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GEORGIA TECH INTERACTIVE COMPUTER

TEAMS HUMAN AND COMPUTER

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ATLANTA, GA....Only a few years ago, industrial experts in America dreamed of the day when computers would run U.S. manufacturing plants.

But today some of these analysts believe full automation is an unrealistic hope.

"For a long time we tried to teach computers to perform all the decision making functions of a human worker," says Georgia Tech industrial engineer Dr. John Jarvis. "We've come to realize now in the late 1970's and 1980 that this just isn't possible."

Computers, Jarvis maintains, can't think in some areas as well as human beings. They can calculate complicated mathematics far more rapidly than a man. However, a computer would need a long period of time to evaluate the dynamics of a spatial pattern which a human can analyze in a matter of several seconds.

Jarvis and his colleagues at Georgia Tech's College of Industrial Engineering aren't trying to pit man versus machine in some electronic age College Bowl. Instead, they've found a way to pair the distinctive talents of the human brain and the computer's artificial intelligence.

"We call it an interactive computer system," Jarvis explains. "Some things a computer can do a lot faster if it has a human partner helping it over a few difficult hurdles."

Take, for example, a spatial representation problem to determine the most inexpensive routing system to service 50 truck delivery stops. Jarvis

(more)

says a computer would take "a lifetime" to find an ideal solution if it were working alone. But relying on a human being's talent for interpreting spatial configurations, it can obtain a good answer in a few minutes.

In fact, Georgia Tech's own interactive computer terminal recently solved a similar problem, designing a routing system for deliveries which would cost less to run than any automated computer method previously found.

The Georgia Tech interactive computer is a "stand alone" model, meaning that it can function without a larger host computer. The system is operated through a display screen which makes the unit resemble a television set. Operators can "draw" objects in eight colors which have a three dimensional appearance.

Jarvis says the interactive computer is ideal for designing delivery routes, transportation systems or routes for moving goods through a manu- facturing plant. Indeed, government and industry are already using the computer system to solve a variety of problems, and several are currently working closely with Tech's Center for Production and Distribution Research.

Jarvis believes the interactive computer can influence the direction of American industry.

"It will give new importance to the human factor in the workplace," he says. "In a number of tasks, the most efficient approach to computer- ization is going to come from systems which use the strong suits of man and machine."

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