

interactive computing

PRESS REVIEW

The following articles are reprinted solely as items of interest for the independent evaluation by members of The Association of Time-Sharing Users and The Association of Small Computer Users. The opinions, statements of fact, and conclusions expressed herein are not those of either Association.

500,000 Share Offering Filed by Sci. Time Sharing

WASHINGTON — Scientific Time Sharing Corp. has filed a registration statement with the Securities and Exchange Commission to sell 500,000 shares of common stock, the first public sale of the privately-held corporation.

Half the amount to be sold will be newly-issued shares, the company said. The other 250,000 shares will come from the holdings of the private

stockholders, according to a company spokesman.

The company was founded in 1969 and had revenues last year of about \$10.2 million. A consultant to the FCC, reporting last summer on electronic mail systems, said Scientific Time Sharing is the largest U.S. vendor of time-sharing services based on the APL language.

Almost half the company is owned by four investors: Burton C. Grey, a director, 20.8 per cent; T.A. Associates, a Boston investment banker, 12.4 per cent; Daniel Dyer, the president, 11.2 per cent; and Allen J. Rose, vice-president and technical director, 4.6 per cent. The remainder is owned by a group of officers and directors of the company.

The company said proceeds of the proposed sale will be used to retire part of its outstanding indebtedness. The sale is to be managed by L.F. Rothschild, Unterberg, Towbin and Alex. Brown & Sons.

Scientific said its services are available in over 200 cities in North America, Europe and the Far East.

The company has pending before the FCC an application to market its Mailbox electronic mail service as a resale communications carrier and an associated application for waiver of the FCC's requirement under the existing Computer Rules to establish a separate subsidiary if it wants to market the mailbox service as a communications product separate from computer time-sharing.

2 Major Banks to Form EDP Services Subsidiaries

NEW YORK — In moves apparently prompted by a court action filed last year, Citibank and Chase Manhattan Bank last week told Adapso, the computer services trade organization, that they would set up subsidiary companies to offer computer services.

Citibank said it will form Interactive Computer Center as a separate subsidiary to market the DEC system-based time-sharing services it introduced in 1976. Chase Manhattan said it would operate Managistics, Inc., a computer payroll firm it is acquiring, as a separate profit center with separate staff and facilities.

Both banks agreed not to use their respective names in their computer services marketing efforts.

Adapso had filed in federal court here in May, 1977, to restrain Citibank from providing computer services

and to request that the Comptroller of the Currency not authorize national banks to sell such services.

Adapso said it was "extremely pleased with both settlements" and noted that it will drop its suit against Citibank when the bank fulfills its

part of the new arrangement.

Citibank said it had "in no way made any concessions regarding the legalities" of its offering computer services and noted that it has always operated interactive computer centers as a separate profit center.

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FOR IMMEDIATE RELEASE

FAIRFIELD, CT -- June 5, 1978 -- General Electric Company and Honeywell announced today that they have reached an agreement in principle to combine the worldwide operations of General Electric's Information Services Business Division with Honeywell's timesharing marketing operations in the United Kingdom, Europe, and Australia. The new company will be 84 per cent owned by General Electric and 16 per cent owned by Honeywell.

Honeywell is now the exclusive distributor of General Electric's MARK III[®] computer services in the U.K., Italy, and Australia. The other major countries of western Europe are served by HB Network Information Services, a company jointly held by Honeywell and Compagnie des Machines Bull, whose minority interest Honeywell has been negotiating to purchase.

Plans for the new company call for improved integration of the marketing and support capabilities of this global network information services business. The new company will be in a better position to take advantage of the rapidly growing worldwide demand for such services and to better serve customer needs for remote access data processing services throughout the world.

The new company is scheduled to begin operations November 1, 1978, contingent upon necessary corporate and governmental approvals.



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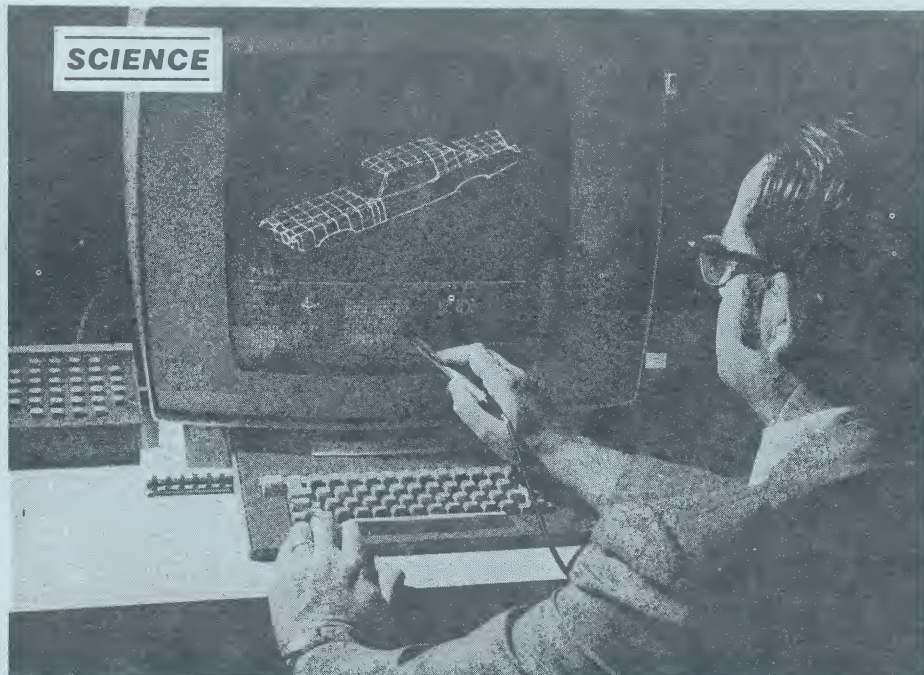
For Immediate Release

June 27, 1978

On-Line Systems Inc. announced today that the U.S. Attorney's Office formally notified On-Line that the investigation of the procurement by On-Line of its Office of Education contract has been completed and that the Grand Jury has determined that the evidence does not warrant the bringing of any charges against the Company, its employees or consultants.

The U.S. Attorney's Office explained the decision was based upon an "extensive investigation" that proceeded with On-Line's "full cooperation." The U.S. Attorney concluded in his letter that "...this entire matter [including similar allegations concerning a contract with the U.S. Senate]...is no longer a subject of inquiry or investigation by this office."

This investigation and the HEW investigation which preceded it were accompanied by a number of inaccurate news stories. Rather than responding specifically to these stories, On-Line has maintained since its original statements last year that these contracts were procured competitively through proper procurement procedures. This position has now been fully vindicated.



General Motors

Designing autos: One picture is worth 10,000 print-outs

Mapping With a Computer

The congressman sits down at the computer terminal and, by pressing a series of keys, fires off a barrage of commands: draw a map of the percentage of people in Florida with four years of high-school education, the number of persons employed in manufacturing in Iowa, the percentage of the civilian labor force unemployed in New York City. On a screen, the displays pop up in seconds, illustrated in color and matched on the map with similar statistics from across the country.

This mammoth information system, known as Odyssey, may soon be installed for the U.S. House of Representatives. It is one example of the rapidly growing technology of computer graphics, which uses the statistical wizardry of computers to produce not just print-outs, but sophisticated pictures on terminal screens. Such technology already is being used in a wide range of fields, from map-making and marketing to movie animation and engineering.

Magic: Clarity and speed are the crucial features of computer graphics. Given enough time, patience and sharp pencils, a skilled cartographer can manually produce a map illustrating the distribution of the elderly throughout the U.S. But the computer can do it in just moments—and then superimpose an additional feature, such as dental health, over the first map. While such information could be presented in a standard computer print-out form, it would be much more confusing to absorb.

Computerized cartography depends for its magic on two systems of information: one that draws the maps and another that fills them in. To create the maps, the computer is fed billions of bytes of data generated in part by an

orbiting NASA satellite that takes aerial photographs of the earth. Then the machinery has access to a wealth of statistics from the U.S. Census Bureau, Labor Department or other reliable sources.

Computers can interpret data with so many combinations and permutations that they sometimes reveal unexpected relationships between factors. A cluster of cancer cases in a community juxtaposed against the distribution of chemical plants in the area might give medical researchers clues to the cause of the outbreak. "Assumptions are frequently challenged by what appears on the screen, and a computer map will often highlight a clear exception to the norm," says Allan H. Schmidt, executive director of Harvard's Laboratory for Computer Graphics and Spatial Analysis.

The potential uses of computer mapping seem nearly endless. If the House of Representatives adopts Odyssey, each legislator may someday have a terminal in his office that he can tap for instant information. Faced with a bill on em-

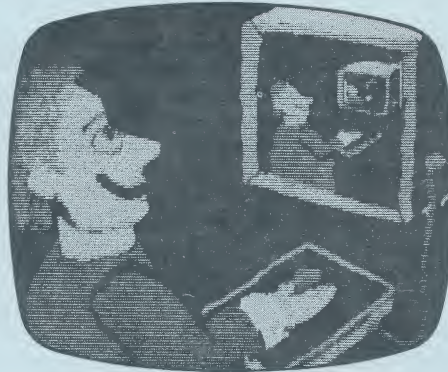
ployment, for example, he could call up a map of his own district for a close-up of its blue-collar population. Doctors might use such a system to find out which hospitals could provide appropriate specialists to treat their patients.

Varied Uses: But mapping is only one application of computer graphics. At MIT, researchers are using computers to make animated films. The computer smooths the transition between individual drawings, sparing tedious hours of work. A city planner can program a computer with details on a traffic system, including the proportion of cars to trucks, bus routes and peak congestion hours. Then he can test a road pattern, and the computer will show where and when it may cause traffic jams. Given that information, the planner can feed in new speed limits, road widths and access routes to major highways—until the computer shows he has got it right.

At General Motors, computer graphics has become an essential part of the design and engineering of new automobiles. Clay models of a proposed design are scanned by the computer and stored in its memory. Then, using a special pencil or the computer's keyboard, the designer can alter various features of the auto and get a quick response on how one change will influence such factors as the car's weight, stability and impact resistance. Similarly, jet-aircraft designers at McDonnell Douglas Corp. are finding graphics more valuable than blueprints in building the Navy's new F-18 fighter plane. With the basic design stored in the computer's memory, the engineers can summon it to the screen and find out just how a change will affect the craft's aerodynamic stability, load capacity and weight.

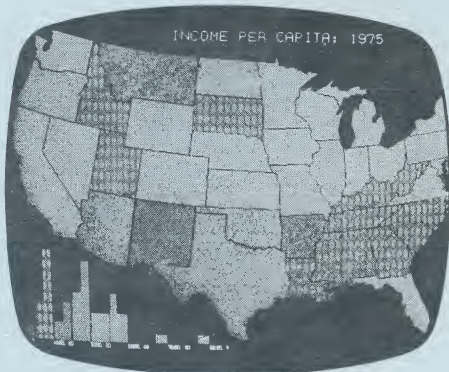
Helpful Image: A staggering amount of information can be conveyed in just one computer image—and that, says Harvard's Schmidt, should prove helpful to industry. "The human mind is limited in the information it can manipulate," he says, "but fortunately, human beings are exceptionally good at spatial recognition." For those who are not computer experts, Schmidt adds, one picture is worth 10,000 print-outs.

—JEAN SELIGMANN with JENNIFER FOOTE in Boston and SHARON BEGLEY in New York



Walter Lieberman

Console cartoon: Smooth transition



Peter Southwick—Liaison

Keyboard cartography: Wealth of data