

Electronic Brain Now 'Try Out' New Cars in Major Auto Firms

Detroit — Pliers and screwdriver men such as Henry Ford and Charles Kettering once designed autos and put them together, but now engineers at drafting boards and electronic brains which can't turn a tap "try out" new cars every day.

When an auto engineer gets an idea these days, he doesn't dash down to the forge shop and start pouring metal. Putting every idea into metal and running it over the road would be too time-consuming, too wasteful and too expensive.

So the engineer goes to his company's mathematics department, pries a Ph.D. loose from a logarithm table and works out a formula for testing his idea on an "electronic brain."

At the Ford Company's engineering laboratories, they are "trying out" combinations of new engines, transmissions, axles and tires that may be in your car in 1960.

Another Ford computer set-up is used to figure out how new suspension systems would work on all types of roads.

Can't Guess Wrong

At the General Motors Tech Center, the engineers and mathematicians have put a steering wheel on an electronic analogue computer. When they turn the steering wheel the computer figures out how much the car will roll, yaw, pitch and skid at any given speed. Best of all, the computer sends signals to some little electric motors built into a toy car, and the engineers can see this toy car roll, yaw, pitch and skid.

In the old days, the pliers and screwdriver men had a limited number of chances to hit on the right combination or system of their cars.

"If they guessed wrong, they didn't get another chance, that's one reason a lot of cars disappeared from the market," a Ford engineer said.

"When we spend hundreds of millions, we just can't af-

ford to put a 'dog' on the market," said Ford's mathematics department supervisor, R. A. Roggenbuck.

Computer operator Thomas Jackson took a thick deck of business machine cards and fed them into three giant combined computers which can make up to 2,000 decisions sought by the Ford engineers. When the "brain" had digested the information from the cards, Jackson flipped some switches to "tell" it the decisions he wanted. He walked to the third part of the computer system and pressed a button which caused it to grind out the answers on a sheet of paper fed out the top.

Back To Drawing Board

He had just determined how a car would perform with a certain type of engine, gear and axle ratio, gear shifting points—how quickly it would accelerate and how fast the engine would turn over.

It would have taken one mathematician at least six hours to duplicate this job with manual calculating aids.

Stylists Employed By Auto Makers

Most automobile manufacturers now employ stylists to make car interiors a home away from home, according to producers.

Today's car upholstery may well express the personality of the owner with such luxury coverings as leopard or pony skin leading a long list of custom-made accouterments.

Leather, however, is one of the most popular choices. Available in a wide selection of colors, leather is now processed to prevent scuffing and to increase its wearability. It is "standard" on many models.

Car dealers in the United States total about 40,000.

"I can remember when we kept 20 people working all night just a couple of years ago to find out answers like this on a new model we planned," Roggenbuck said.

Unfortunately, the car drive train combination Jackson fed into the machine produced a car that took 17 seconds to go from zero to 60 miles per hour, about seven seconds slower than most American cars today.

"Well, this is a 'dog,'" he said. "Back to the drawing boards."

"You could do a real service if you'd get across to people that these electronic machines can't do anything by themselves, they're only as good as the men who use them," Roggenbuck said.

Then he went back to a conference with his top mathematicians to try to figure out why two electronic brains gave different answers to a single problem so difficult men can't figure it out in a single lifetime.

Man Uses Boy To Bilk Barber Shop

Waltham, Mass. — A man and a small boy entered John Tirone's barber shop. The man sat down in a chair and said: "Give me the works."

After a haircut, shave and shampoo, the man said to the boy, "Wait here. I'll be right back."

An hour passed. Tirone asked the boy when his father was coming back.

"My father?" said the lad. "I never saw him before."

Important coal resources are found in 28 of the United States.

An electronic computer has been made to play checkers. When opposed to ordinary players the machine won, but it lost when playing with a champion.

They'll Do It Every Time

By Jimmy Hatlo



Points Given for Small Town Business

Champaign, Ill. — A University of Illinois business expert says that small businesses are suffering not because of competition within towns—but because of competition between towns.

Irwin Cochran, of the school's Bureau of Business Management, said "little towns are in trouble" because of the increasing mobility of the populace which makes it easy for people to shop "some distance from home."

Cochran said that small business can lick the problem, however, by becoming "sensitive to what is going on," and by adjusting "to supply the needs of its customers."

He said that small towns can improve their retailing power by providing "clean merchandise, lively displays, new buildings and business-minded merchants."

Answer Presents Self To Puzzled Police

Parkersburg, W. Va. — Police arrested four teenagers after an early morning chase of their speeding automobile.

Officers filed three traffic-violation charges against the driver, but were at a loss as to how to book the remaining three. They had tossed a case of beer out the back window into the path of the police cruiser.

Before they were turned loose, an answer to the situation presented itself. The beer had been stolen.

Americans have increased their average per capita food consumption by at least 12 per cent above the level that existed in the late 1930s before the start of World War II.

Damage in all accidents in the United States in 1956 would have built one million new single family homes on a basis of an average cost of \$10,600 for each house.

Automobiles Have An Array of Colors

Today's automobiles are rolling off the assembly line in a rainbow array of colors from sunset pink to deep purple.

There was a time, automobile producers pointed out, when a two-tone car was a taxi. Now, two and three-tone cars have gained in popularity.

The average man, producers say, wants a relatively subdued, solid color. But women are more color conscious and want the same color vitality they demand in their dresses and in their interior decoration. The result is that the average car manufacturer now offers as many as 28 different color choices and combinations.

Automobiles last twice as long now, even though their lifetime mileage is 4½ times greater than that of cars produced 30 years ago.

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