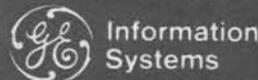


# GE TIME-SHARING SERVICE MAKES NEWS



Time-Sharing  
Service

## *The Field of Numerical Control*

# TOOLING & PRODUCTION

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## Now, CAM

EXPANDING the problem-solving capabilities of its nationwide computer time-sharing service, General Electric has introduced a comprehensive series of application programs for computer-assisted manufacturing (CAM).

The package has extensive application in such areas as N/C tape preparation, production control, quality control, inventory control, industrial engineering and management. With the capabilities of large-scale GE-600 series computers, the programs will enable manufacturers to employ modern CAM techniques throughout most sectors of their operation.

1. Fast turnaround time and access to a large-scale computer means reduced downtime on Ex-Cell-O Turbine Products Group's vertical turning lathes.

Stored on-line the time-sharing systems will help manufacturing personnel to conveniently use regular telephone lines from office and factory terminals. Hundreds of users can be linked to the powerful system at the same time, yet have the feeling of exclusive computer use.

The CAM package helps to meet the growing needs of both new and experienced time-sharing users for real problem-oriented application software—enabling them to broaden their own problem-solving capabilities, at the same time develop their own.

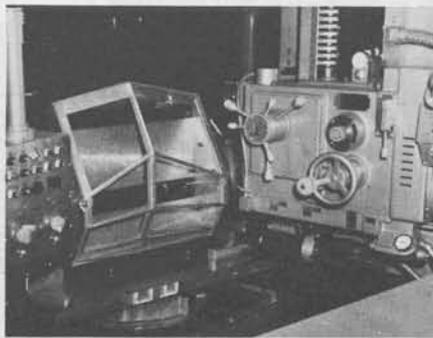
The total package comprises a broad spectrum of manufacturing tasks including part programming, tape verification, scheduling, cost and time standards, inventory control, evaluation of process and part accuracy, simulation studies and capital investment analysis.

GE's time-sharing systems and N/C programs have potential application in direct numerical control (DNC). Studies show practicality of offering REMAPT or NCPPL as a programming language linking the GE CommanDir system to the GE Mark II system.

The manufacturing package has another major element: a series of programs providing a capability to quickly, economically turn blueprints into N/C tapes. It features two distinct part programming language systems designed to meet industry needs.



**2.** Time-sharing service with a library of over 500 programs related to all phases of business and industry aids an Armco Steel N/C programmer in producing a machine tool tape.



**3.** Capabilities of time-sharing service enable Aeroflex Laboratories, Inc. to machine complex casting with irregular shaped openings. Key points and angles of rotation programs are found in the library.

One is called REMAPT—a time-sharing version of ADAPT—providing APT compatible subset for industries requiring a commonality in program language between various machines and components. Its programming system is capable of handling both 2½-axis contouring and 3-axis point-to-point machine tools.

In addition to REMAPT, the package includes two post processors—GELATH designed for lathes with newer generation controllers and GPOINT for milling, drilling and boring machines.

The other is called NCPPL which can accommodate virtually any machine tool. It's a powerful, flexible system said to permit a programmer to create his own program vocabulary by defining words which are most convenient and meaningful to him.

Also in the N/C package is a new tape verification capability. Through use of a stored program—called TAPVER—and a plotter attached to the time-sharing terminal, programmer can determine the correctness of the cutting path of the tool. The time-sharing tape verification technique minimizes lost machine time for prove out, also the risk of damage to expensive parts and machine tools.

Besides the programs are varied support services, including training, program documentation and application seminars, designed to help users take complete advantage of both time-sharing and the CAM package. ■

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