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Time-Sharing Seen Losing Ground as Service Choice

NEW YORK — Total time-sharing industry revenues were approximately $640 million in 1975, a figure which should reach $1 billion in 1984, according to Frost & Sullivan, a market research firm.

The New York firm predicted that while the DP sector as a whole will grow at about 18% a year through 1984, resulting in expenditures that year of some $87 billion, time-sharing's share of the revenues will decline.

"Vendor profitability will [also] decline, falling from a current industry average of about 11.5% to no more than 5.3% by 1984," the report said.

"The declining importance of time-sharing is only one facet of a profound and continuing shift in the mix of services offered by remote computing services (RCS) vendors," the report said.

"Due to growing user sophistication, saturation of traditionally lucrative customer segments, and more direct competition with the autotransaction industry as well as the products of the burgeoning minicomputer industry, the RCS vendor must strive to remain viable in a buyer's market. His possible countermeasures are both limited and expensive," the report stated.

The firm said it based its predictions on intensive interviews with 50 users located in 15 major metropolitan areas. The 50 users had aggregate 1975 RCS expenditures of about $40 million.

The industry time-sharing (T/S) trend is toward constant availability, the report said. The T/S services of the ten leading vendors are available to industry users for an average of slightly over 115 of the 168 hours in a seven-day week; all leading vendors operate on Saturdays; and only two leaders shut down on Sundays and holidays.

Most of the industry leaders are full service vendors, offering T/S-related services such as remote job entry (RJE), extensive application libraries, training and technical support, according to Frost & Sullivan.

Few Offer Leasing Services

While only a few do not engage in contract programming, facilities management, and/or consulting, only a few offer equipment leasing services.

"Despite professed plans to the contrary, market factors will impel those T/S vendors inactive in certain of those related service areas to enter them," the report predicted.

Current vendor-published prices vary widely, Frost & Sullivan found, with connect charges varying from $9/hr to $22/hr; I/O charges from zero to $1.65/thousand characters transferred; and mass storage from 17 cents to 62 cents/thousand characters per month.

The T/S leaders represent every major hardware vendor: Honeywell, Control Data, Xerox and Digital Equipment Corp., but over a third of all installations are IBM. Most installations are multivendor, however, the interviewers found, with mainframe brands/vendor approaching two.

"Replacement of front-end processors is proceeding rapidly, occasioned by the growing prevalence of dual-mode (T/S and RJE) systems and broader support of higher line speeds," the study stated.

As to operating systems, "the gradually emerging current generation is all vendor-custom, dual-mode and compatible with all possible line speeds," the report said.

"Thanks primarily to the number of IBM mainframes and the available TSO, neither dual-mode nor custom systems incidence is likely to reach 100%, but will approach that figure," it said.

Citibank Plans to Offer Time-Sharing Services to Firms, Using Own Facility

By KATHRYN LIEBTAG

NEW YORK.—The $45.9 billion-deposit Citibank NA Wednesday announced plans to enter a new computer service market beginning Jan. 1, that of offering time-sharing services to large corporations in the metropolitan New York-New Jersey region. It is believed to be one of the first banks in the country to offer such services through its own in-house time-sharing facility.

The services—which could include a company's bookkeeping, billing, payroll, inventory and other functions—will be handled through Citibank's Interactive Computer Center, a time-sharing department established at the bank's Park Avenue headquarters about eight years ago.

Initially, the bank will offer the facility's services to business firms, but according to Seymour Brooks, the center's applications support manager, plans call for expanding the service to correspondents and developing an international computer network, a system which Citibank's international banking group is anticipating for a direct in-house link with Hong Kong and London money center offices.

Mr. Brooks said the bank is looking to market the time-sharing service to "large business customers who are concerned about the increasing high cost" of such services."

Citibank's initial thrust to market the services will emphasize cost-effectiveness—the bank claims the cost is "50% of the going rate," Mr. Brooks said—in advertising being prepared for the New York Times and such computer magazines as Datamation, Computerworld and Computer Decision. The ads are scheduled to run early next year, he said.

The availability of a newly installed DECsystem-20 computer, manufactured by the Digital Equipment Corp., was a major factor in deciding to make the time-sharing services available on a commercial basis, according to the bank. The DECsystem-20 "will be the only machine of its type in the New York City area available for general purpose time-sharing service," Citibank claims.

Mr. Brooks, outlining the rate structure, said the bank will charge $6.50 per hour for prime-time usage — 8 a.m. to 6 p.m. Monday through Friday, New York time—and $2.50 per hour for non-prime time. Additional charges involve disk storage costs, and the use of magnetic tape units, line printers, etc. The minimum monthly charge is $250. Prices do not include any Federal, state or local taxes, according to the Citibanker.

The Citibank facility will be able to handle 32 separate lines into its computer for the time-sharing users. Mr. Brooks said. The bank is "holding back," he said, on the capacity for the moment, he said, to explore the new computer's capabilities and limitations.

The bank's other major-time-shared offering is a package of computer programs, for noncomputer-oriented financial managers, announced earlier this year under the name "International Command." Bascally, the system is used in planning and analyzing cash flow needs, dividend policies, divisional forecasts, and financial statements.

Home Input

The Computer Moves From the Corporation To Your Living Room

If You Don't Have One Yet, Up to 100,000 People Do; Clubs, Magazines & Music

James and Nancy Like Roy

By DAVID GUMPERT
Staff Reporter of THE WALL STREET JOURNAL

You plunk down anywhere from $200 to $3,000, bring it home, put it together, plug it in and, presto—you've got a computer system at your beck and call.

The era of the home computer, it seems, is upon us. Thanks to smaller and cheaper computers, just plain people are entering what used to be the exclusive, expensive and mysterious domain of corporations and universities.

The home-computer industry is so new and so fragmented that it hasn't got around to computing its own progress, so nobody knows how many individuals have bought computers. But estimates range from 20,000 to 100,000. This trend has been going on for only a couple of years, but it has already spawned more than 300 stores, more than 150 clubs and half a dozen magazines.

Some computer experts compare the situation to the earliest days of automobiles, television sets and, more recently, hand-held calculators. "Right now," says one computer consultant, "we're just seeing the tip of the iceberg" in terms of potential demand.

Why Buy Them?

Why do people want computers? A computer's ability to store information, and cough it up on demand, makes for endless possibilities. You can keep up to date on next year's tax return so that its actual preparation will be a breeze. You can have your lawn sprinkler turn itself on and off. You can create electronic music, play electronic games or just entertain the neighbors. And much more.

"You get a sense of a lot of power by getting the computer to do things you couldn't normally do very easily," says James Geiser of Cambridge, Mass., a mathematics teacher who bought a desk-top system a year ago for $1,100.

About a dozen companies, most of them small private firms, turn out home computers, selling them either by mail order or through the computer stores. The stores have sprung up mostly on the West Coast and in the Northeast. They are geared to the novice and have such names as Computer Warehouse Store and Kentucky Fried Computers ("a computer in every pot").

The computers available to consumers are also being used more and more by small businesses and other commercial users. They are known in the industry as microcomputers; it was the advent of low-cost microprocessors that made the notion of home computers practical.

The 1950s and Today

Microprocessors are silicon chips, usually no more than a quarter of an inch square, on which the equivalent of once-huge circuit boards can be implanted. Because of microprocessors, it is possible to turn out a computer the size of a portable typewriter for $800—a computer comparable in capacity and speed to IBM computers of the late 1950s that required huge rooms and cost hundreds of thousands of dollars.

Still, experts say, not everyone who can afford one should rush out to buy a home computer. For one thing, they mostly come in kit form and require some electronics background to assemble. Also, you have to know something about programming a computer to use one.

These problems promise to vanish soon, says Jim Warren of People's Computer Co., a nonprofit California corporation devoted to research in the personal-computer field. He notes that a few small companies have begun making completely assembled computer systems that retail for under $1,000, and he expects other, larger firms to follow their lead. He also predicts that packaged computer programs will gradually become available; you won't have to know anything about programming.

Manufacturers Surprised

Even with the present obstacles, so many people are buying home computers that even the manufacturers are surprised. When National Semiconductor Corp. introduced a $200 computer-system kit last spring, it never expected to sell the 10,000 to 20,000 kits that a spokesman says have been sold so far. And when a small Albuquerque, N.M., firm known as MITS Inc. came out two years ago with what it calls the first home-computer kit, the company quickly fell eight months behind in filling orders.

"I projected 800 machines in 1975, and people said I was a wild-eyed optimist," recalls Edward Roberts, MITS president. "We shipped more than 5,000 machines in 1975." They retailed at $400 each.

That kind of success has encouraged larger concerns to look more closely at the home-computer market. International Business Machines Corp., while declining to discuss its own plans, says "it's a matter of time" before "computers are generally available for home use much as calculators are today."

Large retailers are beginning to express interest. A spokesman says Sears, Roebuck & Co. "is watching this scene very carefully." While Sears has no immediate plans to market a home computer, the company is "very aware of it from a long-range point of view," he says. Similarly, a spokesman for Montgomery Ward & Co. says its executives are "watching the home-computer market very closely" although it, too, has no imminent plans to market models.

One large firm ready to plunge into the home-computer area is Tandy Corp.'s chain of 6,000 Radio Shacks. The chain will probably begin marketing its own computer kit "before the end of the year," says Bill Nugent, executive vice president of the chain. Its price, he says, will probably be $300 to $400.

The computer stores have gone a long way toward taking the mystique out of computers. They tend to be small stores with a few computer systems on display, a section for repairs, and a salesman or two to explain things. "You walk into one of these stores and a guy comes out in a plaid shirt usually with a beard" to push his computers, marvels Neil Kleinman, marketing director of International Data Corp., a computer-industry-research firm. "It's a freaky thing, especially if you have a big-computer-company mentality."

At the Computer Warehouse Store, situated next to a pizza parlor and a billiard hall near Boston University, the emphasis is on price. Large hand-printed signs describing the computer systems carry the prices in bolder characters. "The Cadillac of microcomputer kits," boasts one sign pushing a $651 kit. Leaflets around the store promise one-day shipment for various kits.

The store opened last July, and sales that month totaled $5,000. Since then, they have climbed more than eightfold, says Adolph Monosson, an owner. Perhaps even more important: "Over all, there's been a decline in the technical expertise of the people who come in here," says the store's manager, Lee Ridlon.

There is no doubting the enthusiasm of the new computer owners. Between 150 and 200 computer clubs with 15,000 to 20,000 members have been organized over the last two years, says Mr. Warren of People's Computer Co. The clubs have sponsored conventions. One in Trenton, N.J., last May

Home Input:
The Computer Moves
To Your Living Room

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drew 1,500 people; another in Atlantic City last August drew 4,500; a conference planned for San Francisco next April is expected to attract between 7,000 and 10,000.

The home-computer magazines are aimed largely at novices. Their articles bear such titles as "Learning Computerese," "Understand Your Microprocessor" and "Computer Widow." Among the magazines are Byte (a byte is a measurement of computer information), Personal Computing, and Dr. Dobb's Journal of Computer Calisthenics and Orthodontia. Byte, which started in September 1975, is the largest, with 73,000 circulation. In addition, there is a Boston radio program especially for home-computer owners.

David Halliday, owner of a biological-instruments firm in Cambridge, says he bought a $245 computer system to help him in his hobby of formulating electronic music. He says he is so happy with the results that he is considering an electronic-music career.

A retiree in Naples, Fla., uses his home computer to play a variety of games ranging from craps and blackjack to WARI, a board game designed especially for computers. He says WARI is about as hard as checkers. "The computer takes about 30 seconds to think about each of its moves," he says. "The first few times I played with it, it beat me badly. Now I can hold my own."

Another game popular with home-computer enthusiasts is Lunar Landing. The object is to make a soft landing on the moon by adjusting the rate at which fuel is burned in a series of stages. If you calculate correctly, the computer prints out, "Perfect landing, Congratulations." If you miss, you're told, "Crash landing. Sorry, no survivors."

Mr. Geiser, the Cambridge mathematics teacher, says he does a little of everything with his desk-top computer, which he has nicknamed Roy. Mr. Geiser, who shares a house with seven other people, uses the computer to keep track of who owes what for food, phone bills and other household expenses. He also uses it to construct charts of "biorhythms"—physical, emotional and intellectual peaks and valleys—for himself and his housemates; to explore mathematical theories; and to store records of students' homework and grades. "I'm amazed by what Roy's doing," Mr. Geiser says.

Friends of computer enthusiasts may benefit, too. Nancy Mullin, a teacher who lives in Mr. Geiser's house, says that before she saw Roy in action, she had "all these ideas about computers being cold and impersonal." But Roy, she says, is almost "like another member of the house. I don't feel intimidated at all anymore."