CAN TRANSPON FUEL USE BE CUT?

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of two auto-commuters would change to a car pool.

The second option is being considered, that of transit through downtown areas, as opposed to traffic into the area. Most traffic has been shown to travel through urban sections, rather than park and remain in the region. The concept of a metered downtown, a method of dividing the urban areas into sections through which traffic would be impossible, is one idea for allowing automobiles into the area, while retaining much of the congestion, stated Roos.

With this option, however, an alternate route must be provided around the sectioned area, so a highway out-of-town must be built built around the area.

The third of these proposals appears to be the most feasible, at least enough, however, to merely lower fees on existing transit systems. Substantial change in public transportation services must be offered, and existing systems must be improved.

One mode currently used which could better utilize existing resources is taxicabs, states Roos. Instead of a taxi being used for a passenger, a taxi could be computer dispatched and implement group rides.

The most feasible suggestion is, then, to develop new systems and options, in an attempt to draw some of the commuters away from their automobiles. Wilson stated that "at MIT, we have been working for seven years on demand-responsive small systems. In the last three or four years, 39 or 48 such systems have been installed. The demand responsive systems, known as "Dial-A-Ride," are "very successful," according to Roos.

When new transportation systems are being considered, new problems arise. "Short run help is very limited, it is unrealistic to talk about improving mass transit, now, Five to ten years is the time scale you have to talk about," Wilson stated.

"Lead time for rail rapid transit is now a minimum of five years from the initial design to the starting of operation." 

Lead time is a problem: its about 5 years

Even for Dial-A-Ride, which uses small buses rather than rail, has problems with lead time. "Order times for buses now are nine months to a year, so our ability to respond with bus systems is limited," according to Wilson. Dial-A-Ride may be worth the wait, though, and may be one of the most practical options. "Dial-A-Ride works on the principle of "You can order a ride when you have demand densities slightly higher than taxi demand densities." Taxi cars carry maybe three riders in an hour; Dial-A-Ride carries about twelve. Control costs are higher, but only about one third higher," Wilson continued.

Measures of immediate concern, such as the high taxation of gasoline, will not be able to curb the urban commuters away from their automobiles. "A 30 cent increase in the tax, say to 30 cents a gallon, might affect non-essential riding," Wilson stated.

When asked what work is being done at MIT in the way of new urban transportation systems, Wilson replied, "Precious little. There's some work in mechanical engineering on simulation of PRT (Personal Rapid Transit) networks, and design of PRT systems. There has been some work done in the dual mode area as well."

Systems with promise include Personal Rapid Transit, according to Wilson. "The systems that exist, exist around activity centers. We're talking about at least ten years to implement any of these in a big way."

Another promising possibility is dual-mode transit, "The US Department of Transportation (DOT) has recently let three major contracts for research into dual-mode vehicles (automotive control units). General Motors and PROHR have two of the contracts. Transportation Technology Incorporated has the third," Wilson explained.

As Roos stated in his remarks, "Clearly there are energy utilization benefits derived from more efficient utilization of public transportation systems and diversions of people from auto to public transportation."

Lead time: five years. Photo by Roger Goldstein