portation, which could be between communities, as well as within them, in rural areas.

In the Senate, the Senate Banking, Housing, and Urban Affairs Committee adopted S. 2441. It provides for the first time that the private intercity bus industry would be eligible for participation in the $100 million annual assistance program for rural and small urban areas.

Obviously, we have a long way to go as these provisions proceed through the legislative process. And eventually they will have to be reconciled in House-Senate conference.

Meanwhile, transportation planners should investigate the feasibility of using the potential of the 1000 or so private bus companies that are already operating in all regions of the nation in solving some intracommunity transportation problems on a subcontracting basis. The demand of the marketplace can no longer be the sole criterion for evaluation of the need to continue existing service, or for implemention of new service in rural communities. Indeed, there are private needs to be met that transcend the ability of the private sector to provide socially necessary service without outside assistance.

The ultimate beneficiaries will not be just the hundreds of intercity bus companies across the nation, but rather, they will be the 340 million passengers (31 percent of whom come from rural areas) who will be the ultimate recipients of improved transportation at the least cost to the American taxpayer.

REFERENCE

1. The Intercity Bus Industry: A Preliminary Study. Bureau of Economics, U.S. Interstate Commerce Commission, s/n 026-000-01112-4, May 1978.

Abridgment

Small Bus Market

Grovenor Grimes, Urban and Public Transportation, Michigan Department of State Highways and Transportation

The small bus market in America today is in a precarious position. Mercedes and Grumman have stopped making small buses (i.e., 10- to 25-passenger vehicles). General Motors will no longer produce motor homes, which have been used successfully as small buses. In the van conversion market, Travel Equipment Corporation and Recreational Industries are temporarily not manufacturing vans and TRAVCO has permanently stopped production. Argosy is considering ending production. This apparent unstable in-and-out phenomenon can be attributed to two major factors.

In relation to total U.S. production of automobiles, trucks, and vans, the small bus market is very small. Thus the major automobile manufacturers do not yet see this area as an economically sound market. All small bus manufacturing is, therefore, carried out by school bus and recreational vehicle companies by converting a van or by building on a truck or recreational vehicle chassis. Individually these companies cannot afford to do the research and engineering design necessary to produce a better bus. Although some improvements have been made (such as wider doors, improved lift technology, and some esthetic improvements), the small bus, in general,

1. Has excessive downtime because it is a converted, added-on, or built-up vehicle;
2. Has relatively short life expectancy [241 400 km (150 000 miles) at most]; and
3. Takes 4 to 6 months to be delivered.

Social issues combined with government standards also contribute to the instability of this market. The accessibility issue is a good example. Michigan took 1.5 years to decide which buses should be lift-equipped. While the Michigan legislature decided the issue, no new buses were purchased, which built a backlog of over 500 small buses alone. The legislation requires 100 percent lifts in line-haul buses and approval by the Michigan Department of State Highways and Transportation of an accessibility plan for demand-response buses. It is no wonder that manufacturers are uncertain as to the potential market when it is a feast or famine situation. Michigan is still unable to purchase a significant number of vehicles because capital funding is tied to the transportation package that has not passed the legislature and will not pass until after November 1978.

Given this context, how can the situation be improved to start moving toward that better bus? One can improve the purchasing process and make some short-term improvements in the life expectancy of the vehicle.

THE PURCHASING PROCESS

Some efforts are under way to use life-cycle costing (LCC) to evaluate bids. By determining a vehicle's total cost, including the initial capital costs and ongoing operating costs projected over the potential life of the vehicle, one can determine the real cost of the vehicle. The low bidder, therefore, may not be the low bidder on the capital cost of the bus. The obvious drawback is the need for good, sound operating data on the bidder's vehicles.

Road testing of the first vehicles off the line, combined with detailed final inspection, can be used to set a standard for the rest of the purchase order. Otherwise a lot of buses will be sent back to the factory or dealer. Quality control verification and regular visits to the factory are a must. Complete operating manuals and warranties for the chassis, body conversion, and accessory equipment, such as air conditioning or fare box, should be included. The location and reliability of manufacturer or dealer outlets are also critical. Quick service time is essential.

Specifications for the vehicle should be simple and concise. They should not include features that the manufacturer cannot supply or unnecessary frills (just one more item to break down). Tell the manufacturer about

specifications and problems. They can provide solutions within a limited range. The post supporting the lift, for example, may be a hazard in the bus interior. The specifications should not require removal of the posts but rather require adequate protective padding.

IMPROVEMENTS IN VEHICLE LIFE EXPECTANCY

Vehicles should be purchased with proper engine-drive-train combination to fit the operating mode of the bus. From day one, a uniform preventive maintenance program should be implemented and used. Vehicles should be stored inside, especially in cold climates. Cleaning should be regularly scheduled. The vehicle operating distances should be spread evenly across the fleet. At 193 000 to 241 000 km (120 000 to 150 000 miles), major rehabilitation should be considered in lieu of the purchase of a new bus. Rehabilitation must include engine, drive train, and brake systems.

Productive service runs should be maintained; buses that make empty runs should be eliminated or reduced. This will translate into longer life expectancy.

Good driving habits tend to erode the longer the individual is on the job. Pressure to hurry up from dispatchers and to make schedules also force unsafe operations. Jackrabbit starts and stops increase wear and tear on transmissions, tires, and brakes. Management observation and periodic retraining will keep this situation under control, lead to less down time, and increase the life of the vehicle.

Taxis and Subsidized Programs in Rural Areas

Richard V. Gallagher, International Taxicab Association, Washington, D.C.

The taxi industry in rural communities is undergoing scrutiny, especially as it relates to the transportation of special groups within a community—the elderly, handicapped, and others who do not have access to automobiles or to public transit. A major concern of the taxi operators is the survival of small taxi operations of 10 vehicles or fewer in communities with populations of 25 000 or less. This paper describes ongoing small-taxi programs in Lancaster County, Pennsylvania; Houston, Texas; and Indianapolis, Indiana. Possible solutions to the problems of the taxi operator in rural areas, such as direct subsidies, mergers with a centrally located operation, and support through social service agency transportation contracts are examined.

A number of positive actions have been taken to develop an expanding rural public passenger transportation system. There are decisions, however, that must be made to determine the future of rural public passenger transportation.

The bus industry has cited its service to some 15 000 communities, the vast majority of which have populations of 5000 or less. Intracity fixed-route bus service does not provide door-to-door service. Therefore, within each one of those communities the link between the bus stop and the ultimate destination must be provided by either public transportation or the private automobile. At present, most of these communities are served by an informal arrangement of small taxi companies or individual taxi operators. Some effort has been made by county authorities to develop a network of public transportation organizations within the rural communities. Decisions will have to be made about the feasibility of working through existing service arrangements or generating new ones.

Another major concern is whether or not a vast network of government-controlled (if not government-owned) transportation facilities should be developed in the rural communities. Except for studies by Gorman Gilbert and several others, no substantial base exists on which to judge whether or not the current needs of the community are being met.

The taxi industry in rural communities has only one advantage at the present time. It is an in-place service and one that has survived the economic reversals of the past 5 years. Therefore, it is assumed that, given an opportunity to compete in a free market, it will continue to survive in its existing form. However, if certain segments of the service are removed from the marketplace, the inefficiencies introduced will destroy the taxi operations. For example, if a 9:00 a.m. to 5:00 p.m. dial-a-ride service is established that absorbs the bulk of the daily business, then taxicabs will be expected to provide the off-hour service.

A suggested method of dealing with the problem of transportation in rural America was contained in a report issued by the U.S. Senate Committee on Agriculture and Forestry (1). The report used the term "jitneys" to describe what most transportation officials consider as paratransit services. The word "jitneys" is often misused because of its original concept. Before the advent of mobile-radio communications, jitneys concentrated in the areas of major passenger traffic generation and did in fact gain the passengers who would normally take fixed-route vehicles. From today's perspective, we are looking at radio-equipped vehicles that would use route deviations and give door-to-door service. This is a level of service above the fixed-bus route but a step below a shared-ride taxi.

The study noted that individual entrepreneurs in rural areas and especially the smaller cities could be given incentives to establish a jitney-type service. These incentives might include the repeal of antijitney laws in localities where taxi and bus service are deemed inadequate or nonexistent; technical and legal assistance for startup; lower license fees; and cooperative purchase of insurance.

Some of the conclusions contained in Taxi User Characteristics in Small and Medium Size Cities (2) indicate what is actually happening in small communities:

1. Given the nonexistent or inadequate transit service in many small cities, the large proportion of taxi