

hound schedule with me and pointed out to them that a bus would soon leave. Because the bus terminal was right across the street, they were able to walk over and catch the bus.

The bottom line is that we need the maximum number of alternatives to the automobile. Most people do not like to ride buses for very long distances, and trains will never go to many places. Intermodal travel is essential, and its growth is inevitable.

OPENING COMMENTS

Judith L. Stone, U.S. Department of Transportation

I would like to use this opportunity to emphasize citizen participation, which I think is very important. Also we have a recent policy from the Secretary of Transportation on this subject.

I would like to address two questions. First, how can we find out what consumers' and citizens' needs are in the field on intermodal travel? And, second, how can we give consideration to those needs when we make transportation plans and decisions?

We start from several assumptions in this discussion, many with which I am only peripherally familiar. One common-sense assumption, however, is when only one mode of transportation does not suffice during a trip, a traveler usually has to use more than one mode. Typically, there are certain elements of the additional mode of transportation that make it more or less attractive to the user.

In addressing the first question, those of us who espouse citizen participation techniques or the use of them simply say: "Ask them." Besides using scientific modeling and statistical methodologies, which I must say are Greek to me, there are some seemingly obvious but sometimes forgotten techniques for getting information.

We are told that formal surveys require a lot of money and expertise. So we are not saying that you have to go through a long series of contracting procedures to do formal surveys. There are other ways of doing it, although, clearly, you want to be as scientific as possible. One approach is to use mail surveys to households in a city, town, or county. But another kind of survey -- and there might be others here who know more about this than I do -- is the bus or mass transit user survey, which reach business travelers and tourists and other transportation users.

We would like to espouse using local community groups -- those who are really in touch with active transportation users in the community -- to organize their own research on the needs and consumer choices in their communities. These findings can then be communicated to the planning agencies and other community makers and often have more credibility within the community because they, the people, have been involved early on in the process, and they feel there is some sort of ownership.

Employee surveys are another idea. I think the Washington Council of Governments did this with people coming into government offices; they took surveys of commuter trends, etc.

We would also suggest conducting several public hearings and meetings on the subject of consumer choice in intermodal travel, in several locations, at convenient times, and in accessible places, advertising the meetings well in advance in the media, neighborhood, and regional information centers. Consider providing simple background papers and fact sheets, explaining the purpose of this outreach effort, and communications effort; and distribute these ahead of time. Keep the jargon simple; use maps and simple graphics to supplement the fact sheets.

Get the media involved as important members of the community themselves. Talk shows are sometimes good mechanisms. But the press can help get input on how people feel, how they travel, and what the problems are in a particular community. Relationships with the press obviously have to be nurtured.

The second element of an active citizen participation effort is feeding the information into the decision making process. Obviously, not all points of view and ideas can be accommodated or adopted. Nonetheless, citizens, especially those particularly affected by a change, need to know that their ideas and comments have been fully understood and considered. Procedures should be established to collect, analyze, consider, and respond to public comment. Summaries of all the elements of the process can be made available, and something like a "docket" -- although nothing quite that formal -- might be set up so people could come in and view it.

Let citizens see the results of their involvement -- use mailings, write articles for newspapers and other media, advertise results of what you have found in this quest.

If the results and findings of the outreach and other research are organized and structured, and if the process is documented, the decisionmakers will find it easier to make their decisions. They will feel that they have done their homework and have been responsive and responsible. They have a foundation upon which to build and are less likely to be stopped in their tracks.

It may take a little longer at the outset to conduct these efforts, but an active citizen participation effort is like an insurance policy -- it pays off in the end.

OPENING COMMENTS

Frederick H. Mueller, American Bus Association

Thank you, Dr. Tignor. I believe that some of the areas I will cover here have already been discussed.

Intermodal travel involves essentially four basic factors: (a) through routes; (b) fares, ticketing, and, possibly, baggage-checking service; (c) intermodal terminals or stations; and (d) ready accessibility to information for intermodal movements.

Let us take a quick look at intermodal travel as it exists today from the perspective of the bus industry. Through routing and ticketing are available for travel over a comparatively substantial number of routes involving both Amtrak and bus service. Schedules and fares for the bus segments of such rail-bus routes are published in the Official Bus Guide and individual route schedules or in the Amtrak Tariff and Timetables. Conversely, schedule departure times for certain Amtrak trains are shown in the Official Bus Guide. Additionally, regular-fare Amtrak tickets are honored by a substantial number of bus companies where the routes involved are served by both the bus and rail modes.

Intermodal terminal and station facilities for the bus and rail modes follow several variations. Facilities specifically intended for such purposes are in service in a number of cities, including those in Carbondale, Illinois; Kalamazoo, Michigan; and Harrisburg, Pennsylvania -- the one in Kalamazoo having been specifically arranged for this purpose.

In other instances, some bus systems operate out of or make stops at Amtrak stations. For example, certain bus systems in Maine make scheduled stops at the Amtrak South Station in Boston. There also is significant service, essentially intermodal

in character, involving bus lines and air transportation. Intercity bus schedules operate into or through substantial numbers of airports. Examples are Logan International Airport, Boston, Massachusetts; O'Hare International Airport, Chicago, Illinois; Mitchell Field, Milwaukee, Wisconsin; and Stapleton International Airport, Denver, Colorado. Through ticketing is not, in general, provided in such situations, and intermodal schedule and fare information requires reference to the Official Bus Guide, the Official Airline Guide, and applicable bus tariffs. Furthermore, much travel involving both the bus and air modes necessarily involves some form of supplemental ground transportation between the air and bus terminals or stations -- a condition dictated by the fact that, due to airport space requirements, an air terminal must generally be located some distance from the central city.

Intermodal service involving local transit services is pervasive from one point of view and quite elusive from another. Located generally in the central city of most large communities and at important points in suburban places and in smaller communities, intercity bus stations and terminals are, for the most part, readily accessible from local transit services that may exist. However, use of such local transit services tends to be difficult for persons not familiar with routes, fare structure, and so on, as has been described here earlier. Taxicabs and private automobiles probably represent the remaining modes of significance. Both find comparatively ready accessibility to bus terminals and stations. In some cities automobile parking is not as convenient to such facilities as it might be. A broad problem in some cities is that the neighborhood locations of bus terminals and stations have deteriorated over the years, and they have, therefore, become less attractive to the traveling public.

Two principal questions remain: Why has not more been done? And what are likely development possibilities for the future? It should be noted that most governmental and other authorities and groups involved have expressed approval of intermodal concepts, at least in principle. The Congress in 1978 authorized a program of assistance for development of bus terminals in which the facilities would be primarily for intercity bus service and also for "coordinating such services with other modes of transportation." No funds have as yet been appropriated for this purpose.

The extensive and expensive Northeast Corridor Improvement Program, primarily for the benefit for Amtrak, includes funds for terminal acquisition and development in the corridor. However, despite repeated assertions by the Department of Transportation, the Federal Railroad Administration, and Amtrak recognizing the need for greater coordination between Amtrak and the intercity bus mode, most terminal development under the Carter program for assisting bus operations has been effectively ruled out by the Federal Railroad Administration.

With respect to Union Station in Washington, D.C., all of the development to date at this location has been directed to facilities for the benefit of Amtrak and local transit. Most proposals for future development also ignore intermodal aspects involving intercity bus.

Intermodal travel of one type or another is necessary for most intercity journeys. Travel to a terminal or a station is generally required before an intercity trip can be commenced, whether the mode is bus, air, or rail. The principal exception is charter bus travel where members of a charter party are often picked up in their local neighborhoods.

In many instances, the individual traveler's choice of mode is limited. If the travel begins in

a rural area or small community, intercity bus may be the only common carrier mode available for part or all of the trip, along with, possibly, a short, initial leg by automobile or, where it exists, some form of paratransit. At the end of the trip, the same requirement for local transportation often exists.

For travel from or to a large city, somewhat greater choice of intercity mode may exist where rail or air transport is available. The air mode is becoming increasingly expensive, as will the rail mode if any reasonable fraction of the cost of operating rail service is reflected in the cost of passenger tickets. For the local leg at the beginning or end of an intercity trip from or to a large community, local transit travel may be an option along with taxicab and private automobile. As a result of such considerations, there have been proposals for a comprehensive program of surface transportation centers for both large and medium-size communities to improve interface between local and intercity transport modes.

A problem often faced with intermodal terminals serving more than one intercity mode is that the terminal location may be optimum or required for one mode but may not meet the requirements of other modes. For trips on which more than one mode of transportation is available, such factors as comparative convenience, comfort, speed, and flexibility are important in modal selection for all or successive parts of the travel involved.

The popularity of the automobile rests primarily on its flexibility and comparative economy where the travel party consists of more than one or two persons. Air travel is unmatched for speed, at least terminal to terminal, and rail travel enjoys comforts and amenities stemming from space and weight equipment relative to passenger seating capacity. The intercity bus has a number of advantages, including more flexibility than either air or rail, comparative economy, and schedule speed often equal to or exceeding rail, particularly for short and mid-length trips.

To the extent that travelers can avail themselves of a variety of such attributes on successive segments of trips without undue effort, expense, or time in transfers, intermodal travel is obviously advantageous. As already noted, some steps have been taken to facilitate such intermodal movements, and developments for the foreseeable future appear likely to follow the same general patterns, probably on an accelerated basis as the cost of travel increases. Comparative fuel efficiencies will also be a factor.

OPENING COMMENTS

Robert L. Bowles, U.S. Department of Energy

In this discussion I will review and highlight some approaches to evaluating and comparing the energy intensities of various transportation modes. Some comments will also be offered on the perspective with which energy intensity information should be used, and the energy conservation potential afforded by intermodal travel.

Energy intensive values are useful tools in studying the energy-related behavior of a particular transportation mode and forecasting its future fuel requirements. These numbers are frequently employed as benchmarks to evaluate the energy conservation potential or performance of an improvement to a particular means of passenger travel.

Great care must be employed, however, when energy intensive values are used in an assessment of alternative intermodal transportation scenarios.