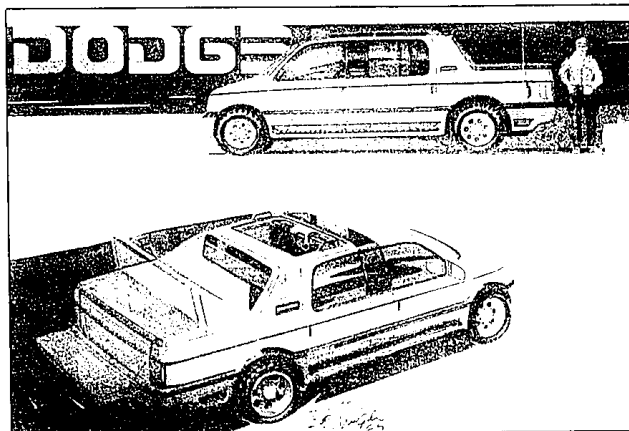


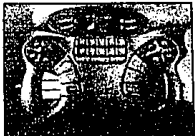
The sleek Pontiac Pursuit concept car is some designers' idea of what the car of the future will be like.

AUTO ODYSSEY

A drive to the future



A glimpse of the future from Dodge.



A driver's-eye view of the Pontiac Pursuit.

THE BIRMINGHAM resident said electronics will make the entire engine work together instead of operating independently as it now does.

"There won't be more computers," Greenslade said, "just more intelligent use of computers. It's the software that's taking time to develop."

While some companies have opted to develop ideas like talking dashboards, Greenslade said Ford only works on "useful applications" of computers.

"I think there's a lot to be learned there without having a public embarrassment. You can get sucked into technology for technology's sake," he said.

Joe Dunn of Rochester is project engineer for the Pontiac Pursuit, a

"concept" car. He agrees more electronic uses will be coming in cars of tomorrow.

One example, he said, is a "heads-up" display system that projects the speedometer or other information onto the windshield so the driver can see his speed without taking his eyes off the road.

"A LOT OF THESE things are available now, but they're too costly," Dunn said. "No division (of General Motors) has said let's put it into production and get the cost down. That's something in the very near future."

Electronic steering would use circuitry instead of a shaft or steering column to command direction of the wheels. That would allow a car to make a turn without the cur-

rently needed two or three revolutions of the steering wheel, Dunn said.

"The benefit would be you could steer all four wheels, so you can have the wheels turn parallel to one another for easier parking or easier maneuverability in small places," Dunn said.

ELECTRONIC STEERING would also change how a car makes a high speed turn. Currently, the front wheels will turn and the back wheels skid sideways. Four-wheel steering would allow the back wheels to roll in the opposite direction of the front wheels.

The not-too-distant future will also see auto companies eyeing more personalized transportation like mini-cars for commuters and

more mid-engine sports cars, according to Thomas Gale, vice president of product design at Chrysler.

"There's been a trend to specialized vehicles to reflect individual owner tastes and needs. More specialized markets have developed, and we see that trend continuing," said the Rochester resident.

Among the more personalized features of the future is a computerized "key card" that functions as a key. In the Dodge Daytona concept, which was displayed at recent auto shows, the card would also record the driver's preference of seating, foot pedals and steering wheel position, climate control, and entertainment.

Displaying concept cars at auto shows helps companies gauge consumer reaction to new ideas they're

developing or planning to use in next year's model.

"Whatever we're going to build for the future relates to what the customer wants; that is shaping the cars of the future," said Greenslade.

Thus, some current model cars have compact disc players available and digital audio tape, the next step in high quality music reproduction, will be coming. "Whatever goes into home entertainment audio will be funneled into cars in a few years," Greenslade said.

One thing consumers apparently want in their cars is to know the latest road conditions, how to avoid traffic jams and how to find the best route to get where they're going.

Several companies are working on navigational systems. They are very expensive, Greenslade said.

Currently, there are ETAK navigational systems available for \$1,500 on some cars and for some larger cities. They show the driver's car as a cursor on a screen within a map of the area. As the driver makes a turn, the map shifts so it appears he is traveling forward all the time.

The system could be improved when auto companies can use satellites to bounce bulletins and updates to cars, telling them a street is closed for construction or there is a traffic jam.

Such an information system could allow the police or road department to suggest alternate routes to individual drivers. "The possibilities are fascinating and a little bit frightening," Greenslade said.

If the highway department installed beams or sensors in the roads and auto companies used satellites, cars on long trips between cities could be programmed to virtually drive themselves, according to Dunn.

Cruise control is already a standard feature. And, sensors available today could control braking systems within certain distances of other cars or objects, he said. With a beam in the highway, the driver could set his desired speed, Dunn said, "put the car in cruise and turn around and play cards."

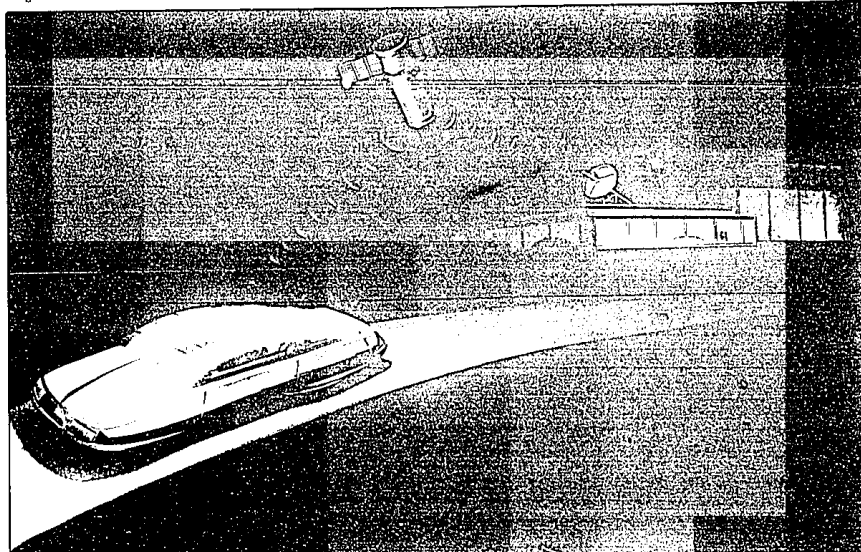
"I see this as being out there a ways, but you could do it. All you need is that satellite," Dunn said. "You can use your imagination and play games with all the things you can do."

By Dave Varga
staff writer

The above vignette features a few of the great innovations that engineers and design experts are planning for the cars of the future.

But automobiles probably won't look much different as the 21st century approaches, they say.

"The cars are going to be very much like today," explained Rex Greenslade, product launch manager for public affairs at Ford Motor Co. "The cars are going to evolve, but they'll still be powered by internal combustion engines. I think the revolution will be the way in which we use all the systems that are in cars today."



Ford Motor Co.'s futuristic car, the model T-2008, will have an on-board, direct-to-satellite, two-way communication system that will automatically contact the nearest Ford dealership in case of on-the-road problems.