output to editor Flowcharting during off-shift time.

**UTOR**

- runs on any RX, 1130 with line printer or equivalent 1800. Runs in stack job mode. No need to remove monitor control cards. System supported and maintained.

**Send a duplicate FORTRAN deck for demo and more information.**

**Price:**

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• Use OPU6 (Optimum Printer Utilization System) No. 2 and increase your CSP and IDEAL printing speed from 16% to 300%.

• OPUS is a software print routing conceived by the Development Division of VPI which enables the 1132 user to increase productivity by constantly printing at the maximum available speed and totally overlapping printing with all other computer functions.

• Load OPUS No. 2 once - All CSP and IDEAL programs using the 1132 printer will run faster - no program changes need to be made. You continue using standard CSP and IDEAL call statements.

• OPUS No. 2 will work with any IBM 1130 operating system, either Version 1 or Version 2.

• OPUS No. 1 provides the same support for Version 2 FORTRAN users.

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Project Control for 1130 - Procedures G.P.M.

2 to 4 times the speed and capacity (7200 Activities - 80 LPM) of the Library Program. Includes Dollar/Activity, Cash Flow forecasts, Resource Leveling, Pay Estimates/Request, Summary Bar chart, Change File, etc. $4500 includes installation assistance. Write C.M.S., Box 90, Haddenfield, N.J. 08033 for Full Details.

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PROMPT provides:

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Honeywell EDP Reorganized Into Two Operating Units

WELLESLEY HILLS, Mass. — The manufacturing and engineering activities of Honeywell's Electronic Data Processing Division have been reorganized to establish two new operating units along product lines.

The systems computer group, headed by Walter H. Gray, and peripheral devices operations, to be headed by Robert W. Rose. The Honeywell computer systems group will be responsible for the design, manufacture, and testing of central processors, control units, and communication systems, and overall EDP Division responsibility for systems design and shipping. The unit will involve personnel employed on the Brighton plant, the EDP Technology Center in Waltham, the entire Lowell plant, and the Natick operation.

Peripheral Devices will be responsible for the design, manufacture, and testing of peripheral equipment and certain remote terminals shipped by the division. It also will handle factory reconditioned equipment. This unit will involve personnel at the new Billerica plant, the Lawrence plant, and some personnel at the Waltham and Brighton facilities.

Memorex to Use du Pont Patents Under License

SANTA CLARA, Calif. — Memorex Corp. has entered into a licensing agreement with E.I. du Pont de Nemours & Co., Wilmington, Del., covering certain du Pont patents relating to high-energy chromium dioxide materials and their use in magnetic recording products.

Memorex intends to produce commercial magnetic recording products employing these materials, according to a Memorex spokesman. He said that it is not likely before 1970.

The impact of chromium dioxide products upon markets for existing magnetic iron oxide products is expected to be limited in the near term, and Memorex's future large-scale use will be dependent upon the success of Memorex's media-product development programs and the marketing of complementary recording equipment by equipment manufacturers, he said.
Land Development Slated To Bolster Computer Co.

PHILADELPHIA Scientific Resources Corp. is debating a move to form a land development subsidiary that would be 20% publicly owned.

Thomas T. Fleming, Scientific's president, said after the annual meeting that the company needs more cash to compete effectively in the areas of computer programming, supplies, and peripheral equipment. Fleming said the proposed subsidiary, Land Resources Corp., would assume title to Scientific Resources' $100 million real estate assets.

Plans are still tentative, but Fleming said they may be made in 60 to 90 days. Negotiations are currently underway with several New York underwriters, he said.

Scientific Resources, formerly Sunasco Inc., has been expanding rapidly in the computer field since its acquisition last October of Maschuy Associates Inc.

Land, especially in residential development areas, would provide the bulk of the company's cash-generating base, Fleming said. In November, Scientific Resources completed the acquisition of Leighac Acres, a 58,000-acre development near Ft. Myers, Fla., for about $15 million of Scientific Resources common.

Fleming said that Scientific Resources will make a public offering next month or 4% interest in its Computer Sharing Inc. subsidiary, a time-sharing concern.

The previously announced plan is expected to provide the company with about $15 million from the recent annual meeting approved the increase of authorized common to 20 million shares from 10 million to facilitate future acquisitions.

Fleming believes the company is in a period of consolidation and said, "I don't look for any great growth in earnings in the first half," ending March 31. He added that the outlook should be brighter in the second half.

General Electric's 1968 Earnings Dropped 1% from 1967 Record High

NEW YORK - The General Electric Co. has confirmed that its 1968 earnings fell about 1% from the record set in 1967.

Fred J. Borch, chairman and chief executive officer, said sales and profits in the last quarter were down to $8,381,633,000 or 8% above the $7,471,433,000 reported in the fourth quarter of 1967. Profits were $357,107,000, or $3.95 a share, down from $384,015,000 or $4.01 a share, in 1967.

All figures for 1968 are final audited results. Borch said that 1968 earnings had been affected by a combination of the federal income tax surcharge and "sharp increases" in the cost of labor and materials.

He noted that the company's reported sales growth had limited earnings by "requiring larger capital outlays for plant and equipment, both in our new ventures and in many of our established businesses as well.

The GE chief executive pointed out that until the fourth quarter, 1968 earnings were running behind 1967 levels by 6%, and the $1.35 a share recorded in the final quarter of last year was the highest ever recorded by the company for any three month period.

Leasco Data Gives Up Hostile Take-Over of Chemical Bank

GREAT NECK, N.Y. - Leasco Data Corp. has given up its attempt to take over Chemical National Bank of New York.

Leasco had announced its intention of making an offer to Chemical in mid-1968.

Leasco made its offer on Feb. 21 that behind Leasco's decision was its 45% interest in the bank's chemical operations, which was described as "fantastic" by Chemical's chairman, John G. Steinberg.

Major customers of Leasco, according to Steinberg, were said to have threatened to cancel their contracts with the company if Leasco called off its attempt.

"Commercial banks were said to have intimated that Leasco would have trouble obtaining financial at a rate of 4% per cent.

White, Weld & Co. and Lehman Brothers, both investment bankers, were also said by the Times to have told Steinberg that they would not support him should he make a hostile attempt to acquire control of Chemical.

GREAT NECK, N.Y. - "Hostile take-overs of money center banks" has been called "a threat to the stability of the banking system and diminishing confidence in it," explained.

The New York Times reported Feb. 21 that behind Leasco's decision was its 45% interest in the bank's chemical operations, which was described as "fantastic" by Chemical's chairman, John G. Steinberg.

Leasco, in a separate development, announced the acquisition of Werner Associates Inc., a management consulting firm with annual revenue of about $2.5 million. The transaction would leave between 56,250 and 112,500 Leasco common shares, depending on Werner's results through Sept. 30, 1971.

"This, coupled with our desire not to create a conflict within the bank, prompted these decisions," Grant said.

Granat also indicated that the possibility of the Nixon Administration's proposed legislation to regulate the further combination of banks and nonbanking industries was also a factor in Granat's decision to sell the block of stock to AMK.

Granat's future growth in certain areas might have been inhibited had the company acquired the bank and CFE, according to Granat.

Chemical had strongly indicated when the first rumors were heard that it would fight any take-over with all the forces at its command. Granat, who said earlier this year that Leasco was considering the possibility of a hostile takeover of Chemical National Bank, said that the company's fee for doing this would be $2.5 million.

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Granite Confirms Plans To Sell N.Y. Bank Stock

GARDEN CITY, N.Y. - "A "basic understanding" on the sale of more than 490,000 Security National Bank shares owned by Granite Equipment Leasing Corp. was reached Feb. 20.

At the same time, Patrick J. Clifford, president of Security National, announced the bank intends to increase Granite's line of credit by 50%.

Harvey Granat, president of Granite, confirmed the offer of about 22.5% of the bank's outstanding shares to AMK.

In announcing the discussions with AMK, Grant said that "the possible adverse effect of our offer on an imminent rights offering by Security National was one of the prime reasons for our decision."

Granat added that the proposal to increase the bank's capital through a rights offering "is vitally important to the continued growth of Security National and is being done at the request of the comptroller of the currency."
Five Indexes Fall as Stock Market Dives

By V.J. Farmer

"The higher they fly, the farther they fall" was amply reflected in computer stocks in the New York stock market cave-in during the week ended Feb. 21.

Ninety-eight of the 105 stocks of the Computerworld trading summary lost ground. The CW composite index dived 13.8 points (9.8%) retrograding to the level of the week ended April 26, 1968. All five sector indexes lost ground.

During the same 4-day trading week, the Dow Jones Industrial Average closed at 916.64, down 35.3 points; the New York Stock Exchange composite index dropped 2.33 points to 56.31; Standard and Poor's Industrial Average dropped 6.17 to 102.02; the American Stock Exchange index lost 0.05 to 58.10; and the New York Over-the-Counter index lost 12.69 points to 540.32.

Software Likes Most

Software & EDP Services, the highest flying sector of all, which had zoomed up 227% from our base period March 1, 1968 through Oct. 11, 1968 — seven and a half months later — proved the most vulnerable in the swift general market decline. The Software sector fell 35 points (17%) from last week's 199.7 to its current level of 164.6.

Software & Services have been favored by many industry leaders and analysts as holding the greatest growth potential for the next five years, but from this rapid decline it appears that investors' prime concern appeared to be across the board retreat to more secure and stable stocks.

Leasing Follows Closeby

The Leasing sector, the second largest loser after Software, fell 11.219 to 103.2 from 116.23.

Leasco, for the second week in a row, led the Leasing sector's decline by dropping 7-1/2 points (14.17%) to 106 for the week. The previous week saw Leasco drop 13-3/4 points (109). Leasco had hit its high for the year of 143 only three weeks previously and now has dropped 26% breaking through a major support level of 110.

Beche & Co. still maintains a bullish position on Leasco. Allen Klein, a Beche computer stock analyst, rates Leasco as the top leasing concern.

Klein attributes the present weakness in Leasco to its controversial and ill-stated attempt to merge with Chemical Bank New York Trust Co. and to certain government statements which paint unfavorable light on the tax reform studies which are still going as a careful evaluation will be taken of the 7% investment tax credit that is "virtually gone" and the rest of the leasing industry.

Klein estimates earnings for Leasco's fiscal 1969 year ending Sept. 1969 at $6.50 to $8.50 a share and forecasts strong growth for the company in such fields as management consulting and financial services.

The Computer Systems sector lost 8.7 (7.5%) to 125.7, and the Peripherals and Subsystems sector lost 8.4 (6.3%) to 124.7.

The Computer sector overall was relatively stable with no losses exceeding 10%. IBM, however, did hit a new low of 133 jumping the decline.

Control Data, RCA, SCM, and Xerox traded about even.
Computer Subsidiary Started
By Louisville & Nashville RR

LOUISVILLE, Ky. - To obtain a share of the rapidly expanding market in computer counseling, programming, and computer-managed information systems, the Louisville & Nashville Railroad has established a subsidiary to be known as Cybernetics & Systems, Inc.

This is the first venture of the $300 million-a-year company into nontransportation markets. Samuel A. Alward, presently director of management information services for the LAN, will be president and chief executive officer and a director of the new company.

It was also announced that Cybernetics & Systems, Inc., would be retained by the railroad for computer counseling and services.

NEW YORK - Advanced Computer Techniques Corp. announced it has reached an agreement in principle with General Instrument Associates S.P.A., Milan, Italy.

The joint venture will be owned 66% by ACT and 34% by Giacomo Lorenzi.

The newly-formed company will conduct education courses, seminars, training programs in computer technology in Italy and other European countries.

NEW YORK - The announced terms of the proposed merger of Maxson Electronics Corp. into Rockwell Corp. have been changed, according to Robert Dresner, president of Rockwell, and W.L. Maxson, chairman and president of Maxson.

The change was made so that the transaction with present Maxson stockholders will have tax-free reorganization status.

NEW YORK - A definitive agreement was signed whereby Dation Services, Inc., a computer software and services company, will acquire all the outstanding stock of Computer Systems & Education Corp., Hamilton County, computer-training schools.

Under the terms of the agreement, the initial cash installment required at Dation will exchange one share of Dation stock for each $7.15 of 1968 pretax earnings of Computer Systems, and that the transaction is based on performance over the next three years.

Under the agreement, however, the common shares cannot exceed the number of shares issued in the initial offering.

PAOLI, Pa. - Keitelle Associates, Inc., a computer services company, announced that it has acquired I/MAP, Inc. which will operate as a services division of KAI. Carl H. Reynolds was elected president of the company.

LIVERPOOL - Liverpool, England, appointed David C. Kay as manager of the Liverpool division.

ROCHESTER - Sterling Electronics Corp. announced it has terminated negotiations to acquire 25% of the Industries, Inc., San Carlos, Calif.

CAMBRIDGE, Mass. - Analog Devices has acquired Pastoria Electronics, Inc., Newton Upper Falls, Mass., a manufacturer of analog-digital and digital-analog converters and designer and manufacturer of computer interface equipment. Terms were not disclosed. Pastoria will be operated as a division of Analog Devices.

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Better Terminals Are Needed Soon

NEW YORK - The digital communications market, already one of the fastest-growing areas in the computer industry, holds even greater promise over the next few years due to advancing technologies, according to Rich and P. Rinshenfels, executive vice-president of Mohawk Data Sciences.

Speaking before the Second Institutional Analyst Conference at the New York Hilton, Rubenstein outlined the present difference between the communication market and the data communication market.

"Today," he said, "the digital message communication market is primarily limited by low-speed terminals. However, devices that we familiarly think of as being in private wire, TWX, and Telex terminals..."
Greyhound's Computer, Time Sharing Subsidiaries Move to New Quarters

CHICAGO — Greyhound Computer Corp. and its Greyhound Time-Sharing Corp. have moved into new quarters in the Flor- shorn Bldg., 130 S. Canal St. The companies were head- quartered at 10 S. Riverside Plaza.

The two Greyhound operations occupy the entire second floor of the Florshorn Bldg. — more than 28,000 square feet, 10,000 occupied by a modern computer center.

Equipment installed in the new headquarters includes three GE 420 computers, three Datam- 30 telecommunications compu- ters, two IBM 1401 tape sys- tems, and an IBM 360 Model 30 and Model 40.

In addition to serving as the corporate headquarters for both companies, the new location houses 111 members of the GCC Data Services Div. Nationwide, Greyhound Computer employs 184 persons.

The Data Services Div. is com- posed of a 34-man project man- agement team involved in the design and implementation of computer systems, and a data center staffed by computer oper- ation personnel.

Wyoming Forms Branch

READING, Pa. — Wyominging Corp. announced it has formed a new subsidiary, Datacom Sys- tems, Inc., for on-line as well as batch processing services. Initially, the new subsidiary will offer batch process computer service on a scheduled basis, with on- site computer service to follow later this year.

Process Consulting Opens Chicago Computer Office

SAN DIEGO, Calif. — Process Consulting, Inc., a subsidiary of Cubic Corp., has opened a branch office in Chicago’s aero- space center to provide computer consulting services and data processing facilities to the Mid- west. Jack Durham was ap- pointed manager.

Davis Computer Systems Moves to New Quarters

NEW YORK — New corporate headquarters have been estab- lished by Davis Computer Sys- tems, Inc., at 280 Park Ave., New York, for computer services.

Affiliated Computer Opens Oklahoma City Office

DALLAS — Affiliated Compu- ter Systems, Inc., a software services company, has opened an office at 4000 N. Lincoln, Okla- homa City, and will provide pro- grammng and systems develop- ment for firms with existing computer installations.

Burroughs Hits Sacramento

DETROIT — Burroughs Corp. has opened a new marketing branch to serve California State Government accounts in Sacra- mento, Calif. Thomas W. Leigh was named branch manager.
Xerox to Ask Stockholders To Approve 3-for-1 Split

ROCHESTER, N.Y. — Directors of Xerox Corp. have proposed that the company issue an additional two shares of its common stock for each share presently held, the effect of which will be to split the stock 3-for-1.

The proposal is subject to shareholder approval at the annual meeting at the annual meeting on May 15 in Los Angeles, where 1.25% increase in dividend is also planned.

Shareholders will be asked to approve an increase in authorized common stock from 10,000,000 shares to 30,000,000 shares. The distribution of the additional shares will require the transfer of approximately $4,500,000 from the company's "additional paid-in capital" account to its "common stock" account.

If approved, delivery of the new certificates will be made in early July to shareholders of record June 6. The directors plan to declare a 15 cent quarterly dividend on the 3-for-1 split stock in the third quarter, and the annual meeting will be scheduled for September 15.

Based on the distribution of the stock, there will be a 3 cent quarterly dividend on the present shares, payable April 1 to shareholders of record.

The directors were unable to take any action with respect to the proposed merger with Scientific Data Systems, announced last year, because the merger agreement is in preparation now and not yet ready for formal consideration. The directors will consider the SDS merger agreement at a subsequent meeting, according to the company.


BOSTON — A board of directors of Computer Counseling, Inc., one of the two firms that will be merged into the new two-for-one split of the company's stock, pending stockholders' approval at the meeting of shareholders called for today.

The two-for-one split will have the effect of increasing Computer Counseling's authorized number of common shares to approximately 500,000 from the 250,000 shares currently outstanding and increasing the company's authorized number of stocks from 25,000 to the present 2,000 stock authorization.

Electrospace Corporation issues 4% Stock Dividend

GLEN COVE, N.Y. — The board of directors of Electrospace Corporation declared a 4% stock dividend.

The dividend will be payable March 2, to stockholders of record on February 24, 1969.

ICS Stockholders Get 25% Of Value of Stock Split

NEW YORK — Information Computer Services, Ltd., a data processing service oriented towards commercial accounting applications, announced today that it is splitting-off 25% of its ownership in Wall Street Computer Corporation, an 80%-owned subsidiary, in the form of a stock dividend to holders of shares of Informative Computer Services, Ltd.

For every four shares of stock held in Informative Computer, shareholders will receive one share of stock in Wall Street Computer Corporation, a company specializing in back office systems for brokerage and trading firms. The distribution of the stock dividend will be payable on April 17, 1969, to shareholders of record on March 17, 1969.

For the distribution of the stock dividend, there will be 100,000 shares of Wall Street Computer stock distributed to shareholders and these will be traded in the over-the-counter market with the 80% ownership of Information Computer Services, Ltd., which is also traded over-the-counter.
Orders and Installations

The Division of Computer Research and Technology, National Institute of Health, Bethesda, Md., has installed a Digital Equipment PDP-10 computer for use in biomedical research activities.

Merritt Lynch, Pierce, Fenner & Smith, New York, and Information Systems Design Corp., Oakland, Calif., have ordered modern 4400 high-speed data sets with a total cost of $250,000 from International Communications Corp., Miami, a subsidiary of Nilo Electronic Corp.

The South Colonie Central School District, Albany, N.Y., has purchased a Univac 9300 system for business applications.

Delivery is scheduled for later this year.

The Campanella Corp. of New England has ordered an NCR 1410 computer for its 110 computer for sale.

The unit will be used for summer season payroll, job control labor distribution, and equipment distribution accounting.

InterAccess Corp., Palo Alto, Calif., has installed a Control Data 3000 computer for time-sharing. Preprogramming is handled by a Vax 6220 and a Control Data 1700.

Mississippi Power & Light Co., Jackson, Miss., has ordered a GE-PAC 4020 processor computer to be installed at the utility company's station on the Mississippi River near Vicksburg.

Raytheon Computer, Santa Ana, Calif., has ordered a Short/3 memory from Data Products Corp., Los Angeles. The unit will be used with Raytheon's 706 computer system.

The Erie County Comptroller's Department, Buffalo, N.Y., has installed a Univac 9300 computer system to be used in public assistance, medical assistance, payroll, and budgeting accounting.

The unit will be used with the standard peripherals of a card reader, card punch, printers, and six magnetic tape units.

Superior Coach Corp., Kansas City, Mo., has installed a Honeywell 1100 computer to be linked via telephone line to a central processing system in Lima, Ohio, to keep track of the parts used in the manufacture of the 42 bus models and other vehicles.

Digital Equipment Corp., Maynard, Mass., has ordered a new computer and card handling equipment from Mocha Data Sciences Corp., New York. The equipment is for use with the PDP-9 and PDP-10 computers.

2 Software, Stocks Sell Out Quickly

NEW YORK - New computer stock offerings continue to sell well as two recent offerings by Informatics Inc. and U.S. Systems & Software recently were quickly overwhelmed.

Informatics Inc.

Retail investors oversubscribed an $25,000-share ($21,037,500) public offering of Informatics common at a market price of $25.00 a share. Data Products Corp. sold 752,000 shares of the total offering. The Culer City, Calif., concern, which initially organized Informatics as its programming and computer services subsidiary, previously had announced it would sell all of its 62.5% interest in the company.

Informatics will use its portion of the proceeds from the sale of the 73,000 shares it offered for acquisition and investments.

The company currently has 1,276,844 common shares outstanding.

U.S. Systems & Software

A 150,000-share initial public offering of U.S. Systems & Software Inc. common was quickly bought by investors and bid up to about double the issue price of $15.50 a share.

The Los Angeles concern, which furnishes computer systems analysis and related services, was incorporated on Jan. 10, 1968. On Oct. 31, it had a deficit of $333,091. Proceeds will be used to complete an acquisition and for other purposes.
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More Position Announcements on Page 21
Computer Analysis of Cases Aids Cervical Cancer Study

ROCHESTER, N.Y. — More than half million Pap tests given in Monroe County here indicate that cervical cancer and other diseases are primarily an affliction of the urban poor, according to a prominent Rochester sociologist.

The Rochester project appears to substantiate findings of previous studies conducted in Memphis and Louisville showing that the urban poor have the highest prevalence of cervical cancer.

Eighteen years of statistics on the female disease are being analyzed with the aid of a computer by Dr. Stanley F. Patton, Jr., director of the Cytology Laboratory at Strong Memorial Hospital here. They show a definite correlation between cancer of the cervix and poverty. Analyses of data disclose that most cases are limited to the city's poorer districts.

Nearly 150,000 Pap tests from Strong Memorial, Geneva, St. Mary's, and Rochester General hospitals will be recorded each year and analyzed using an IBM 1130 at Strong Memorial's Central Cytology Registry. Strong Memorial's Central Registry contains data on Pap tests given to about half the women of Rochester. It is considered to be one of the most intensive archives of its kind in the United States.

Data analyzed by the computer indicates that women between the ages of 20 and 40, who live in economically depressed neighbor-

borhoods, are most susceptible to the disease.

"While no definite conclusion can be yet be drawn," Dr. Patton points out, "the computer is helping us pinpoint much more accurately the high risk areas in the community so that special efforts can be made to encourage women to take Pap tests."

Prior to the use of the computer, all of Strong Memorial Hospital's Pap test records were filed on index cards in cabinets which ran the length of a long room. Three clerks spent the better part of a day conducting an average of 300-400 searches for information.

"If we wanted to extract all data on a certain type of lesion or the number of cases referred by a specialist, it was an enormous undertaking," Dr. Patton said.

"Obtaining follow-up data on existing cases was very difficult," he said. "But the computer has put an end to such marathon searches."

Evaluation of Radio Signals Helps Scientists Map Space

DELAWARE, Ohio — Radio signals that have been traveling through space longer than the earth has been in existence are being received at Ohio State University's radio observatory here and evaluated on a computer.

Dr. John Kraus, observatory director, said that every point in the sky is scanned electronically to identify as many objects as possible on a comprehensive new map of space. He predicted the project would uncover thousands of new objects and undoubtedly would add a great deal of information to man's understanding of space.

The radio signals are not like those broadcast by commercial stations or amateur and police radios, he said.

Unique Kind of Signals

"Most of the signals were created by high-speed electron clouds moving in magnetic fields of objects or whole galaxies far out in space. Such clouds could be caused by massive explosions or other alterations in an object's natural state," Dr. Kraus said.

The signals picked up here by one of the largest radio telescopes in the world.

Ultra-sensitive devices, located in an underground laboratory beneath the telescope, are used to receive the radio signals and convert them into numerical values for recording by the IBM 1130 computer.

At the same time, the computer gives out commands for the recording instruments to look for such characteristics in the signals as angle of approach, strength, and other factors.

By correlating this information, astronomers are able to reduce such things as the location and the relative size of a given object or set of objects.

Use of the computer to record and evaluate data enables observatory technicians to do in one hour what formerly took 12 hours using manual methods, he said.

After the information is gathered and evaluated, it is recorded on a magnetic tape for further analysis on more powerful computers located at Ohio State's computer center in Columbus.

The number of radio-emission objects known to be in the sky has been increased from about 400 to some 10,000 in recent years, he said.