

## SPECIAL REPORTS FROM ENGLAND AND SWEDEN

### From England

Roger Slevin, Cranfield Institute of Technology, England

Telephone availability in Britain is something like a third of that in the United States. That in itself puts a big question mark on the dial side of dial-a-ride. Lower car availability is equally a problem. In fact, only about 10 percent of our households are in the ideal dial-a-ride market, which is a household with a telephone but without a car, as opposed to the market here, which is with a telephone and without 2 cars. We also have a well-used transit system.

Because of these factors, the demand-responsive transport system that will emerge in Britain will be different from that which is developing here. I suspect there will be a much greater compromise between fixed-route operations and dial-a-ride operations. The densities of our urban areas are something like 5 times higher so that we have a higher density of movement and shorter distances over which people are moving. To have dial-a-ride feed line-haul services in many of our towns would be quite inappropriate. We will probably have the dial-a-ride vehicle provide fast line-haul service into a town center or city center.

Since your last conference on demand-responsive transportation, we had a few experimental services start. One service was a half-baked idea in Abbingdon that has since died. This was a 2 day a week service mixed with a 5 day a week minibus, fixed-route, fixed-schedule operation.

The second experiment was in Masden, and that has also been close to disaster because of some institutional barriers in Britain. We have a very complex licensing system for any bus operation. The Masden operator was a taxi operator, and he had to protect the existing bus operator by charging a high fare and by not picking up anybody except at doorsteps.

At Harrogate is a different sort of service that has done 2 things: expanded from 5 service areas to 9 and contracted from offering 4 journeys a day to each of the areas to 2. It is the only version of dial-a-ride that is showing anything like the commercial return. It is a specialized shoppers' service, but seems to be answering a need in that particular context.

A fourth service has begun recently in Eastbourne, a coastal town about 60 miles from London. There is heavy commuter travel from there into London by train, and the service is intended primarily to serve the rail station.

Two other proposals, Bristol and East Kilbride in Scotland, have both fallen foul of our traffic commission proceedings.

The experiments that are under way and those under consideration are entirely manual, fixed schedule, but variable route. All of them are many-to-one or many-to-few operations.

The Department of the Environment has asked the Transport and Road Research Laboratory to prepare within the next 4 years an evaluation of the potentials of all various forms of demand-responsive bus services in Britain. The Transport and Road Research Laboratory is sponsoring a small number of experimental services solely with the objective of collecting experimental data. Cranfield Institute of Technology is under contract to the laboratory to assess studies of these experiments.

The first experiment will be established in late 1974 or early 1975 in Harlow New Town. In about 12 months, we expect to start another experiment, probably in an established town; and in about 2 years, offer a many-to-many service in a large suburban area. Sometime during the 4-year contract period, which started in July 1973, we also expect to start a rural operation.

Our research program will evaluate all the system components—vehicles, radios, telephone equipment, and so on—and particularly concentrate on the problems of communication between the passenger and the control, which is going to be far more of a problem in Britain than here. We will also study the market for dial-a-ride services and indeed the market for public transport services in general. We believe there is much more involved than just a share of the market. We must do more in the way of latent demand estimation.

And finally (and something that I have found surprisingly and disturbingly missing here), we will do a thorough social and economic evaluation of the cost and benefits not only to the operator of the services but also to society at large. We have been asked particularly to look at the distribution of these benefits. If they all go to the upper middle classes, it may not be a desirable policy politically for the government to support the idea that dial-a-ride services should be introduced in Britain. The political aspects, I think, will be our biggest problem. My feelings and observations are that political processes here are different and the officeholders prefer not to be bothered with cost-benefit analyses because they would probably disturb the political processes. In Britain, the emphasis seems to be the other way around.

## From Sweden

Curt M. Elmberg, Gothenburg Transit Authority, Sweden

I traveled extensively throughout the United States and Canada in 1972 to study demand-responsive systems in Haddonfield, Columbia, Batavia, Bay Ridges, Regina, and Ann Arbor. When I returned to Sweden, I wrote a report that was widely distributed and publicized. In fact, I was called to testify before the Swedish Parliament Transportation Commission, after which the national government suddenly changed policies.

In Gothenburg, we were going to start a feasibility study on the use of dial-a-ride, and the national government offered to contribute some funds to this. That was a complete change of policy in Sweden because the national government has never given a cent to local governments for anything. Although the amount of money given was very limited, the attitude was important. The feasibility study started in April 1973.

Gothenburg is situated on the west coast of Sweden. The city proper has 450,000 people; and the region has 675,000. We have a rather extensive rail rapid transit system; 75 percent of the travel is by rail, and 25 is by bus. Most of the bus routes feed the rail system. However, we do have several bus routes that have demand appropriate to the dial-a-ride concept. Therefore, we have picked 3 areas of different social-

economic structure and studied them from many viewpoints. We hope to make a full-scale test in one or all of the areas.

Although Gothenburg is the home of the Volvo factories, Volvo has not been able yet to make a good bus for this type of operation. It is a problem to get good vehicles for this type of operation anywhere in Europe. However, the concept of dial-a-ride is starting to grow and I think that the manufacturers of buses in Europe will respond and produce a good vehicle. Mercedes is perhaps the most appropriate, but has one disadvantage: It is very expensive.

We do have several years of experience with another concept: transporting disabled people. Before 1967, a private enterprise in the city government provided transport service for the disabled people. In late 1966, the city council purchased this private operation. The first question raised was, "What agency should have responsibility for transporting the people?" There were 2 agencies to select: the Transport Authority and the Fire Department (in Sweden, the Fire Department is also responsible for ambulance service). The council selected the Transit Authority, for it had the most knowledge of transporting people.

Today that small operation is quite large. Any citizen who is disabled to the extent that he or she cannot travel on the regular public transport can apply for a permit to use this special service. The cost of the full operation of the special service is borne by the Social and Welfare Administration of the city, and the Transit Authority operates the service. The people apply to the Social and Welfare Administration and must have a physical examination. They are divided into: those who have a regular daily destination, such as to school, to work, or to hospitals and those who have special destinations such as to places of leisure. Those who have permission to use the service are given a certificate, which they have to show to the driver. The city council gives 8 leisure trips a month. For the first years from 1967 to 1970, the service was free. However, the disabled people want to be considered as general citizens and to pay for the service. Since 1970, they have paid the same fare as that on regular transit: 25 cents for adults and 15 cents for children.

In 1972, 720,000 trips were made—120,000 by special vehicles and 600,000 by taxis. The Transit Authority purchases the taxi service, which is used based on a doctor's statement as to whether the applicant must go in a special vehicle or in a taxi. Eighty percent of all the sick go by taxi. The average cost in 1972 for making a trip was \$3.00 in taxis and \$7.00 in a special vehicle.

We have 40 special vehicles with movable platforms for taking wheelchairs. Thirteen of these are Mercedes, 2 are Volvos, of which one is an ambulance (a few people cannot even sit in a wheelchair, but must lie on a stretcher), and 25 are Peugeot. The Peugeot is considered the best vehicle because it has such a low floor that the hydraulic, movable platforms are not required; the driver just hooks onto a ramp. The ramp system always functions, but the movable platforms sometimes do not in cold weather.

The Transit Authority is fully paid for its service and acts as a transport agency. At the end of 1972, 9,000 permits had been issued. The budget was \$3 million for 1972 and 1973.