# GE Time-Sharing Service

The General Field of Time-Sharing



### Electronic News

Computer SPRING '68

## GE's '67 Time-Sharing Gains

### **Annual Sales Now Totaling \$30 Million**



NEWEST MARKET: Two numerical control programmers at Numerical Cutting, Inc., Elma, N. Y., use Teletype link to GE timeshared computer service to prepare coded machine tool tapes for a contouring operation in 1.5 hours. Manual methods formerly required 45 man hours, Ge said.

#### By RAY CONNOLLY

BETHESDA, Md. — The party line at General Electric is that 1967 saw the company "strengthen its world leadership in the commercial time-sharing service market." Strong as that claim is, there is evidence that GE's Information Service Department headquarters has made those words more than a press agent's fantasy.

Reliable estimates place GE's annual time-sharing service sales at \$25 million-\$30 million annually. The money comes from the department's 31 domestic computer centers and does not include the recently created international time-sharing service operation's four installations in Paris, London, Toronto and Sydney, Australia.

Size of GE's investment in time-sharing service is evident when it is recalled that this growth has occurred in an 18-month period. It was October 1965 that GE inaugurated the service with two centers at New York and its Phoenix, Ariz., computer manufacturing headquarters.

William R. Eaton, the man responsible for running the Information Services Department here, estimates the United States commercial time-sharing market at about \$100 million annually on the basis of computers installed. It is a figure, he emphasizes, that does not consider batch process-

#### Continued from P. 14, This Sect.

ing or sharing of excess capacity on commercially installed machines.

"That's not time sharing," he explains.

#### Market Projection.

While Bill Eaton is careful to protect proprietary data on his department's share of this action, if his market estimate is correct the projection of industry sources on GE's piece of the market would put the company at the top of the heap with one-quarter to one-third of total revenues.

To keep the GE juggernaut ahead of the competition — and Eaton sees the Control Data C.E.I.R. combination, as the toughest — the company is continually upgrading its installations, adding to its inventory of special programs geared to the special needs of big industrial markets and extending access to its centers by local telephone lines. By dialing a local number, customers in 6i metropolitan areas can reach one of the 14 United States time-sharing centers.

Charges for the service, the company says, are \$10 per hour of terminal time and 4 cents per second of computer time, with a monthly minimum of \$100. Program storage charges run to another \$2.50 a month per unit of 1.536 characters from GE, plus telephone line charges and \$80 to \$150 a month for teleprinter rental.

Although statistics on GE's expansion of its domestic time-sharing operation support its claim for success, it is harder to pin down anyone on the subject of profitability. To Information Service Department manager

Eaton, the measure of profitability can vary with the yardstick used. It can be based on providing a service at a favorable financial return; on investment in machines and equipment, and vary with the way a company's financial department treats its investment designed to increase the system's capacity and variety of services. "Profit potential," says Mr. Eaton, "is very good."

#### Official Statement.

The official GE statement on profitability is even less specific. "Some of GE's information systems businesses became profitable during the year," it says of 1967. "Some will be profitable shortly; others will not be profitable for some time to come because of the substantial investment required for long-range success."

Competition in the field likes to claim that GE's time-sharing service operation falls in the last category and notes that the department numbers other GE operations among its own best customers.

"They take the money from one pocket and put it in another," says one of the opposition.

Bill Eaton readily acknowledges that other segments of the company buy his department's service, although he won't call it nepotism. Other GE users must be sold just like any other customer, he insists.

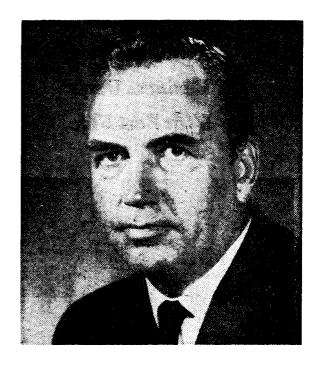
The one advantage he believes does accrue to his operation from having customers within the GE fold is the help them provide in terms of indicating potential new applications and ways of improving on existing services.

#### Massive Investment.

Although GE claims "more than 50,000 individual customers" for its time-sharing service, the company's obviously large investment in hardware, marketing and technical services makes it difficult for financial observers to see how the operation could have turned the profit corner in the brief span of 18 months.

Of the 31 computers under Bill Eaton's jurisdiction, two are large-scale 600 Mark II series while the remainder are the smaller 65 models.

One GE-635 time-sharing system at Dartmouth College, Han-over, N. H., is being used to develop the education market but is also available to the communications link. A second Mark II in Cleveland is available to Mr. Eaton's department and, he says, "a few more will be installed this year." Los Angeles will probably be next to get one of the big machines, followed by the Teaneck, N. J., center where five computers are already importation.



W. R. EATON

#### **Time-Sharing**

#### Continued from P. 15, This Sect.

Although GE ducks discussions of modifications it has made to its \$3 million Mark II machines for its time-sharing operation, it is known that the Dartmouth Machine has 64,000 characters of one microsecond core memory, plus two or three disc storage units of 20 million characters each for use in the time-sharing mode. This would provide users with some 50,000 characters of source data in program preparation.

This compares with 16,000 characters of core memory and 18 million characters of disc library storage in the 265 model to produce about 6100 characters of source data for programming.

#### Customer Demands.

In Bill Eaton's experience, tlme-sharing service customers most want systems with large, easily manipulated files. How large? "On the order of 200 million characters with rapid random access" in discs or on drums. Core memories would run to 128,000 characters.

While he declined to compare this level with what GE now has, it is known that his department's 635 Mark II in Cleveland has core capacity far greater than the Dartmouth machine and is climbing closer to the estimate

of 128,000.

The GE push to increase memory production capability as well as memory capacities is evidenced by the company's statement that it is adding a \$5.8 million plant to its memory facility at Oklahoma City.

As these company investments continue to grow, so does the development of new time-sharing service applications and the effort to market them in the information service department here.

Most recent applications development was the introduction earlier this month of a service to permit United States users of nearly 14,000 numerically-controlled machine tools to use timesharing for fast preparation of coded N/C tapes. That disclosure came in Philadelphia at a meeting of the Numerical Control Society.

Last year, GE used a similar marketing ploy to introduce its do-it-yourself course of computer-taught lectures called Tutor for students, businessmen, engineers and scientists at the annual meeting of the Association for

Educational Data Systems in De-

"Education," says Bill Eatonuis a market not yet exploited by sellers of time-sharing services.

"Government," he adds, "is am insignificant user," preferring—and having the requirement for—its own machines.

"The largest segment of users," he says, "are in manufacturing." They dominate the time-sharing market by about three-to-one in terms of numbers, according to the GE executive, and by "at least two-to-one on the basis of revenue."

INFORMATION SERVICE DEPARTMENT

