

# Will talking tractor be farmer's backseat driver?

By DAINAH BULLARD  
Reporter

A farmer's best friend is his tractor — and one day soon it will be able to talk to him, giving him advice on how to better operate the machine.

A team of agricultural engineers at Texas A&M is developing the talking tractor to help save fuel and money on the farm. The talking will be done by a microcomputer that tells the driver how to operate the tractor more efficiently.

"Our main objective is to document how Texas farmers use tractors," said Dr. Bill A. Stout, professor of agricultural engineering. "Our second objective is to conserve fuel."

Studies by the Texas Agricultural Extension Service predict the microcomputer system may cut farm fuel consumption as much as 25 percent.

"The microcomputer monitors or reads what the tractor is doing," Stout said. "It tells the operator what his work load is

(heavy, light, etc.), and suggests a travel speed and work gear to get the most out of fuel."

Stout said tractors perform several levels of work, ranging from heavy (plowing), to light (planting).

Fuel is wasted when a powerful tractor designed to perform heavy work is used for light work, unless the operator adjusts gears and speeds correctly.

The computer monitors tractor speed through sensors connected to the tractor's front and

back wheels, Stout said. Other sensors measure the amount of pull the tractor is using to move its load.

The tractor used in the program is a John Deere 4440, loaned to the University by the Deere company.

"Our budget wouldn't allow the purchase of a tractor," Stout said. "That tractor is worth \$40,000 to \$50,000. We sought help from John Deere and they loaned us the tractor and gave us some financial support."

The tractor program is supported by three groups: the Texas Agricultural Experiment Station, the Center for Energy and Mineral Resources, and John Deere. Stout said a "ballpark figure" of about \$100,000 has been spent on the program since it began three years ago.

"We use the money mainly to buy equipment, like computer equipment and other kinds of sensors," Stout said. "It also goes to supporting the grad students who work on the pro-

gram. There are five grad students working on it now."

Stout and his associate, Dr. Stephen W. Searcy, assistant professor of agricultural engineering, have been involved in the program since it began. Stout is in charge of the mechanical aspects of the project; Searcy, the microcomputer work.

Searcy is working on methods for speech synthesis in the

microcomputer. Though computer is not yet speaking, the tractor and computer system were tested last fall.

"The microcomputer mentation worked better than which was what we wanted to know," Stout said. "We're being fully operational. Our microcomputer represents a major investment of money."

# A&M scientists to go to sea for ocean drilling tests

By SUZY FISK  
Reporter

Texas A&M scientists will head out to sea in January 1985 to begin a 10-year ocean drilling project its director says is the biggest ever.

Texas A&M officials are expected to sign a \$124 million contract today to direct "the largest ocean drilling project in the world," said Dr. Phillip Ra-

binowitz, director of the Ocean Drilling Program.

The contract designates the University as the science operator for the program, which is sponsored by the National Science Foundation. Responsibilities of the science operator are providing logistical and technical support for a team of scientists, managing each two-month cruise, drilling and distributing core samples and the coordinat-

ing, editing and publishing of the final research product.

Rabinowitz said the program will help scientists study what the ocean floor is made of and how it's formed. Other studies will be on the evolution of the ocean basins and how they are formed, the evolution of passive and active type continental margins and paleo-oceanography — the study of the environment of the ocean including plant

and animal fossils. A new technique on the development of bare rock drilling will be also tested.

The ship selected for the international program will be the SEDCO-BP 471, "the finest drill ship in the world," Rabinowitz said. The 16,000-ton ship, owned jointly by SEDCO and British Petroleum, was selected to drill at various sites around the world.

The ship can drill to depths of 30,000 feet, but the deepest drilling during this program will be 27,000 feet. There are 55 crew members and the ship will accommodate 50 scientists.

Scientific direction will be provided by the Joint Oceanographic Institution for Deep Earth Sampling, who will also select scientists from U.S. oceanographic institutions and those from other participating

nations, Rabinowitz said. The international members are from Canada, Germany, France, Japan, England and the European Science Foundation. Each cruise will have a different team of scientists who will be responsible for information gathered during each two-month period that the ship is out.

Additional funds will be provided to convert part of the ship into a "four-story house" for the

scientists to live in and another 12,000 square feet of laboratory space. The ship has a computer system that keeps the ship in position during time of drilling and will allow direct contact with headquarters here at any time.

The University will have drilling operations center, core repository in the A&M Research Park to be off Highway 60.

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# Measle cases drop to new low

United Press International

ATLANTA — Measles cases have reached their lowest level in 71 years, representing a 99.7 percent reduction from the pre-vaccine era, federal health officials said Thursday.

The national Centers for Disease Control said a provisional total of 1,436 cases of measles were reported in 1983, a record

low incidence rate of 0.6 cases per 100,000 population and the fewest cases since the nation began keeping records on the disease in 1912.

"This is a 99.7 percent reduction from the pre-vaccine era,

when from 1950 to 1962, an annual average of 525,730 cases were reported ...," the CDC said.

Dr. Robert Amler of the CDC's immunization division said measles "is no longer a major public health problem but it remains a public health concern because we have not eliminated indigenous measles (non-imported) entirely."

"We do know that when the effort to control measles is relaxed the disease returns. If it is not eliminated, the opportunity exists for measles to re-establish itself in our population."

Most of the 1983 cases occurred in college students and in children under age five who are not directly affected by state immunization requirements.

The 1983 total represented a 16.2 percent decrease in measles cases from the 1,714 cases in 1982, which also was a record low year.

Of the nation's 3,139 counties, 3002 or 95.6 percent, reported no measles cases during the entire year and every county was free of measles for at least six consecutive weeks in 1983.

Four states accounted more than 77 percent of the indigenous cases — Indiana, Illinois, California and Florida.

Federal health officials hoped to eliminate the hood disease and launch an education and vaccination campaign to accomplish that. But they failed to achieve Oct. 1, 1982, eradication line.

The CDC said although eradication of indigenous measles had not been achieved, the disease's attack pattern and mode of transmission had been substantially altered.

# Executive explains expectations

By LISA PEDERSEN  
Reporter

An executive for Tenneco Inc. discussed what his company expects from engineering graduates who are first year employees with the company Thursday night.

Joe B. Foster, executive vice president for Tenneco, began

his lecture, "What do you call an Aggie five years after Graduation?", with anecdotes on bus stories.

"The reason for the bus stories is to give you a clue on what you can do early in your career to avoid missing the bus and take off like a rocket instead," Foster said.

The bus stories were jokes. Foster's outline on what it takes to start the countdown toward success was no joke.

Tenneco is looking for engineers who can think clearly, get the job done, communicate their ideas, provide leadership and show professionalism, Foster said.

"You can't play in the major league if you can't get a curve,"

Foster said. "You can't be an engineer if you can't think."

The risks are too high, the consequences are too great for mistakes by engineers, so they have to think clearly, Foster said.

Tenneco is also looking for engineers who can get the job done right the first time, Foster said.

"We are looking for people who will go the extra mile," he said. "I've seen people come early and stay late if that's what it took to get the job done."

Thinking clearly and getting the job done won't do the young engineer any good if he can't communicate his ideas, Foster said.

"There are people who have good ideas but are not good communicators," Foster said. "Those who don't use the English language correctly or can't spell are not good engineers."

In addition to being able to communicate, Tenneco is

looking for people with entry.

"I've seen alot of people because they were too wrapped up in themselves," Foster said. "As a boss or leader, employee essential."

Furthermore, Tenneco looking for people with leadership potential, someone has the drive and dedication to get the job done, Foster said. "The leader decides what happens and does what is necessary to do it," he said.

Finally, Tenneco is looking for someone dedicated to professionalism, someone who it like it is, but with integrity, Foster said.

Summarizing his speech, Foster concluded with, "As Rogers once said, 'Even if you're on the right track, if you're there you'll get run over.'"

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