

# The Road Watches You

By Simson Garfinkel

**H**IGHWAY authorities throughout the country are building futuristic "smart-road" systems designed to unclog traffic and improve driver safety. But these smart roads could lead to an Orwellian surveillance state if we aren't careful.

One smart-road system is already in operation on New York's Tappan Zee Bridge. Called E-ZPass, the system allows drivers to drive through the toll plaza without rolling down their windows. Instead, a computer reads an electronic tag mounted inside the car's windshield and automatically deducts the toll from a special pre-established account.

In Florida, the Orlando-Orange County Expressway Authority has a system called E-Pass, which also lets drivers pay tolls electronically. Here, E-Pass relies on a radio transponder mounted under the front bumper. A similar system is planned for the San Francisco Bay area.

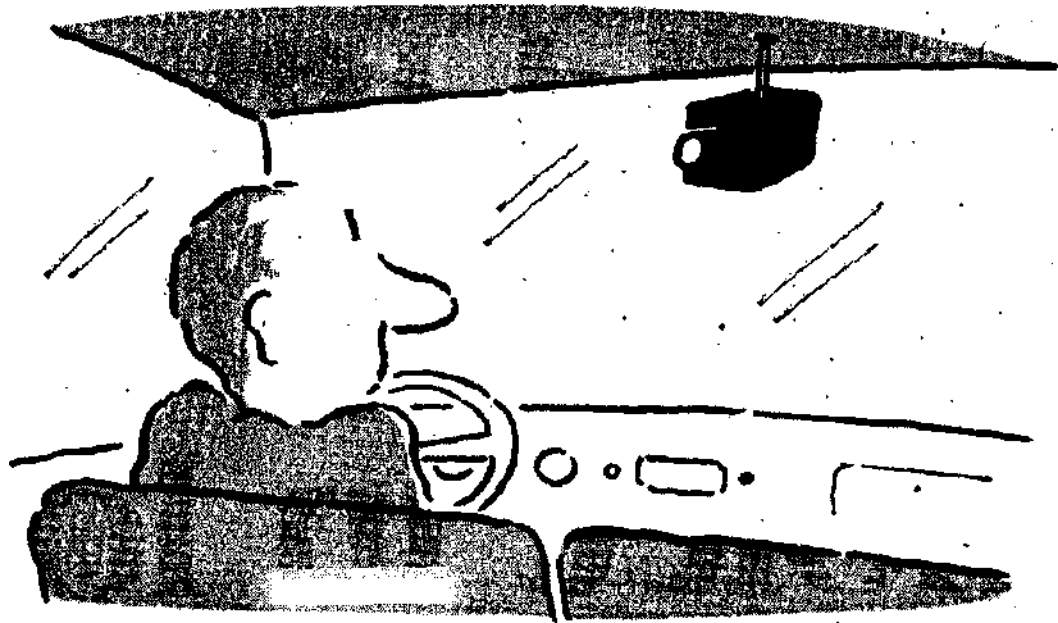
These automatic toll collection systems are just the beginning of a nationwide plan called Intelligent Transportation Systems. Rather than have each city adopt its own tag or transponder, the Department of Transportation and I.T.S. America, a Washington-based organization that promotes the system, are scrambling to create a single national standard.

As envisioned, smart roads could reduce highway congestion by alerting drivers to accidents; a computer display on the dashboard could suggest alternative routes. With its planned two-way communication between the car and the intelligent road, the system could even eliminate the search for a place to park. Instead, your car's computer could automatically find the nearest parking lot with an opening and electronically reserve you a place.

But there is a dark side to this plan, Phil Agre, who teaches communication at the University of California, San Diego, and closely follows privacy issues, warns that there might be other unintended consequences of smart-road systems. Auto insurance companies already offer discounts to drivers who don't live in areas of high auto thefts or accidents; in the future, says Mr. Agre, they might offer discounts to drivers who can prove that they haven't driven over to "the wrong side of the tracks."

This data could also be sold illegally by insiders. Information about a person's movements might be a key fact in forcing an out-of-court settlement in a divorce or worker's compensation case. Private investigators would have a big incentive to bribe low-paid clerical workers for a photocopy of somebody's toll-crossing bill.

time, date and location that each toll was collected. I.T.S. America has adopted a set of privacy principles saying that states shouldn't take advantage of this data, yet the organization's statement specifically envisions that "states may legislate conditions under which ITS. Information will be made available."



## 'Smart' highway systems may know too much.

a privacy problem that its boosters are trying to pave over. It offers unprecedented opportunities to monitor the movements of drivers. It would create a bank of personal information that the Government and private industry might have difficulty resisting.

Consider Florida's E-Pass system. Each month, every E-Pass subscriber gets a detailed statement listing the

There is an alternative to this system. Instead of transmitting an account number, a radio would transmit "digital cash" using a smart card inside the car similar to the telephone cards used in many European countries. But judging by plans under way so far, state agencies and the Government haven't shown much interest in making privacy a priority in the design of tomorrow's intelligent highways. Americans have always loved the freedom that their cars give them. Could that too become a thing of the past?