Taxicab Innovations:
Services and Regulations

rtment of Transportation
Urban Mass Transportation Administration
Office of Service and Methods Demonstrations

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Taxicab Innovations:
Services and Regulations

Proceedings of the National
Conference on Taxicab Innovations

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Kansas City, Missouri

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PREFACE

The 1980s will present taxicab operators with both challenges and opportunities. Taxicabs are increasingly being called upon to meet the public transportation needs in urban and rural communities.

To assist taxicabs in meeting these new demands and challenges, and to aid them in their selection of strategies, the Urban Mass Transportation Administration undertook the task of getting both taxicab operators and local government officials together to discuss innovations in service and changes in regulations that might best meet the needs of citizens and visitors to the city for reasonably-priced, door-to-door transportation service.

The meeting transformed into the National Conference on Taxicab Innovations, held in Kansas City, Missouri on May 5-6, 1980. UMTA project direction was provided by the Office of Service and Methods Demonstrations. Public Technology, Inc. (PTI), acting as the secretariat for the Urban Consortium for Technology Initiatives, coordinated the effort, which was co-sponsored by the International City Management Association, the International Taxicab Association, and the National League of Cities. In addition, a steering committee was formed to help in the planning and preparation of the conference.

These proceedings highlight three topics addressed at the conference: service innovations and free enterprise, regulations, and technological innovations. Several recommendations were made in each area, which serve to emphasize the integral role of taxicabs in the transportation network. The text of major speeches and abstracts of supporting presentations have been assembled for this report along with an extensive and comprehensive appendix on how to get involved in the operation of and the funding for a public transportation service.

TABLE OF CONTENTS

CONFERENCE SUMMARY

Over 140 representatives from the taxi industry, governmental, and transit agencies, together with key researchers, and policymakers attended the National Conference on Taxicab Innovations, a two-day forum on taxicab operations and regulations, at Kansas City, Missouri, on May 5 and 6, 1980.

Participants were provided with background information and subsequent panel discussions on:

- Taxicab service, industry structure, and trends.
- Service innovations, such as shared-ride, taxi feeders to transit, and user-side subsidy services.
- Regulations - history, scope, and trends, including examples of recent regulatory revisions in cities such as Dallas, Indianapolis, San Diego, and Seattle.
- Technological needs and advances in the areas of vehicles, fare computations, and dispatching.

This conference was supported with funds from the Office of Service and Methods Demonstrations (SMD), Urban Mass Transportation Administration, U.S. Department of Transportation. The Office of Service and Methods Demonstration also funds projects relating to taxicab service innovations. Anyone wishing to find out more about the Paratransit and Special User Groups Divisions of SMD, may contact Ronald Fisher, James Bautz, or Larry Bruno, at (202)426-4984, or write to them at the Office of Service and Methods Demonstrations, U.S. Department of Transportation, 400 Seventh Street, S.W., Washington D.C. 20590.

The interchange of ideas among the conference participants was valuable in and of itself. While there were many different opinions on the subjects discussed, there was consensus on these six issues:

- Taxicab operators have provided and continue to provide the capacity for many transportation services crucial to intracity and intercity transportation. While many taxicab companies have provided innovative transportation services for some time there is still a great need to share information about the services provided. This information should be available to both taxicab operators and local government officials.
- Many of the transportation services provided by taxicabs are essential to the mobility of residents of the local jurisdictions. Many local government officials expressed grave concern that taxicab companies were going out of business due to rising costs.
- In many cases regulations may impede the service innovations most needed to maintain a viable taxicab industry. Regulations may be outdated and may need to be revised to reflect current

conditions. Regulatory revision may include a revision of acceptable services, insurance and safety standards, fare structure, and entry controls.

- Without question, one of the most volatile issues for taxicab operators is the one of entry controls. Much discussion was focussed on this issue, but all agreed that it will be several years before the total impact of the regulatory revision demonstration projects in Seattle, San Diego, and Portland will be known.

- It was agreed that information about current taxicab projects and the dialogue between taxicab operators and local and State regulators should continue.

- Technological innovations are being developed which may make certain service innovations (such as shared-ride service) more easily implemented.

INNOVATIONS IN THE REGULATION AND OPERATION OF TAXICABS

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The taxicab industry historically has played an important but little recognized role in the provision of public transportation services in urban areas. Throughout the 1970s taxicabs reportedly accounted for twice as many revenue miles, more than a third as many passengers, and almost twice as much passenger revenue as transit bus, rail, and trolley services combined.[1] In many small urban rural areas taxicabs have provided the only public transportation services available, and they have been an essential service for many community residents without convenient access to an automobile.

Public policy toward taxicab services has been concerned primarily with ensuring that travelers are protected adequately with regard to safety, service levels, and fares. This policy objective has been translated into regulations at the State and local levels that govern vehicle condition, insurance requirements, driver licensing, and the entry of new providers and specify the types of service to be offered and fares to be charged. Taxicabs have been seen primarily as providers of exclusive door-to-door service for single passengers or preformed groups, with regulations typically prohibiting taxicab operators from providing other services such as shared ride, fixed route, subscription, or (in some instances) package delivery.

A number of transportation developments have combined over the last decade to stimulate interest among policymakers in re-examining traditional policy positions toward taxicabs. Firstly, legislative directives for both transportation and social service programs have required that special efforts be made to provide adequate public transportation services to handicapped and other transportation disadvantaged persons, many of whom cannot use conventional fixed route transit services. Taxicabs represent a ubiquitous, in-place resource for providing these specialized services. Secondly, rapidly rising fuel prices and occasional fuel shortages have increased both government and industry interest in higher-occupancy taxicab services, such as shared- ride and subscription. Regulations in some cities have been changed recently to encourage rather than prohibit these kinds of services. Rising fuel costs and general price inflation also have created pressures for simplification of fare adjustment procedures to permit more rapid responses to cost increases. Finally, growing transit deficits have engendered inquiries into whether taxicabs might be used as lower-cost substitutes for large transit vehicles in areas or times of low demand.

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[1]Wells and Selover, "Characteristics of the Urban Taxicab Transit Industry," and Control Data Corporation and Wells Research Company, Taxicab Operating Statistics.

Growing interest in innovative ways of regulating and operating taxicabs has led to some actual applications of innovative techniques over the last few years. These applications have occurred slowly and in a relatively few locations, largely because of deterrents to innovation that are familiar in many fields:

- Uncertainty about the impacts of change and fears of adverse effects.
- General inertia and unwillingness to change the status quo.
- Active opposition by groups who expect their conditions to be worsened by proposed changes.

The general caution and occasional resistance surrounding taxicab innovations has been accompanied, however, by great interest in the results of innovations that have been implemented. In response to this interest, the Urban Mass Transportation Administration, through its Service and Methods Demonstration Program (SMD), has funded studies of many of these innovations, and has stimulated others by funding demonstration projects in selected urban areas. In addition, the UMTA Office of Bus and Paratransit Technology has sponsored research and development projects aimed at improving the technology of taxicab operations, including vehicle design, computerized dispatching procedures, and metering devices to compute different kinds of taxicab fares.

This paper reviews the progress to date with the various taxicab innovations that have been implemented over the last few years or that are currently under investigation in research studies. It is emphasized that the impacts of many of these innovations are expected to occur gradually over periods of several years, and that the information available to date frequently represents only short-run effects. Because many decisions need to be made in the near future, however, carefully documented short-run and otherwise incomplete results are presented here as being more useful to decision-makers than no information at all or than fragmented and occasionally misleading anecdotal information. The paper concludes that continuing efforts to stimulate, monitor, and evaluate taxicab innovations over extended time periods will be needed to permit informed policy decisions on taxicab regulations and operations.

SERVICE INNOVATION AND PARTICIPATION IN PUBLIC PROGRAMS

The most common service offered by taxicabs is an exclusive-ride service in which individuals or groups are conveyed directly from their trip origin to their trip destination with no intermediate stops or detours.[2] This service is often termed conventional taxi service, or simply taxi service. Fares typically are charged by means of a taximeter or through a zone system.[3] Taxicabs are requested for conventional taxi service by telephone, at taxicab stands, or by street hail, and are sometimes reserved on a regular daily or weekly basis.

A variety of other services can be provided by taxicab companies, however:

- Dial-a-ride, a shared-ride door-to-door service summoned by telephone. For this service, individuals or groups of passengers with different trip origins or destinations may share the same taxicab. The service can be requested for immediate response or up to twenty-four hours in advance of the desired response time. It may be available to the general public or only to special user groups, such as elderly and handicapped persons.

- Hail-a-ride, a shared-ride service similar to dial-a-ride, except the taxicabs are summoned by street-hailing rather than by telephone.

- Subscription, a shared-ride service provided on a regular basis with pre-arranged pick-up and drop-off times and negotiated passenger payments.

- Jitney service, in which vehicles operate on unscheduled headways on fixed or semi-fixed routes.

- Conventional fixed schedule, fixed route transit service, in which vehicles operate on designated routes with scheduled headways, like conventional bus and rail transit systems.

- Feeder services to conventional transit, in which taxicabs provide on-call pick-up and drop-off service at transit stops in coordination with transit schedules.

- Package delivery services for high priority packages. These services are sometimes coordinated with air freight services to provide door-to-door package delivery between cities. They also occasionally include delivery of blood and other hospital supplies.

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[2]When pre-formed groups travel together between the same origin and destination, the service is usually described as group-ride.

[3]Different kinds of fare structures are discussed in detail below.

- Emergency services, such as ambulance or other health-related services.

- Auto rental and leasing, an activity that lends itself to joint operation with the paid-driver services listed above.

Many of these services may be conducted under standing contracts with client organizations, such as hospitals, social service agencies, transit operating agencies, employers, or school systems.

The overall size and composition of the taxicab industry and the extent to which taxicab companies are involved in the different activities listed above are not known with great accuracy. Probably the best information currently available on the taxicab industry is that obtained from two mail questionnaire surveys of the industry conducted in 1974 and 1976.[4] These surveys were sent only to taxicab fleet operators, and the low response rate of 10.8% in 1974 and 4.6% in 1976 led the surveyors to conclude that:

> ...the samples fall short of being true random samples, and the results should be accepted only as general and tentative indications of taxicab operations in the two years.[5]

A uniform reporting system for taxicabs and other paratransit operations is under development by the U.S. Department of Transportation (DOT), but this system is not expected to yield improved information on the taxicab industry in the near future.

The 1974 survey produced some indications on the involvement of taxicab companies in different kinds of services, as shown in Table 1. The survey shows that almost all the responding companies offer conventional exclusive-ride taxicab services, but that only a few percent of the companies are involved in the provision of dial-a-ride or other shared-ride services. Over 70% of the respondents offered package delivery services, however. In the absence of data from a truly random sample with high response rates it is impossible to estimate the untapped potential of taxicab companies in providing innovative services. This lack of representative data hampers efforts to identify the areas where public policy emphasis would be most productive, and DOT should consider giving high priority to remedying these data inadequacies. Tentative indications like those in Table 1 consistently suggest, however, that the untapped potential is substantial.

Dial-a-Ride

Dial-a-ride is a service which first received the close attention of policymakers and researchers in the 1960s, though a few taxicab oper-

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[4]Control Data Corporation and Wells Research Company, Taxicab Operative Statistics.

[5]Ibid.

Table 1

SERVICES PROVIDED BY TAXICAB OPERATORS in 1974

SERVICE PROVIDED	PERCENT PROVIDING SERVICE
REGULAR DEMAND SERVICES	
Conventional taxicab	96.1
Dial-a-ride	3.6
Conventional bus	3.9
Package delivery	71.4
Special handicapped	25.0
SPECIAL (CONTRACT) SERVICES	
Company employees	43.3
School children	44.4
Hospital patients	30.9
Government employees	10.5
EMERGENCY SERVICES	
Ambulance	3.6
Emergency taxicab	49.6
Towing	5.5
PRIVATE AUTO RENTAL OR LEASING	
Auto rental	6.7
Auto leasing	3.4
OTHER (CONTRACT) SERVICES	
Transport senior citizens, handicapped, and public aid recipients	10.0
Deliver blood and hospital supplies	5.3

Source: Control Data Corporation and Wells Research Company (1977)

ators had been providing such services for many years.[6] Considerable research and experimentation was devoted in the late 1960s and early 1970s to providing subsidized dial-a-ride services with small buses and vans operated by transit authorities. Per-passenger costs were found to be relatively high and demand densities low, however, and in the mid-1970s researchers and planners began looking toward the taxicab industry as a potentially more cost-effective provider for dial-a-ride services.[7] Over the last few years a number of taxicab companies have become involved in providing publicly funded dial-a-ride services for the general public or for special user groups, such as elderly and handicapped persons. Table 2 shows the general characteristics of several projects of this kind.

Perhaps the most extensive involvement of taxicab companies in dial-a-ride services for the general public has occurred in California. Teal et al, (1980) describe a number of cases in which contracts have been entered into between public bodies and taxicab companies for the provision of subsidized dial-a-ride services at low fares for the general public. These cases involve the use of provider-side subsidy arrangements in which public bodies contract directly with service providers for specified services. The providers are reimbursed on the basis of in-service hours, miles, or other measures of service operated, sometimes, with special performance bonuses linked to certain service features. As shown in Table 2, cities in Michigan, Minnesota, Arizona, and other States have adopted similar kinds of contractual arrangements with taxicab companies.

Taxicab companies have also been involved in providing publicly-funded dial-a-ride services for special user groups in a number of cities. These services sometimes are supported by human service programs, such as Medicaid, to achieve particular health and other service objectives for eligible client groups and sometimes by general State and local public transportation programs. (See Table 2.) For special user group services user-side subsidy approaches are becoming a common alternative to provider-side subsidies. Under the user-side approach, public agencies make tickets or charge slips available to eligible users and encourage them to patronize the providers of their choice. The participating providers accept the tickets or charge slips as part of the payment for trips, and submit them to the public agencies for reimbursement at pre-arranged rates.

Considerable variation exists in publicly funded dial-a-ride services with regard to service levels and fares. Some projects have adopted relatively low fares and service levels, and emphasis has been placed on maximizing vehicle occupancies even though this sometimes has

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[6] Kirby, et al., "Some Promising Innovations in Taxicab Operations."

[7] Ibid.

Table 2

EXAMPLES OF INVOLVEMENT OF TAXICAB COMPANIES IN PUBLICLY-FUNDED DIAL-A-RIDE PROJECTS

CITY	ELIGIBLE GROUP	SUBSIDY ARRANGEMENT	COMPANIES PARTICIPATING	REFERENCES
El Cajon, California	General Public	Provider-side Contract	1	U.S. Department of Transportation (1976)
Fullerton, California	General Public	Provider-side Contract	1	Systan Incorporated (1979)
Westport, Connecticut	General Public	Provider-side Contract	2 (Consortium)	Furniss (1979)
Hopkins, Minnesota	General Public	Provider-side Contract	1	Minnesota Department of Transportation (1980)
Portland, Oregon	Elderly & Handicapped	Provider-side Contract	2 (Rotation)	Cooper et al. (1978)
Cadillac, Michigan	General Public	Provider-side Contract	1	Michigan Department of State Highways & Transportation (1976)
Pittsburgh, Pennsylvania	Elderly & Handicapped	Provider-side performance contract	3 (Separate service areas)	Charles River Associates (1979)
Danville, Illinois	Elderly & Handicapped	User-side charge slips	2	FitzGerald (1977)
Montgomery, Alabama	Elderly & Handicapped	User-side charge slips	14	TSC(forthcoming)
Kinston, North Carolina	Elderly & Handicapped	User-side tickets	15	TSC(forthcoming)
Kansas City, Missouri	Elderly & Handicapped	User-side tickets	2	Dorosin and Phillips

meant longer wait and ride times for passengers. In other projects higher service levels and fares and lower vehicle occupancies have been allowed, and riders pay more but have shorter wait and ride times. The choice between these strategies is up to community decision-makers and will reflect overall community objectives for public transportation programs. It is interesting to note, however, that unsubsidized dial-a-ride services operated by taxicab companies in a few cities, such as Little Rock, Arkansas, and Danville, Illinois, follow the latter strategy of relatively high service levels and fares and relatively low vehicle occupancies. Since achieving higher vehicle occupancies requires costly administrative and dispatching procedures, it is not altogether clear that this strategy results in more cost-effective services. Research is needed to explore this question in detail.

Hail-a-Ride

Hail-a-ride services offer significant potential only for areas and times of relatively high-density demand from street hailing. Since more than 90% of the requests for taxi services in suburban areas and in medium and small cities is by telephone, hail-a-ride potential is concentrated mainly in high-density downtown areas with considerable business and tourist travel and at intercity rail, bus, and air terminals.

Restrictions in many cities on all forms of shared riding and in some on street hailing tend to inhibit hail-a-ride services significantly in the United States. Another deterrent is that the common charging mechanism for conventional taxi service, the taximeter, is not well-suited to shared-ride services. Most shared-ride services have zone or flat fare structures that are not really compatible with taximeter fare structures. Some attempts have been made to deal with the fare structure problem through shared-ride taximeters and specialized zone or grid fare structures, but none of these approaches has been adopted widely to date.

Perhaps the most significant adoption of hail-a-ride services in U.S. cities occurred in the District of Columbia in 1974. District taxicabs have long had a very active downtown hail business, but until 1974 the service was exclusive-ride--the first passenger or group of passengers in a taxicab had the right to insist that they be taken directly to their destination before the driver could pick up additional passengers. In response to the 1974 disruption in gasoline supplies, taxicabs in the District were allowed to pick up additional passengers without first obtaining the consent of passengers already in the cab. This hail-a-ride service has continued as the standard taxi service and appears to be highly satisfactory to both passengers and drivers. It should be noted that the conversion from conventional exclusive-ride to shared-ride services in the District of Columbia was greatly facilitated by the existence of a zone fare system. Efforts to introduce similar shared-ride services in nearby Arlington, Virginia, floundered on the problem of formulating a shared-ride fare structure in the presence of an exclusive-ride fare computed by standard taximeters.

The most recent expression of interest in the adoption of a hail-a-ride taxi services occurred in April 1980 in New York City. After making special regulatory provisions to permit shared riding in taxicabs during a transit strike, the New York Taxi and Limousine Commission is considering making permanent provision for such services during rush hours.[8] Since medallion cabs in New York use taximeters, the fare structure is something of a problem. Current proposals call for the first passenger to pay the full meter fare, and for each subsequent passenger to pay the difference between what the meter read when he boarded and what it read when he got out.[9] A better scheme would be to charge each passenger a flat boarding fee to reflect the delay caused by stopping to pick him up plus a flat charge for each block traversed between his origin and destination (measured horizontally and vertically). Blocks would be counted along the direct route for each passenger's trip, so that no passenger would be charged for route deviation required to pick up or drop off other passengers. A general "grid fare structure" of this kind is described later in the paper.

Hail-a-ride services also have potential and are being organized to some extent at airports. In these situations, several potential passengers wish to travel to destinations that, though different, lie in the same general direction. To the extent that these passengers can be given the opportunity to travel together, they can obtain lower fares and the taxicab driver can obtain higher revenue, and outcome that is to the advantage of all. Logan Airport in Boston and La Guardia Airport in New York are currently experimenting with schemes to facilitate shared riding from airport terminals to certain destinations in their respective metropolitan areas. Special zone fares have been established for these services. This innovation, if successful, could have wide applicability at large airports throughout the country.

Subscription

Subscription services are well suited for regular trips, such as those between home and work, and for periodic medical, recreation, and personal business travel for those without ready access to an automobile. Taxicabs have traditionally served elderly, handicapped, and low-income travelers making trips of the second of these categories, but do not appear to have penetrated the regular home-to-work market to any great degree. Some experiments were initiated with taxi pooling during the gasoline shortages of 1974, and a few jurisdictions have introduced the possibility of negotiated subscription fares into their taxicab ordinances. This remains an area of uncertain potential, however. Though large buses and vans have been somewhat successful in serving long home-to-work trips on a subscription basis in several cities, the use of smaller vehicles like taxicabs for shorter trips apparently has not been very successful.

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[8] New York Times, April 14, 1980, p1. The shared-ride services envisaged are referred to as "group riding" in this article.

[9] Ibid.

Jitney Service

A shared-ride service that operates on fixed or semi-fixed routes and on short headways is termed jitney service. This service is oriented to corridors with relatively high demand densities. For the service to be viable, there must be sufficient demand to support small vehicles operating without schedules on headways of less than about 10 minutes.

Jitney services were common in U.S. cities in the 1920s, but eventually were outlawed by local regulators because they were considered unfair competition to streetcar services. At that time, streetcar companies were given monopoly rights on highly profitable routes in return for commitments that they use some of their monopoly profits to maintain unprofitable but necessary services on other routes. Now that conventional bus and rail service operate on nearly all routes at a deficit, the earlier rationale for outlawing jitney services requires re-examination. To the extent that jitney services could operate profitably along heavy corridors and reduce capacity needs for bus and rail systems, they should be highly attractive to regulators and policymakers.

A few jitney services still exist in U.S. cities, most notably in Atlantic City and San Francisco, and in low income areas of Pittsburgh and Chattanooga.[10] Puerto Rico also has an extensive, long-standing jitney system. Some cities recently have considered revising taxicab regulations to permit and indeed encourage jitney operations once again. San Diego revised its local ordinance in 1979 to permit jitney service, and some new services have been initiated--one to serve the downtown area during the mid-day (with the support of local merchants) and one to serve a major naval base. If the New York City hail-a-ride proposal is implemented and taxicabs begin to establish regular routes there will be formal jitney services in New York. Some thought has also been given to formalizing jitney services along heavy corridors in Washington, D.C.

Though relaxation of regulatory restrictions on jitney services has often been advocated as an important means of relieving transit operations of some of their deficit-ridden peak period services, it is not at all clear that a large market still exists in U.S. cities for self-supporting jitney services. Demand patterns and car ownership levels are very different from what they were in the 1920s, and there may be only a relatively small number of corridors in U.S. cities that could support jitney systems. A number of developing countries, such as the Philippines and Malaysia, have the demand conditions to support extensive jitney systems, however, and the Egyptian government has recently fostered the development of a new, formerly illegal, jitney system in Cairo. Cases like San Diego, in which jitney services have recently been permitted to operate, provide an opportunity to assess to some extent at least the potential market for these kinds of services in other U.S. cities.

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[10] Kirby et al., "Some Promising Innovations in Taxicab Operations."

Conventional Transit

The operation of conventional fixed route, fixed schedule transit services of taxicabs in areas and times of low demand density is an option that has been almost completely ignored in the U.S. by regulators and policymakers. Some West German cities have adopted this scheme with what are termed route taxis, operating under contract to public authorities. Transit authorities in the United States could contract with taxicab companies on the basis of fixed rates per hour, per mile, or per passenger to operate specified routes and schedules in lieu of large transit buses. Chapel Hill, North Carolina, has adopted a limited scheme of this type, but no other U.S. cities appear to have given the idea serious consideration.

Perhaps the main reason why the use of taxicabs for conventional transit services receives so little attention in the United States is that the notion that regional transit authorities should provide all the transit service in their regions typically is accepted without question by regional and local decisionmakers. Some believe, incorrectly, that there are economies of scale associated with regional transit systems that make the substitution of taxicabs uneconomic. Others are concerned that transit labor agreements preclude the substitution of services operated by lower-cost providers. A close examination of the situation in many cities may reveal that using taxicabs for some transit services is more cost-effective and less difficult than policymakers currently believe. The intense pressures currently being placed on government budgets by transit deficits calls for a closer look at the opportunities for substituting taxicabs for large buses on light routes, and for the redeployment of high capacity buses to routes where they will be more productive.

Feeder Services to Conventional Transit

For some areas and times, the demand for conventional fixed route, fixed schedule transit is so low that substitution of on-call taxicab feeder services becomes an option worthy of consideration. Under this arrangement taxicabs would provide short, shared-ride trips from low density areas to existing transit routes, with pick-up and drop-off times coordinated with transit schedules and with some kind of joint fare. Taxicab feeders could be used in this way to extend the coverage of conventional transit services at lower cost than operating regularly scheduled service.

The operational feasibility of taxicab feeder services has been demonstrated in at least two locations: St. Bernard Parish, a suburb of New Orleans, and Peterborough, Ontario.[11] Tidewater Metro Transit in the Norfolk, Virginia, urban area recently adopted this concept to reduce the costs of providing transit coverage in low density areas. Apart from these few applications, however, the taxicab feeder concept has not yet been adopted in U.S. cities. The UMTA Service and Methods Demonstration Program has been actively soliciting interest in demonstrations of this concept over the last few years, but to date has not found any feasible new sites.

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[11]Miller, "Taxicab Feeder Service To Bus Transit."

There appear to be two major reasons why the taxicab feeder concept has not been more widely adopted. Firstly, it involves the substitution of one type of provider, the taxicab, for another type, the transit bus. If adopted aggressively this kind of change could result in a somewhat reduced role for bus transit in providing low density public transportation services. Transit organizations naturally tend to be much more interested in plans that will increase and enhance their role in the transportation system and have not been actively cultivating the taxicab-feeder concept. The major appeal of the concept should be to taxicab companies and to short-range public transportation planners outside the transit industry, two groups that have played relatively insignificant roles informulating public transportation programs in most cities.[12] Considerable strengthening of the institutional roles of these groups in designing and evaluating public transportation alternatives may well be needed before the taxicab-feeder concept will receive the attention it deserves.

A second potential obstacle to implementation of taxicab feeders is the Section 13(c) certification required for projects using UMTA funds.[13] Arrangements are required under Section 13(c) to protect existing mass transportation employees from adverse affects as a result of UMTA-funded projects. For a taxicab feeder service the Section 13(c) requirement would cover transit employees who might be affected by route cutbacks and could also cover taxicab drivers involved in providing the feeder services. A variety of highly complicated kinds of labor protective arrangements can be imagined for this situation, and these potential complexities can be very discouraging to cities interested in the taxi feeder concept. A taxi feeder project proposed for Scottsdale, Arizona, was abandoned in 1978 because of the difficulties encountered in formulating the 13(c) arrangements.

The best approach to the Section 13(c) requirement for taxi feeders appears to be to deal with each question that arises on a case by case basis, and not to try to anticipate every possible complication in advance. Norfolk, Virginia, and Knoxville, Tennessee, obtained Section 13(c) agreements covering taxicab feeders using the approach. Labor protection agreements for UMTA programs are developed through negotiation between the affected parties at the local and national levels, and it is impossible at this stage to prescribe any general formula for particular applications. It can only be hoped that as more cities become aware of the potential of the taxicab-feeder concept there will be greater willingness to undertake the negotiations necessary to establish satisfactory Sections 13(c) agreements and that such agreements once established, will encourage other cities to follow similar paths.

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[12]Kirby, Green, and Olsson, An Assessment of Short-Range Transit Planning in Selected U.S. Cities.

[13]Alschuler, "Labor Protection, Labor Standards, and the Future of Paratransit."

Package Delivery, Emergency, and Auto Rental Services

Services such as package delivery, emergency medical transportation, and automobile rental and leasing offer promising opportunities for taxicab companies involved in providing one or more forms of passenger transportation. The more opportunities there are for taxicab companies to offer profitable complementary services the more viable should be their overall financial condition, and the more extensive should be the array of services available to the public.

As discussed earlier, current data on the taxicab industry in the United States provide no representative estimates of the involvement of taxicab companies in various kinds of services nor any indication of the extent to which regulatory barriers inhibit this kind of involvement. Complaints are often heard from taxicab companies about barriers to their involvement in package delivery or medical services, but no representative information exists on the extent or nature of such problems.

Since public transportation programs are rarely concerned with package delivery, emergency, or auto rental services, these activities generally are regarded as tangential to the main passenger services provided by taxicabs. A better understanding of these activities would be helpful to policymakers in making decisions on regulations governing the taxicab industry and in using taxicab companies as a public transportation resource. Gaining this understanding is dependent on the development of better data on the taxicab industry, an activity suggested earlier as a high priority for the U.S. Department of Transportation.

Participation of Taxicab Companies in Public Transportation Programs

Until the early 1970s the taxicab industry had very little involvement or interest in publicly-funded transportation programs. Taxicabs served some trips under client reimbursement programs like Medicaid, but were not directly involved in major city-wide programs of any kind. With the gradual appearance of special programs for the elderly, the handicapped, and other disadvantaged groups, and the initiation of a number of city-wide dial-a-ride programs for the general public, the taxicab industry began to realize the publicly-funded programs could be a source of highly threatening competition to conventional taxi services.

The taxi industry has been somewhat divided in its attitude toward publicly-funded programs. Many taxicab operators have declined opportunities to submit proposals to provide publicly-funded services, and others have refused to accept reduced rate tickets or charge slips under user-side subsidy programs. The notion that taxicab companies should have as little as possible to do with government and city hall appears to be a common one in many cities. There also exists a quite justified concern among many taxicab companies that the paperwork and other administrative costs of participation in publicly-funded programs more than offset any profit potential from such participation.

The costs to taxicab companies of choosing not to participate in publicly-funded programs can also be quite high, however. Publicly-funded dial-a-ride services have driven private taxi companies out of business in a few cities and have severely impacted their size and profitability in others. Special programs directed at elderly and handicapped persons, such as UMTA's Section 16(b)(2) program, have diverted some of the most regular users of taxicabs to social agency vans in numerous cities. A series of financially damaging experiences of this kind has created a new interest within the taxicab industry in taking advantage of opportunities to participate in publicly-funded programs, and indeed in insisting that policymakers and program administrators make such opportunities available.

From the viewpoint of the policymakers and program administrators, the taxicab industry is generally acknowledged as a potential resource for meeting certain public program objectives. Taxicab companies often have a rather stereotyped image based on their conventional taxi activities, however, and sometimes are regarded as unsuitable for the specialized dial-a-ride or elderly and handicapped services envisaged by program administrators. In some cities, particularly in California, both the taxicab companies and the program administrators have made special efforts to establish procedures under which taxi companies can supply suitable public dial-a-ride services, including in some cases the use of specially dedicated and marked vehicles supplied by the cities. In other cities, taxicab companies have been able to provide satisfactory publicy-subsidized services using their existing fleets and fairly standard management procedures.

Over the last few years policymakers at all levels of government have been making increasing efforts to ensure that taxicab companies have an opportunity to participate in publicly-funded programs. UMTA has recently financed a handbook prepared by Public Technology, Inc., on Taxicabs and Federal Programs, and is in the process of formulating two policies that will help to clarify service eligibility and competitive requirements for participation of taxicab companies in UMTA-funded programs:

- A paratransit policy to specify which paratransit services are eligible for UMTA funding and how such services are to be planned and administered.

- A policy to implement section 3(e) of the Urban Mass Transportation Act of 1964, as amended, which requires "maximum feasible participation" of private transportation companies in UMTA-funded projects.

A number of State governments, such as those in California, Michigan, and Minnesota, have encouraged or required that taxicab companies be given the opportunity to compete for publicly-funded services. And as shown in Table 2, several cities have found ways of ensuring that taxicab companies play an active role in their public transportation programs.

Policymakers and program administrators can adopt either of two general categories of subsidy techniques for involving taxicab companies in publicly-funded programs:[14]

- Provider-side subsidies, in which funds are disbursed to providers for the provision of certain specified services.

- User-side subsidies, in which funds are placed in the hands of the users in the form of reduced-rate tickets or charge slips.

As shown in Table 2, both of these approaches have been adopted in various forms in U.S. cities. The advantages and disadvantages of the two types of approaches are currently the subject of several research and demonstration projects. Both have been shown to be administratively feasible and both have performed satisfactorily in certain settings and for certain kinds of programs.

Provider-side subsidies usually take the form of service contracts in which the provider is reimbursed on the basis of in-service hours, miles, or some other measures of the service delivered. Special incentives are sometimes offered to encourage certain kinds of performance improvements. In a review of a number of these kinds of contractual arrangements in California, Teal et al. (1980) concluded that dedicating vehicles to public dial-a-ride systems was more costly than sharing vehicles with conventional taxi services, and that special incentive schemes had had relatively little impact on provider performance.

User-side subsidies have been employed quite extensively for special user group programs, particularly those serving elderly and handicapped persons. General public applications have been limited, but some are now under consideration by UMTA's Service and Methods Demonstration Program. A number of different administrative proceudres can be used, though reduced-rate tickets and charge slips have been the two most common choices to date.[15] One administrative choice, which is currently being studied is that between central dispatching systems, in which all calls go through a central office before being directed to the providers, and decentralized systems, in which calls go directly to the providers with accounting checks on trips done later by a central office. Kansas City, Missouri, provides an example of the former technique, and Montgomery, Alabama, is a good example of the latter.

User-side subsidy schemes by their very nature can conveniently involve multiple providers and do not require the competitive bidding

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[14]Kirby and McGillivray, "Alternative Subsidy Techniques for Urban Public Transportation," and Kirby and Tolson, "Improving the Mobility of the Elderly and Handicapped through User-side Subsidies," discuss these options in detail.

[15]Kendall, "A Comparison of Findings from Projects Employing User-Side Subsidies for Taxi and Bus Travel."

procedures used for awarding provider-side service contracts. Table 2 illustrates the variation in this regard between some existing provider-side and user-side schemes. Whether the day-to-day competition fostered by user-side plans ultimately will produce more cost-effective public transportation programs than provider-side plans is a question that can be answered only through research and evaluation over an extended period of time. In the meantime program administrations will have to base their choice on the cost and performance information becoming available from a rapidly-increasing set of demonstrations and case applications. The relative performance of the two approaches is likely to depend heavily on the amount of competition that exists between service providers.

REGULATION

The present contribution of the taxicab industry to public transportation systems in U.S. cities and the ability of the industry to adopt the innovations previously discussed are determined to a large degree by the regulatory conditions governing taxicabs in each State or local jurisdiction. Taxicabs have been regulated by State or local governments since the early days of motor vehicle use for taxi services. The degree of regulation varies greatly between cities, from virtually no regulation at all in many small towns and rural areas to highly restrictive controls on entry, service levels, and fares in many of the larger cities.

Regulations governing taxicab operations fall into two major categories:

- Those dealing with safety and protection of the passenger, including vehicle age and condition, insurance requirements, driver qualifications, and company structure.
- Those dealing with service levels and fares, including entry of new providers, types of service permitted, restriction of providers to certain service areas, and fare structures and fare levels.

The desirability of public regulation to ensure the safety of taxicab passengers is almost universally accepted, though the specifics of such regulations and the degree of enforcement are subject to some debate and disagreement. Regulations dealing with service levels and fares are highly controversial, however, being regarded as essential guarantees of reliable services to the public by some groups and as unnecessary and costly obstructions to more diverse and extensive services by others.

Safety Regulation

Regulation of the safety of services provided by the taxicab industry receives relatively little attention from transportation analysts and researchers or, in many cities, from the regulators themselves. Insurance standards are often out of date, many taxicab companies operate illegally without meeting safety standards, and inspections and general enforcement of safety regulations for even the most prominent and respected companies are often inadequate.

Casual observation would suggest that the regulation of the safety and general appearance of taxicabs in U.S. cities is generally much less stringent than in most other developed countries. Taxicabs in the United States often appear to be in rather poor condition by comparison with those of other countries. Regulators and the police personnel responsible for enforcing regulations governing vehicle condition often admit that their control over vehicle condition and driver qualifications leaves much to be desired. As always, of course, the costs of more stringent enforcement are weighed against other demands on the time of city adminstrators and police staff, and taxicabs usually seem to get a low priority rating in this process.

One option that city administrators might consider to improve the overall safety and appearance of taxicabs is the establishment of industry boards as a means of self-regulation. It should be in the interests of all bona fide taxicab companies in a city to ensure that the industry image does not suffer as a result of a few individuals or companies failing to meet safety and appearance standards. This kind of approach would relieve the city of some of the costs of safety regulation and might well contribute to increased concern among taxicab companies for the good of the industry as a whole.

The success of stringent regulation of the safety and appearance of taxicabs in a city could have two important implications:

- The image of taxicabs as a service industry and potential participant in public transportation programs should be greatly enhanced.

- The need for regulators to use service and fare regulation to keep out irresponsible companies would greatly diminish.

Though there have been virtually no publicized efforts to upgrade appearance and safety regulation of taxicabs in U.S. cities, this seems to be a strategy worthy of serious consideration in cities with unreliable and unsatisfactory services.

Service and Fare Regulation

As with other components of the transportation sector, such as airlines, railroads, and trucking, regulation of service levels and fares for taxicabs is highly controversial. It has been argued that service and fare regulation which goes beyond requirements for fare posting unnecessarily restricts the public transportation services available to the general public.[16] On the other hand, it has been argued that extensive controls on entry, service levels, and fares are essential to ensure a stable and reliable supply of public transportation services, and that relaxation of these controls would result in ruinous competition between providers and a decline in overall service levels.[17].

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[16]Kirby, Paratransit: Neglected Options for Urban Mobility.

[17]Samuels, "Samuels Reviews Taxicab Industry Regulations."

An important element of this latter argument is the need for cross-subsidy from highly profitable areas or times to maintain services for unprofitable areas or times.

Perhaps the first step in discussing the regulation of taxicab service levels and fares is to recognize that the situation is not a "yes" or "no" case of regulation or deregulation. There is a wide range of regulatory positions which can be adopted by city administrators to impose varying degrees of control on entry, service levels, and fares. For example, entry of new providers can be highly restricted while service levels and fares are left to market forces, or vice versa. Since these regulations are established by individual cities, and in some cases States, throughout the United States there is considerable potential for variation from one location to the next, and as might be expected much variation does in fact exist.

The term deregulation is seldom an appropriate description of the taxicab regulatory changes proposed and occasionally implemented in U.S. cities, and its use masks the fact that regulatory changes are usually very specific modifications to parts of existing ordinances. It is true that such changes sometimes reduce the degree of control exercised by regulators over service levels and fares, but in other cases the changes actually tighten these controls. In areas like taxicab regulation, where a number of very specialized changes is being considered, and where substantial variation may exist between different cities and States, the term regulatory revision is perhaps a better description than deregulation of activities designed to change existing conditions. In fact, even in the areas of airline, railroad, and trucking services where some relaxation in regulation is currently occurring at the national level, the term deregulation is a rather inaccurate description of the changes taking place.

In addition to the fact that the term deregulation tends to misrepresent regulatory changes being considered or implemented in U.S. cities, its use tends to polarize discussion of the issues involved. Foerster and Gilbert (1979) note that "the discussion of deregulation proposals has revolved largely around ideological positions," whereas careful analysis concludes that "taxicab regulation is a complex interaction of several factors." What is needed with regard to taxicab regulation, then, is an approach that considers various kinds of regulatory revisions on their merits, and recognizes that different cities may reach different conclusions about the particular sets of regulatory provisions which best meet their needs.

Over the last few years revisions have been made to taxicab regulatory provisions in a number of U.S. cities. In order to assist regulatory bodies in other cities and States to assess the likely impact of changes to their taxicab regulations, UMTA's Service and Methods Demonstration Program has initiated studies of the most significant examples of regulatory revisions. The studies are documenting the process by which changes were made, the specifics of the changes themselves, and the general conditions prevailing in the regulation and operation of

taxicabs before and after the changes.[18] From these studies it should be possible to draw inferences about the likely impacts of similar changes in other locations.

In brief, the cities and timing and nature of the regulatory revisions currently being studied are as follows:

(1) Indianapolis[19] (1973 and 1974)

- Insurance of permits under an open entry policy in 1973 and 1974.
- Return to a closed entry policy in 1974 with no new permits issued since that time.

(2) Portland[20] (1979)

- Removal of population based ceiling on taxicab permits.
- Taxi companies permitted to file special rates for shared-ride, jitney, or contract services provided they do not exceed the maximum taximeter rates established for conventional exclusive-ride service.

(3) San Diego[21] (1978 and 1979)

- Numerical ceiling on taxicab permits and requirement for proving public convenience and necessity for new taxicab permits dropped, and new permits issued at a fixed rate per month (rate of 6 a month adopted in November 1978, increased to 15 a month in July 1979).
- Standard taximeter rates replaced by maximum rates almost 50% above prevailing standard. Companies free to set their own rates within the maximum.
- Provision for companies to offer shared-ride and jitney services, including permission to set zone and flat fares within established maximums.

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[18]Heaton, "Evaluation Design for Taxi Regulatory Revision Case Studies."

[19]Gilbert, "The Indianapolis Experience with Taxicab Open Entry."

[20]DeLeuw, Cather & Company, "Taxi Regulatory Revision in Portland."

[21]DeLeuw, Cather & Company, "Taxi Regulatory Revision in San Diego."

- Strict requirements for filing and posting of fares.

- Provision for companies to change fares at their discretion within the established maximums.

(4) Seattle[22] (1979)

- Elimination of ceiling on number of taxi licenses, of requirement to prove public convenience and necessity, and of minimum service requirement (10 miles per day and 230 days per year) in the City of Seattle.

- Elimination of controls on fares in both the City of Seattle and in surrounding King County. Companies can set their own fares for conventional exclusive-ride and for shared-ride services, but fares must be filed and must be meter-based.

- Provision for special contract rates.

- Provision for shared-ride services.

All of these cities have relaxed controls on taxicab service levels and fares to some degree, though the specific regulatory requirements vary considerably. Despite the relaxation of previous numerical restrictions on entry of new companies, none of the cities has relaxed safety and financial responsibility requirements, and in San Diego and Seattle enforcement of these requirements actually has been tightened. With the exception of Indianapolis, all of the revisions listed above are quite recent, and their full impact on taxicab services undoubtedly has not yet been felt.

The motivation for the regulatory revisions in these four cities resulted from one or both of the following concerns:

- That existing services were inadequate in certain respects, and that new providers were needed.

- That the existing process of entry control and fare setting by the cities was too cumbersome and costly, and was serving neither the public nor the industry well.

One particular pressure on the taxicab industry and city regulators over the last few years has been rapid price inflation and a resulting need for taxicab companies to make frequent fare adjustments. The costs and inconvenience associated with going through this process frequently undoubtedly contributed to the interest in relaxing controls on fares in Seattle and San Diego and apparently has prompted several other cities to question their ratio-setting procedures in much the same way.

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[22]DeLeuw, Cather & Company, "Taxi Regulatory Revision in Seattle."

In assessing the impacts of these regulatory revisions regarding service levels and fares, it is important to recognize the differences between the cities with regard to taxicab supply before the changes. Seattle and Indianapolis apparently did not have any significant "frustrated supply" of taxicabs as evidenced by the lack of pending requests for new permits and the fact that the total number of taxicabs did not increase substantially after the regulatory change. San Diego, on the other hand, had a backlog of some 200 applicants for taxicab permits, and it seems that the regulatory change in that city will be accompanied by a significant increase in the supply of taxicab services. Portland probably also has had frustrated taxicab supply (licenses changed hands for between $3,000 and $9,000 in 1978), but a long history of restricted entry and the retention of substantial barriers to new companies may continue to inhibit changes in this regard.

It is also essential in interpreting the behavior of taxicab services after regulatory revisions to take account of the effects of time on any changes that occur. Gilbert (1980) points out that the short-run response to open entry in Indianapolis was a significant increase in the extent and diversity of services, but that after a year or so it became clear that the market was saturated and several companies were forced to cut back fleet sizes and service hours. It should not be surprising that relaxation of entry restrictions may be accompanied by a short-run supply increase followed by a shake-out period in which demand and supply adjustments are made. This kind of occurrence seems particularly likely in cities like San Diego, where there is a perceived under-supply of services, though less likely in cities like Seattle, where few new companies wish to enter the market.

Over time it is likely that some taxicab companies will be reorganized or go out of business as a result of a competitive supply situation, just as occurs in other service industries like restaurants and clothing stores. Such occurrences should not be taken as a failure of public regulation; to the contrary, cases in which existing companies were protected from going out of business should constitute a more troubling situation for regulators. As long as adequate taxicab services are available to the public, regulators should not be concerned by occasional failures of individual companies.

The occurrence of instability in particular taxicab companies is often taken as grounds for greater regulatory control over service levels and fares. When such situations arise after the enactment of regulatory revisions that relax service and fare controls, as is quite likely for the reasons noted above, public regulators are likely to be under considerable pressure to reimpose controls of some kind. A realistic view of the short-run, medium-run, and long-run impacts of regulatory revisions is needed by the regulators who must respond to such pressures. The studies currently being conducted in Indianapolis, Portland, San Diego, and Seattle are aimed at helping regulators in other cities acquire a better understanding of the likely impacts of regulatory revisions over time. These studies cannot be expected, therefore, to provide definitive insights in the near future into the

effects of the recent regulatory revisions being monitored. Over time, however, these and other studies should gradually increase understanding of how different kinds of regulatory structures are related to taxicab services and to the costs and responsibilities of public regulatory activities.

One particular aspect of the revision of taxicab service and fare regulations that deserves special attention is the operation of taxicabs at airports. Airports have rather unique taxicab demand and supply characteristics--passengers who arrive from out-of-town at certain peak arrival times, and taxicabs that are prepared to wait for long periods in the hope of a high-fare trip. Airports also often have special regulatory characteristics, in that the airport authorities themselves exercise considerable control over taxicab operations. Some airports grant exclusive franchises or licenses or certain companies to provide airport services, and they organize taxi stands, lines, or holding areas that significantly influence the quality of taxicab services available. Special shared-ride services have also been organized at some airports.

The relaxation of controls on taxicab fares in San Diego and Seattle has created some special problems at airports and other locations that typically operate taxicabs on a "first in-first out" basis. In these circumstances, an operator can set a very high fare and still be confident of getting regular business at the airport. Some special procedures appear to be needed to inform airport taxi users about variable fare structures and to give them some choice between taxicabs with different fares. Schemes for organizing taxicabs into "short trip" and "long trip" lines have been implemented in some airports and appear to work to the benefit of both the passengers and the taxicab companies. It seems that operational arrangements could be made at airports to allow for shared ride, passenger choice been companies, and for the short-trip, long-trip distinction. Some research and demonstration effort should probably be devoted to this subject by cities and airport authorities with heavy taxicab usage.

TECHNOLOGY

Innovations in the technology employed in taxicab services have occurred in three main areas:

- Vehicles.
- Fare computation devices.
- Dispatching systems.

UMTA's Office of Bus and Paratransit Technology has been actively involved in supporting the development of improved vehicle designs and dispatching systems for taxicab and other paratransit systems, and the Office of Service and Methods Demonstrations has been encouraging new developments in fare computation technology and procedures.

Vehicles

With regard to vehicle technology, an active partnership between UMTA, the taxicab industry, user groups, and other interested parties concluded in 1978 that emphasis should be placed on developing a specialized paratransit vehicle that could be built by modifying existing production vehicles. This conclusion followed the development in the mid-1970s of two prototype vehicles designed to seat five people or two people plus a wheelchair. While the general interior design features of these vehicles were promising, they were not suitable for mass production or use in day-to-day taxicab operations. The strategy recommended and adopted after evaluation of these prototypes was to try to incorporate their design features into modified mass production vehicles.[23]

At the present time UMTA Is evaluating three new prototype paratransit vehicles built by modifying three mass production vehicles: the GM X-series front-wheel drive vehicle, the Oldsmobile Omega, and the Ford Fairmont station wagon. Current plans call for selection of one or more of these prototypes for production of between 30 and 70 vehicles. These vehicles will be tested in typical taxicab operating conditions in U.S. cities and then possibly modified for larger production runs of perhaps 500 vehicles per year.

Fare Computation

For conventional exclusive-ride taxi services, fares are usually computed by means of a taximeter. The meter might register an initial "flag drop" charge of, say, 90¢, and then accumulate additional charges at the rate of 20¢ for each minute while the cab speed is less than 10 m.p.h. or 20¢ for each minute while the cab speed is less than 10 m.p.h. If during a particular trip the cab speed falls below 10 m.p.h. for t minutes, and the cab covers d miles while the cab speed is greater than 10 m.p.h., the fare will be

$$90 + 20\,[t + 6d] \text{ cents},$$

where $[t + 6d]$ is the integral part of the number $t + 6d$. If t is 2.5 minutes and d is 4.6 miles, for example, the fare will be

$$\begin{aligned} & 90 + 20\,[2.5 + 27.6] \text{ cents} \\ = \; & 90 + 20 \times 30 \text{ cents} \\ = \; & \$6.90 \end{aligned}$$

The taximeter fare structure has two disadvantages: passengers cannot determine the exact fare before the trip, and the driver does not have strong disincentive to avoid circuitous or congested routes.

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[23]Samuels, "Technology of the Paratransit Vehicle."

In some cities, exclusive-ride taxicab fares are computed by means of a zone system. The city is divided into a number of geographical zones, and a particular fare is specified for travel between each pair of zones. The zones are usually fairly large, covering perhaps one to three square miles each, and the fare structure might begin at $1.00 for travel within one zone and add $.50 to $.75 increments for crosssing additional zones. This kind of fare structure has the disadvantage that a short trip across a zone boundary can cost the passenger significantly more than a somewhat longer trip that stays within one zone. However, it is in the driver's interest to take the most direct route, and passengers can determine the exact fare before they take a trip.

Where they exist, shared-ride taxicab fares are usually computed by means of a zone system, with lower zone-to-zone fare levels than those for exclusive-ride service. The difficulty with using a taximeter to compute shared-ride fares is that the meter will accumulate distance or time charges for a first passenger while the cab is deviating from this passenger's most direct route to pick up a second passenger. Thus, the shared-ride fare for a particular passenger trip may vary from one day to the next depending on the amount of route deviation incurred to pick up additional passengers.

A shared-ride taximeter currently being marketed by the Bruder and Argo companies can accumulate five different fares simultaneously, and attempts to compensate for the route deviation problem by lowering the rate for passengers in the cab each time an additional passenger is picked up. The number of passengers sharing the cab thus determines the rate charged, but for any given rate the total fare for each passenger still depends directly on the amount of route deviation involved each time the trip is made. These taximeters cost between $600 and $700 each.

Both the zone and meter systems for computing shared-ride fares have major disadvantages--the zone system lacks precision, and the meter system charges passengers for route deviation incurred to pick up additional passengers. Recent interest in shared-ride taxi services in a number of cities has generated a need for a more satisfactory method of computing shared-ride fares. The method should be equitable to both drivers and passengres and practical for jurisdictions of all sizes, it should be feasible for large jurisdictions currently using taximeters for exclusive-ride services and for small jurisdictions currently using zone or informal distance-related fare systems.

A computer-based fare system being developed by Carnegie-Mellon University has a number of conceptually attractive features.[24] Point-to-point fares are calculated by a computer, transmitted to the taxicab by radio, and displayed electronically in the taxicab for the driver and the passenger. The fare can be calculated by the dispatcher in advance of the trip and quoted to passengers who request service by telephone. The computer keeps a record of each fare for accounting purposes. This system

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[24]Au and Baumann, "Ride Shared Vehicle Paratransit (RVSP) System."

has not yet been fully tested, however, and is unlikely to be a practical option in the foreseeable future. And even if the system eventually proves to be workable it may be too expensive for many taxi operators and jurisdictions.

Kirby (1976) has proposed a grid fare structure which appears to be practical for large and small jurisdictions alike. It provides for both exclusive-ride and shared-ride fare structures, and is sufficiently similar to the current taximeter structure for exclusive-ride that is should allow a smooth transition to shared-ride fares in those jurisdictions currently using taximeters. If desired for accounting purposes, a simple meter could be used with this grid fare structure to compute and record the fares and possibly also to issue receipts to the riders.

The basis for this fare structure is a relatively fine grid, which would be drawn for each jurisdiction. The grid would divide the jurisdiction into small subareas roughly 1/2 mile by 1/2 or 1/4 square mile in area. Boundaries of the subareas would be the middle of existing streets, so that each street address would belong to one particular subarea. Holes would be left in the grid where natural boundaries such as rivers, lakes, rail lines, or highways prevented direct movement over the road from one subarea to the next.

Each passenger trip by taxicab would originate in one subarea and terminate either in that same subarea or in some other subarea. The fare would be based on the number of contiguous subareas or "steps" which lay between the passenger's trip origin and trip destination. To be "contiguous," two subareas would have to have a common boundary; subareas with only a corner in common would not be considered contiguous. The driver and passenger would simply count the smallest number of contiguous steps required for a taxicab to travel directly from the passenger's trip origin to his trip destination would be the same for any passenger trip by taxicab. The variation in fare level between exclusive-ride and shared-ride services would be reflected in the rate of fare. The rate structure would be similar to that currently used for exclusive-ride services; a fixed charge for the first step, corresponding to the current flag drop and a small charge for each additional step, corresponding to the current flag drop, and a small charge for each additional step, corresponding to the current mileage charge on the taximeter.

Montgomery, Alabama, Minneapolis-St. Paul, Minnesota, have implemented grid fare systems based on this proposal for specialized elderly and handicapped services. In each case fares are computed manually or with the aid of simple look-up tables; no automated computation procedures are employed. The City of San Diego has developed a similar scheme as a possible basis for shared-ride taxi services for the general public.

Dispatching Technology

Computerized dispatching and routing technology, a subject of continuous research and development activity for over 10 years, has reached the stage where workable systems have been developed and tested. However, the need to have manual back-up capability in case the computer

system goes down and the costs of having the necessary computer capability available currently make these techniques questionable on a cost-effective basis, particularly for small paratransit systems.[25] The rapid progress that is currently being made with computer hardware systems may eventually make computerized dispatching a more attractive proposition, though the number of potential applications in the near future does not appear to be very large.

Less sophisticated computer systems for assisting manual dispatching and performing administrative tasks appear to have substantial near-term potential, however. Minicomputer systems capable of recording trip information, computing fares, and performing normal bookkeeping chores now cost less than $10,000 and appear to be a cost-effective proposition for even the smaller public transportation companies. The UMTA Office of Bus and Paratransit Technology is currently undertaking the development of a computer-assisted system of routing, dispatching, and accounting [for coordination of human service transportation.] The system is scheduled for eventual implementation in Dade County, Florida, in conjunction with a Service and Methods Demonstration project.

It seems highly probable that a variable of computer-assisted dispatching and record-keeping systems will be offered to taxicab companies by private computer software companies over the next few years. One promising system of this type developed by Contax Systems, Inc., is currently being used by a taxicab company in Arlington, Virginia, for package delivery services. Given the need for distribution and ongoing maintenance of such systems, the Federal government should probably make every effort to encourage the development of the systems by private companies equipped to provide the necessary follow-up services.

CONCLUSION

This paper has discussed a variety of innovations in taxicab regulation and operation which deserve consideration by regulators and planners in U.S. cities. Though it is not possible at the present time to evaluate the potential of many of these innovations fully, they appear to hold sufficient promise to warrant continuing study and discussion. Officials in many of the nation's cities are confronted frequently with policy decisions on taxicab regulation and on public transportation services generally. Well-organized information on experience with innovative practices in other cities, even if complete and inconclusive, can be of great value to those who must make decisions that cannot be postponed.

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[25]Hendrickson, "Evaluation of Automated Dispatching for Flexibly Routed Paratransit Services."

The growing willingness among planners and regulators to investigate innovative uses of taxicabs should be welcomed by the taxicab industry. The involvement of public regulation and funding in urban passenger transportation is now of such a scale that no private taxicab operator can afford to ignore it. Public funding offers opportunities for the taxicab company prepared to seek it and a real threat to the company which decides to ignore it. A closer partnership between the public and private sectors will be needed over the next decade if taxicabs are to realize their full potential as participants in urban public transportation systems. Such a partnership can be a highly productive one for both sectors if it allows for free exchange of ideas and continued experimentation with new concepts for taxicab operations.

The U.S. Department of Transportation, along with transportation departments at the State and local level, has an important role to play in promoting more effective roles for taxicabs in urban transportation systems. Demonstration projects, monitoring studies, and research and development efforts supported by the UMTA Offices of Service and Methods Demonstrations and Bus and Paratransit Technology are making a major contribution to improving understanding of potential new applications of taxicab services. The UMTA Office of Policy and Program Development has also devoted considerable effort to helping taxicab operators understand the complexities of Federal programs and the procedures for participating in them.

There are two major activities that the U.S. Department of Transportation could undertake in the near future to increase awareness of the taxicab industry and its potential. The first is to support a well-designed survey effort to obtain reliable data on the size and composition of the taxicab industry in the United States. As discussed earlier in this paper, current data are not representative of the industry, and provide only general indications of its make-up. The second is to finalize and issue the long-awaited paratransit policy statement designed to clarify the eligibility of taxicab services for Federal funding. Having issued a proposed policy in 1976, DOT had kept planners, researchers, paratransit operators, and cities in a state of uncertainty about paratransit services for an inordinately long period. Issuance of a final DOT paratransit policy would be an important contribution in both symbolic and technical terms to the furtherance of promising taxicab innovations.

Regardless of the actions DOT chooses to take with regard to taxicabs and paratransit, however, increased involvement of taxicabs in public transportation programs will depend primarily on the level of initiative displayed at the local level by taxicab operators, public regulators, and public transportation planners. The research and development activities reported in this paper and efforts to clarify State and Federal policies with regard to taxicabs and paratransit are designed to encourage and respond to initiatives at the local level. The value of these activities and the level of commitment to them by

State and Federal governments depend on active interest at the local level in expanding the role of taxicabs in urban transportation. Ultimately it is creative and determined people at the local level who get new services implemented and who stimulate and reinforce the research and policy activities of the State and Federal levels of government.

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HISTORY OF TAXICAB REGULATIONS
After Four Centuries of Taxicab Regulations, Is There Anything New Under the Sun?

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There seems to be a notion abroad that regulation of the demand-responsive transportation industry is a comparatively modern concept, at least one which had its origins during the last half century. Nothing could be farther from fact.

We have the word of the U.S. Supreme Court that such regulation has been customary from time immemorial in England and in this country from its first colonization. Time immemorial is said to be that time when the memory of man runneth not to the contrary--that is, from the accession of King Richard I in 1189.

It may be, therefore, that the regulation of hackmen could be as old as seven centuries in England and four centuries in the United States. It is clear that regulation of this service commenced with limitations on the number of coaches permitted to carry passengers for hire. As early as the beginning of the 17th century, King Charles I limited the number of licensed coaches operating in London because they interfered with his passage along the streets, as well as that of his dear consort, the Queen, and the noblemen. In fact, he ran all of the hackney coaches out of Westminster.

During the Interregnum, Parliament enacted a law limiting the number of coaches to be licensed to operate in London and regulating them, and imposed a tax of 20 shillings to pay for the regulation. And in 1660 it tacked on a license fee of 5 pounds to pay for the damage the iron-clad wheels of the coaches were doing to the pavement.

After several similar acts, a fairly comprehensive law was passed under George III which limited the number of licenses, created cab standings, and required hackney coaches to give way to persons of quality. Outside of London there was no limitation on the number of licenses. The London Hackney Carriage Act of 1831 was the first truly comprehensive regulatory enactment and, together with a similar act of 1843, is the basis for all modern regulation of demand-responsive vehicles.

The act of 1831 regulated drivers and their licensing, forbade refusal of passengers, regulated hours and days of work, and prohibited abusive language, furious driving, driving under the influence, blocking traffic, blowing horns, and overcharging passengers. It also provided for the return of lost property and required a license in the form of a metal plate. It provided for cab standings, defined standing for hire and plying for hire and forbade taking additional passengers without the consent of the person first hiring the coach. It provided for fixing the rates of fare and payment by a passenger who called the hackney coach and then did not ride.

The act of 1843 provided for the inspection of coaches and horses to determine that they were fit for use as public passenger vehicles. It provided for drivers to compensate owners of property they damaged and to pay for damages to the leased hackney coach. It also required passengers to pay for damage that they caused to the coach.

The act of 1852 requred a sign indicating the number of passengers that the vehicle was licensed and obligated to carry and regulated advertising carried on the exterior of the coach.

During all of this time leasing of the horse and coach was the prevalent manner of obtaining drivers, although to hear it now, one would assume that leasing was a 20th century innovation. One of the earliest lessors of coaches was Tobias Hobson of Cambridge, England, who always put the horse that he wanted the driver to take in the first stall--thus, "Hobson's Choice".

The question of liability to third parties for damages caused by the lessee's negligence became a matter of early interest, so much so that the act of 1843 provided that, so far as a member of the public was concerned, in an action for damages the relation between the driver of the coach and its owner was presumed to be that of master and servant, whether or not the coach was leased.

REGULATION IN THE UNITED KINGDOM

If one were to compare this partial list of regulatory subjects with modern U.S. regulations, it seems to me that one would concur in the adage that there is nothing new under the sun.

A century and a half ago, there was a tax related to the cost of regulation, limitation of working hours, metal medallions, shared-ride service upon approval of the first passenger, regulation of advertising carried on the hackneys, leasing, consequences of master and servant relationship, and limitation of the numbers of licenses. Every one of these is a familiar part of today's regulations.

The turn of the century brought the motor car and its use as a means of providing demand-responsive transportation. New areas of regulation, however, seem to have been limited to the vehicle itself.

English regulation had been the product of Parliament, but as time passed, regulation was delegated to administrative bodies such as commissions and, finally, to police departments. In the United States, on the contrary, regulation was a matter of local concern from the outset--only a few States were interested, and those that were tended to limit their statutes to the subject of public liability insurance.

In England during earlier times there was little interest in insurance because the only concern was with making the driver pay for damages to the property of others, and that meant the coaches of the wealthy that he ran into. Pedestrians were simply expected to stay out of the way.

Subjects of current regulatory concern are as clearly enunciated in the London Hackney Carriage Act of 1831 as in any modern municipal regulatory system, but public concern was not demonstrated and regulation demanded until after the first 29 years of the 20th century.

The principal argument advanced to support major alterations of existing municipal regulatory systems throughout the country rests on the specious logical assertion that, since there has been little change in paratransit regulation for a half century, ergo--it must be time for major change. But, to understand the basis for the lack of change and to demonstrate that it has not been the result of coincidence, one must review the events that produced, nationwide, a system of municipal regulation at virtually an identical moment in time and almost identical in form.

THE MOTOR VEHICLE AGE

The evolution of the paratransit industry began following the development of the motor car. That vehicle was the spark that produced large fleets, the first of which appeared in New York City in 1907 and in Chicago shortly thereafter.

The evolution of fleets was the product of the built-for-the-purpose taxicab that appeared at the time of World War I. This coincidence, if indeed, it was a coincidence, for the first time mandated large investments in fleets, in order to purchase taxicabs and operating facilities and, in manufacturing plants, in order to acquire tools and materials with which to manufacture the taxicabs.

Through very large investments, providers of paratransit services were able to meet the rapidly-growing demand caused by an unprecedented expansion in population, prosperity, and demand for mobility. The expansion of fleet size became possible through the merchandising of a recognizable color scheme; dispatching facilities, including private cab stands; and the encouragement of street-hail of easily recognizable fleet vehicles. All of this activity required larger investments in vehicles, stands, telephone systems, garages, and administration. These, in turn, encouraged further expansion and additional investment. Built-for-the-purpose taxicabs, having proved themselves durable and efficient for city operation, continued to be used by the fleets and the ever-expanding market for taxicabs caused expansion of manufacturing facilities, which in its turn drew more investment into that industry.

The fleets prospered and filled the growing public demand. No one saw any reason to limit the number of licenses or to fix the rates of fare. Indeed, little thought was given to mandatory insurance. After all, why would anyone desire that when the fleets were so financially secure that they could have their own insurance companies?

THE DEPRESSION ERA

The happy hour lasted until 10:00 o'clock, Thursday, October 24, 1929, when the roof caved in. The paratransit industry with its millions of dollars invested in facilities in cities from coast to coast was faced with the turmoil of the Depression. There were 15 million unemployed, frantic, hungry people. There were bread marches and riots. Investment capital and customers of the paratransit industry disappeared. Transportation providers of every sort were in financial difficulty, and their insurers filed for bankruptcy by the scores.

Into this maelstrom, into the paratransit industry, came the first instance of free entry: competition of unlicensed and unregulated taxicabs. Anyone, literally anyone who could lay his hands on an automobile by loan, by lease, by hook or by crook plied the streets looking for passengers, engaging in bloody fights over a passenger or a place on a cab stand. Each one would literally do anything to earn enough to buy food for just one day. The first experience with an open market for fares appeared. Each new entrant into the business would charge anything, whatever he could get, and for the most part the charge was so small that mass transportation companies, unable to compete, were suddenly in mortal danger. Used car dealers would each day lease as taxicabs their unsold cars. Compensation for injured passengers and pedestrians was very rare.

The people, the public press, the municipal governments, the providers of mass transportation, and the taxicab operators emitted a great outcry for regulation. It was generally recognized that without protection fro irresponsible competition there would never be a responsible paratransit industry. And, worse yet, if the existing conditions were permitted to continue, there might well be no public passenger transportation at all.

The economic condition existed nationwide at the same time, and public demand for regulation arose at the same time. As a result, municipal legislative action took place within the space of a few years. Its nationwide similarity was the consequence of similar public demand and similar background.

Draftsmen of municipal regulation had available a century of English law and experience to take into consideration and a century of American mass transportation regulation for comparison. The concepts of a regulated transportation public utility were clearly attractive in the circumstances. Public convenience and necessity became the criterion for the establishment of the number of taxicab licenses to be issued. Reliability became the criterion for the issue of licenses to an operator.

Reliability meant not only that the service provider had the necessary equipment, management staff, and experience, but also that it had the necessary financial resources to pay claims for damages resulting from the operation and to pay employees a proper wage and replace wornout equipment. Clearly, reliability was the sine qua non of a proper transportation system. And equally clearly, this could only be achieved if the rates of fare were fixed at a point that would produce the income necessary to provide these basics and, in addition, a reasonable rate of return on the capital investment.

So, in order to induce investment in this perilous venture, two things had to be promised: a reasonable return on the capital invested and a limitation on the number of vehicles to be licensed.

The leasing of cabs to drivers, which circumvented the relationship of master and servant, was banned. Leasing was the hallmark of the independent operator and the unthinkable for the fleets. The ban on leasing reflected the public's abhorrence of any uncontrolled operation. In sum and in short, the public had rebelled against the irresponsible, unreliable, and unregulated mess that had succeeded in bringing urban communities to chaos.

The concepts thus emerging in the form of a nationwide set of similar regulatory systems continued with little change or, for that matter, little desire for change for a half century. Public approval of the system of the 1930s seems to have been clearly demonstrated.

POST-WORLD WAR II CHANGES

Upon the involvement of the United States in World War II, manufacturers of motor cars turned their facilities over to war production, and for four years neither automobiles nor taxicabs were built. The romance of the built-for-the-purpose taxicab, as a sturdy vehicle capable of many years of useful life, proved valid. But by the end of the war they were very worn. The reconversion of the automobile industry was slow, especially at factories that could produce taxicabs. Returning servicemen were given priorities for the purchase of new automobiles, and everyone bought one of them because, price controls to the contrary notwithstanding, there was very lucrative resale market.

As war production came to an end the number of jobs available to the servicemen shrank, and unemployment became a serious problem. As a consequence, for the second time in fifteen years unemployed people turned to the taxicab industry for employment. To quote King Lear: "The wheel had come full circle".

By the thousands, without resources, without licenses, with little or no insurance, but with an automobile, totally unregulated, they swarmed into the paratransit industry. As it had been in 1930, the political issue presented to the regulatory bodies was such that they were forced to abandon any notion of enforcing existing law. Not one had the audacity to harrass an unemployed ex-serviceman. Their problem was complicated by the fact that the licensed fleets were not rendering the full service expected of them because of delays in the delivery of taxicabs. So, based on the spurious premise that the situation would be short-lived, regulators decided to resolve the impasse by issuing temporary permits to unregulated taxicabs.

This solution turned out to be an unmitigated disaster on every count. Immediately after the issuance of the temporary permits, the licensed fleets began to receive new taxicabs and to rehire returning

ex-service-men who, previous to the war, had been employed by them. There was a surge of new operators without permits or licenses, many of whom never had been in the military or naval service. Regulation went by the boards. You couldn't tell one unlicensed cab from another. From this turmoil came the introduction of the assignment of licenses or permits and the leasing of taxicabs by permittees, the leasing of permits without taxicabs, and the leasing of both taxicabs and permits--activities that had been banned in many cities. As could have been foreseen, the final solution was to legitimize all of the illegal operators.

FEDERAL REGULATION

The most noteworthy regulatory activity after 1946 was the entry of the Federal Government into the picture. Prior to 1946 it was considered that the industry was purely local in nature. That view was reinforced by the decisions of the U.S. Supreme Court in two cases under the Sherman and Clayton acts. The Court held that taxicabs were not engaged in interstate commerce and, as a consequence, were not subject to Federal regulation. Repeated attempts by the government to have those decisions reversed have been unsuccessful.

However, in the National Labor Relations Act, Congress used the phrase "activities which affect commerce," as distinguished from "engaged in commerce," which was used in the Sherman and Clayton Acts. Since the definition of affecting commerce was based upon the purchase of gasoline, there could be no doubt that the industry had finally slipped into the Federal orbit.

Now, taxicab drivers are subject to the minimum wage provisions of the Fair Labor Standards Act, although they are exempt from its overtime provisions, and the Department of Labor is involved in matters arising under section 13(c) of the Urban Mass Transportation Act of 1964, as amended.

Two notable concepts of change have come from the Urban Mass Transportation Act: (1) shared-ride in many forms and (2) the use of paratransit vehicles for a variety of innovative services, often initiated with Urban Mass Transportation Administration assistance. I have made this observation in order to demonstrate that I do not oppose any change, obviously there can be no progress without it. Equally obvious is that a great many of the recent changes have made valuable contributions to urban communities. My concern is that a major regulatory revision should not be justified solely on the basis of passage of time.

REGULATORY REVISION

I presume that I was given the topic of the "History of Regulation" with the hope that such history as could be recounted in the short time allotted would provide lessons to guide the trend of future regulations. Surely, a century and a half of experience and development should contain some guidelines to avoid past errors.

Even if one were to brush aside all regulatory background antedating 1930 there would still be much to learn from the events of the past half century. My concern, however, lies in such techniques as those of Georg Wilhelm Hegel, who in his Philosophy of History said:

"What experience and history teach is this--that people and governments never have learned anything from history, or acted on principles deduced from it. As Ron Kirby indicated yesterday, deregulation has already been banned from the lexicon. It has been replaced by regulatory revision. He also observed, and rightly so, that no one faults regulations affecting safety and appearance. But, like many others, he left open the deregulatory topics of free entry and open market pricing.

Unemployment is escalating at an astounding rate and the scene is set for a reenactment of 1930 and 1946. If the script of those times should be rewritten by regulatory revision of the sort suggested by some, and should regulators permit, or even aid and abet, an invasion of the industry by the unemployed, I fear that the result will be the destruction of reliable transportation providers. If whatever regulatory protection now exists should be removed, Hegel will, once again, be proved to be correct.

Oliver Wendel Holmes in a different context once observed, "On this point a page of history is worth a volume of logic". Since the thesis of this presentation has been that in matters of regulatory concern there is nothing new under the sun I thought that I would close with an observation concerning regulatory revision from The Spectator nearly a century ago: "The more impatient revisionists among ourselves should reflect . . . and hesitate."

OVERVIEW OF TAXICAB REGULATORY REVISIONS AND PRELIMINARY RESPONSES: FOUR CASE STUDIES

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The purpose of my talk today is to review taxicab regulatory revisions within the context of experiences in several U.S. cities where the Service and Methods Demonstration Program is monitoring these changes. They include Seattle, Washington; Portland Oregon; San Diego, California; and Indianapolis, Indiana.

I want to present an overview of the wide variety of regulatory changes that these cities have adopted in order to illustrate that it isn't a clearcut case of deregulation; that, in fact, regulatory revision, although it is hard to say, may be an appropriate tag to put onto these changes. I also want to report some of the preliminary responses to regulatory revision in these cities. But, I want to stress the word preliminary because most of the changes are less than a year old, and we may see some different effects developing later on in any of these localities.

I am also going to touch upon some of the practical problems that have arisen during this early phase of regulatory revision implementation.

Bob Samuels has sketched out some of the kinds of taxicab regulations that have been in place historically and the kinds of purposes these regulations were intended to serve. As he said, many of these regulations have remained unchanged for many years. I want to stress here that the desire for change has come about as a result of apparent problems and limitations in the existing regulations.

Local regulators have encountered repeated difficulties in imposing and administering taxicab regulations. Elected officials doubt their own abilties to adjudicate questions of economic theory in order to arrive at appropriate entry controls, fares and other requirements. At the same time they have begun in growing numbers to perceive that existing regulations provide no guarantee of an appropriate balance between supply and demand for taxi services. It has been found that population ratios are not sufficiently sensitive to demand for taxi services, and that the data required to prove public convenience and necessity is often difficult and costly to assemble for regulators and operators alike.

Rate regulations pose similar problems, particularly in developing operational criteria to determine equitable rates of fare. Concepts like percentage rate of return on invested capital and ratios of overall operating costs to revenues almost guarantee that rates will go up with costs. These approaches also tend to involve regulators in the periodic and progressively unpleasant task of re-evaluating the local rate structure on a frequent basis.

Regulators have also come to suspect--as was concluded in a recent City of Seattle study--that fare increases have utimately hurt the industry through reductions in ridership. These problems have led regulators to seek to distance themselves from taxi regulation, to reduce their involvement in rate review and determination of public convenience and necessity, to reduce municipal expenditures for regulation, and to spare themselves the acrimonious and progressively frequent public hearings. Removing regulators from frequent, periodic regulatory concerns has been a major objective of regulatory revision in the majority of the cities we have been monitoring.

The second primary objective of regulatory revision, and one which is at least as, if not more, important to some regulators, has been to improve taxi service through a wider range of services or to induce service innovations, including both fare and non-fare competition. Some local laws proscribe or inhibit the development of innovative taxi services such as shared-riding, jitney, or fixed-route services and variable pricing. So it requires a change in the regulations in order to induce service changes. I would like to summarize briefly changes that have been implemented in the four cities that we have been evaluating to give you an overview of the variation in different regulatory revisions that have been implemented and the variety of responses to them.

ENTRY CONTROLS

San Diego, Portland, and Seattle have all removed their previous ceilings on taxicab permits in order to permit new entry. Portland and Seattle have continuous entry based upon safety and service criteria and other operator qualifications. You should note that in Portland, determination of these criteria and operator qualifications for new permits has been left to the discretion of a city official, the Taxi Supervisor, and that's a particular characteristic of that one place.

Also, Portland is the only city whose minimum service requirements tend to exclude unaffiliated owner-operators. That is because Portland requires a city-wide service capability, and this has been interpreted by the Taxi Supervisor as requiring the operator to have a minimum of seven cabs.

San Diego is unique among the case studies that we've been looking at because it has adopted a limited open entry. What I mean by "limited open entry" is that entry is continuous, but a predetermined number of new permits are issued each month. The number has been set by the City Council. Beginning in January 1979, San Diego issued six permits a month; since July 1979 the City has issued 15 permits a month.

Indianapolis is different from the other three in that its open entry was affected by a redistribution of licenses that had been revoked because the taxicabs had been out of service for over 60 days. These permits were made available to all applicants that met safety and service requirements. Indianapolis achieved this redistribution of permits under open entry conditions administratively. There was no change to its ordinance and no council action involved.

Indianapolis' open entry took place in the mid-70s. The other sites that we have been looking at are currently implementing their regulatory revisions. Most of them adopted their new ordinances in 1979.

The preliminary responses to open entry in these four cities have also varied. I want to stress that the responses we have seen so far appear to depend on the local conditions preceding open entry. In San Diego, for example, the total number of outstanding permits had evidently exceeded the population-based ceiling for some time prior to its removal. There was a longstanding waiting list of applicants for new permits prior to adoption of the new ordinance. They had over 200 applicants for new permits going into open entry, and in 1979 San Diego issued 99 permits. Not all of the new permitees have actually initiated service--gotten their vehicle inspected, and got it on the road.

What happened was that during 1979, 77 new operators began servicing San Diego, the majority being independents. That increased the total number of operators by about 19%. This is the largest response to open entry that we have seen.

In Portland, there was a different set of preexisting circumstances. The existing licenses apparently numbered under the allowable ceiling, as determined by population ratio. There was no evident demand for new licenses prior to the open entry action. There were even indications that licenses were going unused. If somebody sold out of the business, it was the practice for the association to hold the license until a buyer could be found, and in the meantime the cab would go unused and be inactive.

Since open entry, which was effective in Portland in March of 1979, there has only been one new company that has entered the taxicab business. It obtained seven licenses in May of 1979 and an additional five permits in December of 1979. One of the 3 preexisting operators, who had held 102 permits, acquired 3 new permits. That is a total of 15 new permits for the year in Portland.

In Seattle, the outstanding licenses had exceeded the population-based ceiling, and there were some indications of oversupply. There was no interest in new taxicab permits for many years prior to open entry, and up to 10% of the existing licenses had reportedly not been renewed.

Since open entry, approximately 28 licenses have been added to the 400 permits authorized in Seattle.

In Indianapolis, more than 300 unused licenses had been revoked between April and December of 1973, but only 219 were redistributed. Entry was open to all comers who could meet the safety and service criteria, but apparently all of the available licenses were not requested. So there were fewer actual taxi permits than there had been before.

Open entry in Indianapolis did not attract operators who had not previously been involved in the local industry, either as operators or

as drivers for existing operations. Only one new entrant came into the industry during this redistribution. The number of independents went from five holding ten permits in 1972 to 32 in 1974 and was back down to 26 by the late 1970s.

I think these results show that there has been a varying response to open entry, and that there has been no consistent avalanche of requests for new permits under this system. I will now review the major changes in rate regulations in these four cities in a similar fashion.

RATE REGULATION

Two of the four cities--San Diego and Portland--have adopted maximum rates below which operators are allowed to charge whatever they choose. In both cases adoption of the maximum rate was explicitly intended to induce price competition. But these two cities show a variable response, and that response can be at least partly explained by local conditions.

In San Diego the maximum was set fairly high--$1.50 a drop and $1.50 a mile. It was believed the high rate would encourage competition below the maximum and act to preclude frequent requests from the industry for a change in that maximum, thereby allowing distancing of the regulator from the chores of regulation.

Preliminary responses to date have shown a very wide variety of rates among existing operators, all the way from the previous rate of 80¢ a drop and 80¢ a mile up to the maximum of $1.50 a drop and $1.50 a mile.

In contrast with San Diego, Portland carried over its previous maximum of 90¢ a drop and 80¢ a mile into its new ordinance. All the existing operators charged the maximum rate going into open entry. The newest entrant charged below the maximum rate. Eight months after adoption of the new ordinance, the maximum rate was increased to $1.00 a drop and $1.20 a mile and all of the operators, including that newest entrant, are charging the maximum rate.

The Portland case raises doubts about the ability of maximum rate regulation to achieve price competition. Portland's City Council has already raised the rate once, and all of the operators are charging the maximum. So there is a real question about whether it is inducing price competition.

Portland also has flat rates for trips between the airport and downtown as well as for trips wholly within the downtown. We do not have any evidence on the use of those rates as yet, but would like to note that the airport flat rate has also been increased by about 25% since the new ordinance went into effect.

There have been some problems in San Diego and Seattle, where there is total open rate setting as opposed to maximum rate setting. Passenger confusion has resulted from such variable pricing. This confusion is particularly acute at the airports. Both San Diego International and SEATAC (Seattle-Tacoma) airports have underlying first-in--first-out principles of operation in their taxicab queues. SEATAC has a holding area from which passengers call a taxicab, and San Diego has a front and a backup queue that operate on a strict first-in--first-out principle. This tends to remove the incentive for competitive pricing at the airport. Although posted signs notify passengers that variable pricing is in effect, and in Seattle also notifies them of average fares charged in the locality, it is still incumbent on the customer to make the selection of the cheapest taxicab or the best taxicab. At SEATAC, this may mean that a passenger has to reject the taxicab that is sent up from the holding area and call another. At San Diego International it means waiting until the preferred cab is in the front of the queue before you can leave. These are obstacles that indicate the need for discussion between the airport authority and the city.

Independent operators have tended to focus on airport operations, particularly in San Diego and Indianapolis. As a result, the taxicab queues have lengthened and brought about reported increases in short-haul refusals, backloading the queue, and skydiving the queue, and increased passenger complaints. So in addition to the principles of operation at the airport, localities should think about what the enforcement needs at the airport are going to be with regulatory revisions and whether an airport starter is needed.

This is a brief rundown of what has occurred in the four cities. I would like to summarize what some of the preliminary responses to these regulatory revisions yield in terms of transferable implications for other localities to consider.

RESPONSE TO REGULATORY REVISION

The foremost thing that we have noticed in most of the cities that we have been looking at is that implementing regulatory changes tends to take a lot of time and continual involvement by regulators and key city staff people throughout the revision period, throughout the operator information efforts that are involved, and in the early phases of implementation. In three of the cities it was nearly a decade between the original studies that got the regulatory revision process underway, and adoption of the new regulations.

As I have also indicated, enforcement needs may increase somewhat, at least over the short term, especially where local regulators anticipate large numbers of independent operators or variable pricing. These needs may also include airport police or taxicab starters.

Operator information becomes administratively more difficult where you have a large number of independent operators or small firms as opposed to a smaller number of large firms. Plainly, it is more difficult to get in touch with a lot of individuals.

Abundant resources may be required for public information efforts, and city budgets may not provide these kinds of resources. Public information efforts are needed so that the traveling public can be made aware of the potential benefits represented by new fare structures and services. Special attention needs to be given to diminishing the passenger confusion resulting from variable pricing. Operator liaison efforts are especially important in order to help operators provide these innovative services.

As Mr. Samuels indicated, relaxation of entry restrictions and rate regulations have been more controversial than changes in service standards. We have also noticed that relaxation of entry restrictions has been much more controversial with the operators than relaxation of rate regulations. The latter tends to allow the operators more direct and immediate control over their own pricing schedules in order to meet their operating costs.

But entry control--removal of entry restrictions--has been controversial in almost all of the areas we have looked at. We should remember, though, that the preliminary responses to the removal of entry controls have varied a great deal from city to city.

Operator responses in terms of innovative services have also been delayed somewhat beyond the regulators' original expectations. There appears to be a tendency among operators in all of the places we have looked at to wait and let someone else test the waters first.

On the other hand, there have been some very recent, and as yet not fully documented, reports from one of the case studies that operators are beginning to look more seriously at market segmentation or alternative services, specifically shared-riding, in the face of increased competition.

The wide variety of regulatory revisions and preliminary responses in these case studies suggests that local regulators and operators should consider the following issue before implementing changes:

- Whether local conditions appear to warrant changes in taxi regulations.

- What specific kinds of changes could be implemented and for what objectives.

    --Open entry to all comers.
    --Open entry with restrictions in terms of operation.
    --Size or minimum service requirements.
    --Modified open entry with new permits issued at a pre-established rate.

  - --Open rate setting with no limit on frequency of changes by operators.
  - --Open rate setting with limit on frequency of changes by operators.
  - --Open rate setting under a maximum high enough to reduce frequency of official changes while allowing for price competition.

- Specific provisions aimed at inducing service improvements or innovations.

  - --Radio dispatch capability to encourage areawide service and limit dependence on airport pickups.
  - --No radio or other additional equipment requirements to provide minimum restrictions for independent or minority entrepreneurs.
  - --Definition and provisions for alternative taxi services, such as shared-ride and fixed-route services.
  - --Need for and effect of limitations on airport permits.
  - --Need for 24-hour or double-shift operations, including insurance or nighttime surcharges.

- Administration of the new provisions.

  - --Need for additional staff.
  - --Budgetary requirements.
  - --Scheduling requirements and resources needed to allow for Council, operator, and public discussion of alternative policies.

- Operator or public information efforts and resources.

PROTECTION AND PARTICIPATION OF FREE ENTERPRISE

David M. Alschuler
Multisystems, Inc.
Cambridge, Massachusetts

Protection of Private Enterprise and Equity

Section 3(e) of the Urban Mass Transportation Act of 1964, as amended, states that Federal aid may not be used to acquire or compete with a private mass transportation service, with certain exceptions. This provision reflects a concern for the protection of property rights embodied in the Fifth Amendment, that government shall not deprive individuals of property without due process of law and just compensation. It reflects a concern that subsidies to certain operators may compete with unsubsidized private operators and create competition, drawing away passengers and revenues from a private operator and undermining basic equity rights he may have vested in his operations Thus, the use of Federal funds for subsidies without just compensation to competing private operators could be construed as a taking of property without due process. However, the administrative conditions outlined below make clear that this protection of property rights is anything but absolute.

Section 3(e) provides three exceptions or conditions to the protective conditions for private operators. Thus, Federal assistance may be provided, despite the restrictions in Section 3(e), when --

- The Secretary [of Transportation] finds that such assistance is essential to a program...for a unified or officially coordinated urban transportation system which is a part of a comprehensively planned development of the urban area.

- The Secretary finds that such program, to the maximum extent feasible, provides for the participation of private mass transportation companies.

- Just and adequate compensation will be paid to such companies for acquisition of their franchises or property to the extent required by applicable State or local laws.

UMTA has administratively interpreted these conditions to imply that the section does not require taking, utilization, or compensation; rather it requires the Secretary to make findings concerning the adequacy of local planning and the feasibility of making greater use of private operators. The opportunity which a private operator may have to submit these administrative finds to judical review is discussed below.

This paper is excerpted from a study performed by the authors under subcontract to the International Taxicab Association and funded by the Urban Mass Transportation Administration. The final report is Taxis, the Public and Paratransit, Washington, D.C., U.S. Department of Transportation, the Office of Technology Sharing, 1978.

ADMINISTRATIVE PRECEDENTS UNDER SECTION 3(e)

The UMTA interpretation of Section 3(e) has held that only "mass transportation" companies are entitled to protections of the section. Private exclusive ride taxi services and companies have, thus, not fallen within the protective domain of Section 3(e). However, policy statements and actions by the Administrator indicate an evolution of UMTA policy with respect to requiring inclusion of private operators in the planning process and in affording qualified existing private operators the opportunity to provide services. This is particularly true with respect to the planning and provision of paratransit services. Quoting from a letter from Urban Mass Transportation Administrator Robert Patricelli to B.R. Stokes, dated July 12, 1976:

> Pursuant to the policy expressed in Section 4(a) of the UMT Act of 1964, as amended, UMTA encourages maximum feasible participation of existing private transportation carriers in the development and implementation of local paratransit programs and projects assisted with UMTA funds. Specifically, local taxi operators and other private carriers (whether or not they are currently providing mass transportation services) must be afforded a fair and timely opportunity to participate in the planning of community-level paratransit services and special services for elderly and handicapped persons developed pursuant to DOT Regulations for Transportation for Elderly and Handicapped Persons (49 CFR 613.204). Local private carriers must also be given an opportunity to recommend the inclusion of private paratransit services in the annual element of the Transportation Improvement Program.
>
> It is against UMTA's policy to subsidize publicly-owned mass transportation systems and private non-profit organizations in wasteful competition with existing private operators when such operators are willing and able to provide paratransit services in an economic manner. Local taxi operators and other private carriers (whether or not they are currently providing mass transportation services) must be afforded full opportunity to bid for the provision of any general or special paratransit services proposed for the implementation with the assistance of Federal funds. If a private operator can demonstrate that he is able to provide the required service in a cost effective manner, he should be given the right of first refusal on any such new services. An honest effort must be made to contract paratransit services out to private operators and to enable them to qualify as providers of such services.
>
> Compliance with the above policy will be ensured by UMTA through a review of the annual element of the Transportation Improvement Program, and of individual paratransit project applications for Sections 3, 5 and 16(b) grants. Full review will be instituted upon complaint by a private operator that he has not been given a fair opportunity to participate in an UMTA-assisted paratransit program.

> Pursuant to Section 3(e) of the UMT Act of 1964, as amended, UMTA will not provide financial assistance to any publicly-owned mass transportation company for the purpose of operating paratransit services in competition with or supplementary to the paratransit services already provided by an existing local taxi operator or other private transportation carrier, unless it finds that the officially-developed transportation program provides to the maximum extent feasible for the participation of such private carriers. Additionally, compensation as required by State and Local law must be made to private paratransit operators for acquisition of their franchises or property associated with the provision of shared (but not exclusive) ride services.

Shortly after the release of this letter, the fact that UMTA shifted its policy to more directly incorporated existing paratransit operators, previously excluded from protections by administrative fundings, under the umbrella of Section 3(e) was confirmed by the announcement of the release of Section 5 funds to the Delaware Authority for Specialized Transportation (DAST). DAST, a public non-profit organization established by State law in 1974 to serve Delaware's handicapped and elderly who cannot use regular mass transit, operates by contracting with various non-profit health and social service agencies to provide transportation services. Agencies refer clients to DAST for transportation, which is provided to them free of charge. DAST had sought, through the Section 5 grant request, to provide service directly to eligible passengers where non-profit agency service was unavailable.

The DAST grant had been held up for many months because of the vociferous objections of Wilmington taxi operators, who claimed they were not being afforded the opportunity to provide contract service to DAST, even where such service might be cost effective.

The terms and conditions for the UMTA grant included use of private contractors--potentially including existing taxi companies--where cost effective. DAST issued RFP's to 56 private firms, and executed contracts for approximately 20% of its service with Wilmington Diamond/ Yellow Company.

> In announcing the grant to DAST, Administrator Patricelli expanded further on the theme presented in letter to B.R. Stokes: The agreement--
>
> ...reflects UMTA's desire to encourage to the maximum extent feasible the participation of private enterprise in the development and implementation of Federally-assisted urban transportation program.
>
> It is against UMTA's policy to subsidize publicly-owned mass transportation systems or non-profit organizations in competition with existing private operators when such operators are willing and able to provide the required transportation services in an economic manner. Local taxi operators must be offered full opportunity to bid for the provision of local paratransit services. If they can offer such services on a cost-effective basis, they should be given the right to provide them under contract with the public or non-profit body.

The withholding of DAST funds until evidence of such good faith efforts to utilize private sector resources lent a certain muscle to the policy pronouncements. UMTA has been consistent in its response since that time.

JUDICIAL PRECEDENTS UNDER SECTION 3(e)

More recently, a taxi operator in Westport, Connecticut, filed suite in Federal District Court to halt implementation of a subsidized shared-ride taxi service to be operated under contract to the Westport Transit District as a part of a Federally-sponsored demonstration project. This is the only litigation to date that directly addresses the applicability of Section 3(e) in a paratransit context. The plaintiff's request for an injunction was based, in part, on the argument that the proposed program violated Section 3(e) of the 1964 act and constituted an unlawful taking of property without just compensation under the Fifth Amendment. The plaintiff also argued that the project, despite its status as a demonstration project under Section 6, should be subject to the procedural requirements for public hearings and environmental impact findings required under 49 USC 1602(d) for projects funded through the Urban Mass Transportation Act of 1964, as amended. At issue in the suit were fundamental questions of (1) the standing of the plaintiff to sue under Section 3(e) (2) the implications of the Fifth Amendment or Section 3(e) on compensation due the operator and (3) the immunity of Section 6 projects from public hearing and environmental impact statements.

The Federal government and transit district argued that the taxicab operator was not entitled to standing as a mass transportation operator since its type of service did not fall within the bounds of the definitional test for mass transportation applied by UMTA.[1] Additionally, they argued that Section 6 research, development, and demonstration projects were exempt from the requirements of Section 3(e), as well as from the requirements of Section 3(d) that the plaintiffs claimed had been violated.

The initial ruling favored the defendants and established important precedents[2]. On the question of standing to sue, the court ruled that the plaintiffs did not have standing, noting that the interest invoked was "arguably within the zone of interest protected by the statute (the 1964 UMT Act) in question." In making this determination, the court invoked a two-tiered test concerning standing which invoked findings of (1) alleged jury and (2) inclusion of the plaintiffs in a class of interests arguably within the zone which Congress sought to protect. This is a

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[1]Exclusive ride service with ridesharing and group loading permitted only with the consent of the first passenger.

[2]U.S. District Court of Connecticut (New Haven), Civil No. B-76-369, April 13, 1977.

standard test of standing used by Federal courts. The appellate court, however, upheld UMTA's position that the plaintiff was not a mass transportation company since it provided exclusive-ride service only.[3]

The lower court rejected the plaintiff's arguments which contended that the project violated procedural requirements relating to public hearing and an environmental impact statement, determining that demonstration projects were clearly exempted from these requirements on the basis of statements of Congressional intent. This was reversed upon appeal based on the determination that, although the project was funded through Section 6, both the intent and the result of the project would be substantial in nature.

On the issue of unlawful taking of property, the lower court ruled that the action of a public body to undertake subsidized competition with a franchised operator would not constitute a Fifth Amendment taking of property. The court stated that:

> The plaintiff's freedom to exercise their franchise has been in no way impaired even though the profitability of their operation may decline. They have no constitutional right to compensation unless they have a legally protected, compensable interest in operating their franchise free from new competition.

Having determined that the plaintiffs had no Federal statutory right to protection from government competition based on the Fifth Amendment, the court then reviewed protections which might be afforded the operator under Section 3(e). The court determined that Section 3(e) required only that participation of private companies be encouraged "to the maximum extent feasible" and that compensation was required only where there was an actual acquisition of franchises or property. Based on the facts presented in the case, the court determined that the defendants had:

> ...made every effort to invite and encourage the plaintiffs to bid on the participation in the project and negotiated at length on possible roles for them to play under the demonstration grant. Ultimately the plaintiffs declined to bid on the project. The fact that negotiations were unsuccessful does not mean that there has been a statutory violation...Further since to franchise or property interest has been acquired to trigger a duty to compensate [Section 3(e)] has not been violated.

The Westport decision establishes an important precedent that implies that the protections afforded private operators against Federally subsidized competing services are limited; that those protections consist of ensuring only that private operators be afforded opportunities to participate in projects "to the maximum extent feasible."

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[3]Westport Taxi Service, Inc. v. Westport Transit District, United States Court of Appeals, 2nd Circuit, Docket 77-6074, January 24, 1978.

In reviewing the facts of the Westport case, the lower court determined that the open competitive bid process utilized by the transit district to select an operator met this test and that the statute did not protect remaining operators from competition or require compensation. Thus it would appear that public agencies wishing to implement demand-responsive services can most certainly meet their statutory requirements by selecting a contract operator through an open competitive bid process. Losing bidders may have no apparent protections requiring compensation under Federal law, even if they are franchised to operate similar services.

As a final note, the judge cautioned that the plaintiffs could possibly have standing to sue under State statutes which could protect their franchise rights. Such protections would necessarily vary from State to State based on both State statutes and legal percedents.

SUMMARY OF PROTECTIONS AFFORDED PRIVATE OPERATORS UNDER FEDERAL LAW

In summarizing the rights and protections afforded private taxicab operators under the Fifth Amendment, Sections 3(d) and 3(e), a recent U.S. DOT study concluded:

"...recent litigation has resulted in a ruling that...the procedural requirements of Section 3(e) are required when the result of the (demonstration) assistance could potentially be competition with a 'mass transportation company.'" To date, conventional, exclusive-ride taxi services have not qualified as "mass transportation" and, therefore, have been denied these added safeguards. It should be noted that this recent case is legally binding only in a few states, and, although it is clearly persuasive authority, other jurisdictions are free to distinguish the application of capital grant and demonstration grant requirements.

The more difficult question which may have to be addressed in the near future is how to handle an existing transportation company offering both shared-ride and exclusive-ride service. Since shared-ride services are recognized as mass transportation, the issue then becomes what protections would such a company qualify for under this new status. Presently, UMTA"s proposed policy requires a finding that the shared-ride portion be more than an "incidental adjunct to its main business" before such provisions apply. How the courts will interpret this administrative direction remains an open question.[4]

This latter problem may become particularly complex if the shared-ride service is operated under an assistance contract to a public agency, which may later decide to withdraw that contract in favor of another contract operator or direct operation by the public agency.

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[4]Richard Gunderson, Analysis of Litigation to Prevent Paratransit Implementation (draft), Transportation Systems Center, Cambridge, Massachusetts: U.S. Department of Transportation, 1978. P. 53-54

The U.S. DOT report further concluded:

> Private paratransit companies have been unsuccessful in claiming constitutional violations resulting from paratransit implementation. To substantiate the constitutional claim of deprivation of property (business franchise) without just compensation, it is necessary to show that there was a taking of property by the government. The cases have held that there is not taking unless the existing company had a legally protected right (such as an express agreement by government not to compete) to be free from such competition. Another constitutional claim which has been unsuccessful is denial of equal protection of the laws. The one case which analyzed this claim held that transit service was not similar to exclusive-ride taxi service and, therefore, the taxi licensing laws did not pertain.[5]

Although UMTA has administratively interpreted exclusive ride taxi operations as being ineligible for compensation under Section 3(e) because it is not "mass transportation," there clearly exists a strong overlap between the markets served by paratransit services and taxi services. Based on all available evidence to date, exclusive ride taxicab operations are clearly affected by the implementation of subsidized demand-responsive paratransit.

This is the strong underlying recognition behind UMTA's gradual policy shift with respect to the taxicab operators future role in providing paratransit services. As Altshuler states:

> The emergence of paratransit poses the issue of taxi-transit competition in a direct manner; it brings into question the legal and policy definitions of the term "transit" that have guided federal policy over the past dozen years; and it raises a host of extremely difficult questions about how to integrate taxicabs into transit planning, transit subsidy, policy, and publicly subsidized competition.[6]

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[5]Ibid., p. 54-55.

[6]Alan Altschuler, "The Federal Government and Paratransit, "Transportation Research Board Special Report 164, p. 95."

REGULATORY REVISION IN DALLAS, TEXAS

Gary Green
Director, City of Dallas Public Utilities Department

Dallas taxicab operations underwent significant changes during the 1970s.

At the beginning of the decade only one taxicab company was franchised. It operated about 400 taxicabs with employee-drivers. Today there are four companies operating almost 800 taxicabs with 100% independent contractors. Individual drivers contract with one of the four franchised companies. For a weekly contract fee, the company provides radio dispatching service, liability insurance, administrative services, and necessary equipment, such as taximeters, top lights, and garage facilities.

As far as we know, Dallas is the only city operating with 100% independent contractors. This new situation, although increasing the number of licensed taxicabs available, did create some service problems.

Independent contractor operations resulted in a substantial loss of driver control. For example, the company management does not assign hours, days, or particular calls to the individual drivers.

Most of the independents preferred to serve key areas outside the Dallas central business district, which were favored by the existing rate structure. The central business district, on the other hand, began to experience service interruptions, especially during late evening hours and for short trips.

It was decided that the best way to contend with these problems was through a revised rate structure. In order to provide an incentive for drivers to accept shorter trips, the initial meter charge, or flag drop, was doubled. To address sevice interruptions during the late evening hours, passenger charges were doubled from $.50 to $1.00 a passenger between the hours of 9:00 P.M. and 8:00 A.M.

These measures have increased service availability for shorter trips and late evening hours and increased overall service delivery in the central business district.

The Dallas taxicab ordinance was revised in 1976, providing the city with flexibility for innovative taxicab operations. The revision removed previous restrictions that made it impossible for taxicabs to be used in such modes as shared-ride and taxi-feeder service. We do not currently have these services in Dallas, but we do have contingency plans for taxicabs to be used in these modes in the event of another fuel shortage or other unusual circumstance.

For example, when the 60,000 members of the National Home Builders Association met in Dallas, a temporary permit was issued to the Dallas Junior Chamber of Commerce to provide courtesy taxi service. Approximately 100 courtesy Jaycee taxicabs supplemented the regular taxicab fleet.

Last year the City Manager appointed a task force to analyze taxi service in Dallas with special reference to the existing level of service, the ideal level of service, and service improvements. The task force included representatives of the Dallas Chamber of Commerce, the Dallas Convention Center, the Hotel and Motel Association, the taxicab companies, and the City's Office of Transportation Programs and Department of Public Utilities.

In its report to the Dallas City Council in January 1980, the task force concluded that taxicab service had improved throughout the city. One recommendation subsequently adopted by the City Council was that

> while the City of Dallas should retain the authority to set maximum limits on the numbers of taxicabs to operate in the public interest, the task force believes that the marketplace should be allowed to determine the number of taxicabs to the greatest extent possible. This decision has not been a popular one with taxicab drivers.

The City Council also requested a study be made of ways to effect a fuel cost surcharge for taxi rates. Staff recommended a $.50 a trip surcharge to offset the doubled fuel prices. This would have maintained the incentive to serve shorter trips and would not have required alteration of the meters. The taxicab industry opposed the surcharge and favored an increased mileage charge. Council members agreed with the taxicab industry.

In conclusion, it is apparent that, because of the rapidly changing nature of public transportation, innovations are often necessary in order for taxicab companies to survive. The City of Dallas has been able to implement some of these innovations. As a result, the taxicab industry in Dallas is financially healthy, riders enjoy reasonable rates, and service is at an all time high.

REGULATORY REVISION IN INDIANAPOLIS, INDIANA

Gerald Young
Sergeant, Indianapolis Police Department
City of Indianapolis Comptroller's Office

The first point I would like to make clear is that I am neither a taxicab operator nor a transportation expert. I am a police officer. My early experience with taxicabs was really running them off what we in Indianapolis call the "strip." That was the only involvement I had with taxis until I was detailed to the Comptroller's Office.

The Indianapolis City-County Council is a 29-member body that sets the rates for taxicabs and also sets limits on the number of licenses that can be issued. In Indianapolis, that number is 600.

In 1972, my first assignment in the Comptroller's Office was to get the cab situation improved.

The largest of three cab companies, Red Cab, owned 302 licenses of which only two-thirds or three-fourths actually were providing service on the street. We revoked the unused licenses and reissued them on a first-come--first-served open-entry basis.

Later, union drivers of Red Top went on strike, bankrupting the company. Indianapolis reissued 125 licenses in May 1973, and another 94 licenses in April 1974.

Problems developed, both in terms of the business management capabilities of many of the independent drivers and in terms of the local government's ability to enforce service standards.

Many of the independent drivers had mortgaged their homes and invested their savings, and were not prepared for the problems they were required to face when they were in business for themselves.

The City-County government also had many enforcement problems to address. This included the tracking of taxicab ownership. By ordinance, a taxicab license is non-transferable, but some taxicab operators simply transferred the assets.

In addition, the taxicab drivers were not required to have offices or radios. This, along with the fact that we had assigned a variety of colors, stripes, and polka dots to the independents, made it very difficult to locate specific taxicab drivers in the event of a complaint.

We also experienced more serious problems with the independents, namely increased crime. One of the largest narcotic busts in our city was of one of the independent cab owners. We also had an increase in prostitution utilizing the taxicabs.

In sum, the independents were an enforcement problem. The open-entry system did not work for us. We are now back to three main taxi companies and a few surviving independents who provide more personal contract services and the airport service.

Due to our experience, if we were to reissue licenses again, I think we would make more stringent requirements of the taxicab drivers. This would facilitate enforcement of the open-entry system.

REGULATORY REVISION IN SAN DIEGO, CALIFORNIA

Elaine Balok
Assistant to the City Manager
City of San Diego

The general philosophy in San Diego is not to treat the taxi industry any differently than any other industry in the city. In that vein we have enacted regulatory revision policies plus other policies to allow greater flexibility and service delivery possibilities.

We revised our shared-ride regulations from a meter to a zonal charge. Taxis are allowed to operate on a fixed route, per capita basis. An operator can select a route, file it with the City Manager's office, post it on the side of his taxicab, and select a rate for that route. Under this arrangement the taxicab operator can provide basically three different types of services: (1) he can utilize his meters for exclusive ride (2) he can post a fixed route and charge on a per capita rate and (3) he can operate as a shared-ride taxicab on a zone rate basis. All of these can be accomplished by one taxicab at different times during the day.

Modified entry and competitive pricing have been tied together because we did not feel competitive pricing could succeed in a closed-entry situation. We are now issuing 15 permits a month. As of April 1st we had approved 176 new permits, 115 of which have gone into service. The others are still acquiring equipment, and we expect them to be in service very soon.

Our waiting list, which was quite extensive when we began this project, still has over 100 people, and the demand for taxicab permits seems to be holding up. We anticipate, however, that new entrants into the taxicab market will determine for themselves if the market is saturated.

I use the term "permits," because in our code revisions we struck the terminology and the concept of "certificate of public convenience and necessity." Instead, we call it a permit process through the City Manager's office. We feel that the combination of open entry, competitive pricing, and the additional services available to a taxicab operator will help to vitalize the industry and lead them to seek additional markets and additional services.

The response to the fixed route plan has been relatively good. We have a large military population in San Diego and a large tourist population. The fixed routes that have been selected basically serve those two populations. We are hoping that operators will also go into the elderly and handicapped market and provide more fixed routes.

We have incorporated taxicabs in our planning for new or special services by allowing them to supplement the City's Dial-a-Ride system for elderly and handicapped persons, which utilizes 21 van-type vehicles, 9 of which are wheelchair-lift equipped. We utilize taxicabs as a supplement to that service.

We are exploring the taxicab feeder concept. San Diego topography lends itself to that type of operation very easily, and we have selected two or three areas in which we would like to attempt a taxicab feeder demonstration project. We have also included taxicabs in our fuel contingency plan for the mass transit system. And we are presently promoting shared-ride service. Shared-ride service, as I indicated, is on a zone basis. The fare is calculated by the dispatcher, although each cab participating in the program carries the zone map and a zone matrix.

The response to shared ride service has been slow. We expected it to be slightly greater, but we do have two companies that have begun shared ride service during the past month. One of our basic objectives in making the change was to increase taxi service and to provide for other than exclusive-ride service. Two surveys of origins and destinations and levels of service were conducted in November 1978 and November 1979. During that time interval, an additional 70 cabs came into service, and the trips per day increased 28 percent.

REGULATORY REVISION IN DADE COUNTY, FLORIDA

Leon Sachs
Chief, Taxicab Regulations
Dade County

I think there is general agreement that the taxicab industry has proven its ability to provide demand-responsive public transportation and that taxicab operators who are willing and able to provide other transit services should be given the opportunity to offer them.

Furthermore, it is generally held that the existing restrictive governmental regulation of the industry needs to be reviewed. Ron Kirby has made the point that the regulation of taxicabs had a profound and complex effect on the quality of services they provide. Regulatory restrictions that limit the taxicab industry, deprive the public of needed services, and provide very little discernible benefit need to be changed.

What I'm going to talk about this morning is the taxicab regulatory changes that have been instituted in Dade County. Major changes have been made. The process was difficult, and the issues were controversial. The business community was strongly in favor of the changes, yet the municipalities were against it, and it intensified a smouldering debate about the appropriate role of an areawide regional government vis-a-vis municipalities within the region.

Dade County has a two-tiered metropolitan form of government. There is a County government with areawide powers, operating as a municipality in the unincorporated area (which makes up half the population), and 27 cities that deliver local services. Since 1970, the transportation function has been centralized in the County government within the Office of Transportation Administration, which has overall responsibility for planning, developing, and operating both the transportation system and the transit portion of it. The Division of Taxicab Regulation is part of the Office of Transportation Administration.

The taxicab industry in Dade County consists of 1,350 taxicabs operated by 25 different associations or companies. The number of taxicabs operating as independents is negligible--approximately a dozen.

Taxicab regulation prior to regulatory reform was a system of dual regulation, with the municipalities regulating all matters except rates within their boundaries and the County government having responsibility for rates and regulation in the unincorporated area.

Regulatory reform grew out of events that occurred over the past five years. It was not until 1975 that the County government assumed any role in the regulation of taxicabs and that was at the wish of the cities, the operators, and the County government. The major objective was to integrate the taxicab industry into the overall transportation system.

The problems of dual regulation came to the forefront when the County established its initial taxicab rate. The Board of County Commissioners determined that the most appropriate regulatory setup was for the County government to exercise exclusive regulatory control over the industry, and in 1976 they proposed a referendum to amend the county charter accordingly. The amendment was adopted on a Countywide basis by a two-to-one vote.

The County government, in developing elderly and handicapped transportation systems in 1977, made an effort to involve the taxicab industry as service providers. Again, the problem of dual regulatory control and fragmentation of the industry showed a need for regulatory change. In 1978, while the County was working on the program, it received a Service and Methods Demonstration project grant to improve paratransit services and incorporate them into the transportation system.

The paratransit program has four components of regulatory reform:

- Eliminate geographical restrictions to minimize deadheading and facilitate the development of a more efficient dispatching system.
- Modify entry regulation to increase taxicab supply if service demand increases.
- Rationalize regulatory procedures and standards to permit greater flexibility and the development of innovative services.
- Simplify the regulatory and licensing system.

Based on work done during the Service and Methods Demonstration project the County proposed an ordinance to implement regulatory change. The one change that became the major issue was the elimination of municipal entry restrictions and municipal regulations. This is due, in part, to the fact that in the majority of the municipalities there was a single taxicab company that had had monopoly.

A major consideration in proposing this elimination was deadheading. In a 1978 study of the industry, we found that deadheading accounted for 55 to 56% of the miles travelled and that approximately 15% of that mileage was due to requirements within the municipalities that taxicabs could not pick up passengers unless they had a municipal permit.

The passage of the ordinance enabled us to meet three of the four objectives. We have not addressed the situation of entry regulations as yet.

It was very interesting to us that the members of the taxicab industry who opposed Countywide regulation did so on the grounds that the County government administrative proposal was not strong enough. It was the first time that the taxicab industry had been in favor of stronger regulations.

Within 90 days after the passage of the ordinance four lawsuits were filed against it. A consortium of municipal taxicab operators and two major cities sought injunctions to keep the County from preempting municipal regulatory control. The last lawsuit was brought by the municipal operators who are seeking $10 million in damages for potential or alleged losses based on the value of their municipal certificates being decreased.

The County has been enjoined from implementing the ordinance. The matter is now before the State Supreme Court. The court has refused to accept the last case until a decision is made on the ability of the County to implement the ordinance.

As I said, regulatory reform is an ongoing process. The goal of the County government is to have the taxicab industry play a greater role in the overall transportation system. A number of features were built into the ordinance to guarantee that. One was the creation of a standing advisory committee comprised of the taxi industry and major public elements that would be responsible to the administration to determine how the taxicab industry could further serve the community.

Another feature was a policy statement on behalf of the County government pledging technical management and other assistance to the industry to help carry out its transportation goals.

We are moving ahead in a number of other regulatory areas, primarily towards consolidating, within the framework of the County government, the regulation of all private operators. We have been successful in having the County preempt State regulation in a number of other areas which will allow us to develop a total regulatory program covering all elements of the private system.

Lessons to be learned? I don't know if there is any transferability. Every area is different. Every political situation is different. We think one of the things that worked well in our area was that the taxicab regulations were considered part of an overall transportation management system, and everyone recognizes the lead role of the County government.

Secondly it made sense that taxi service, as a transportation service, not be limited by municipal boundaries within the metropolitan area. And lastly we feel it was important that at least one of the elected officials took a specific interest in and decided to push this issue.

REGULATORY REVISION IN SEATTLE/KING COUNTY, WASHINGTON

Hon. Randy Revelle
Councilman
City of Seattle

I would like to make a couple of points about the history of taxicab reform in Seattle. The revisions were not based on an ad hoc approach or ad hoc attack, as some may like to claim, on the taxicab industry. They were part of an overall, comprehensive reform of all of the regulatory licenses which govern 150 businesses, including taxicabs, in the City of Seattle.

We began that reform back in 1974 when we spent nine months to a year developing a series of policies to guide elected officials in dealing with the regulations governing 150 different kinds of businesses including, cabarets, taxicabs, charter buses, tow trucks, and security services in the City of Seattle.

After I summarized these licensing principles to the City Council, one of our most astute members said, "If you clear away all that Harvard and Princeton gobbledegook, aren't you really trying to say that in the City of Seattle we should be guided by the following motto: Government should not interfere with private industry unless there's a damned good reason for doing so."

I said "yes," that is really what I was trying to say, and that is what we have been trying to do for the past six years in the City of Seattle.

The next major step I would like to highlight is a matter of the multijurisdictional licensing program. In Seattle and King County we still have three separate governments--the City of Seattle, a city of 500,000 people; King County, a county of 1.6 million people, including 500,000 who have no other type of local government; and the Port of Seattle, with a part-time, five-member commission, that governs the Port of Seattle, and the Seattle-Tacoma International Airport. It is the latter facility that brings the Port of Seattle Commission into the taxicab regulation business.

Prior to the changes we made, there was little coordination among these three jurisdictions. Requirements overlapped and frequently conflicted. We felt there was no major problem--one single taxicab company had an exclusive contract for the cream of the business which was out at the airport and involved from $1 million to $1.5 million worth of business a year.

Our first effort was to convince the Port of Seattle not to renew the exclusive contract and to join with us in creating a system that allowed all of the operators in Seattle and King County to compete for that part of the business.

That change was instituted on an interim basis in January 1977. It was refined and enacted into law with the regulatory reforms in May 1979. So with some exceptions, we now have a multi-jurisdictional licensing program in Seattle and King County.

The basic regulatory reforms were adapted in May 1979.

First, we went to, what in my judgment is incorrectly called, open entry; that is, there are no arbitrary numerical restrictions on the number of licenses to be issued by Seattle. The catch is, and the reason it isn't truly open entry is, we have increased the driver fitness, vehicle safety, and insurance requirements that an applicant must meet to obtain a license. A truly open entry would allow anyone in, at anytime.

King County was somewhat more hesitant than the City of Seattle to pursue open entry. There was a recent effort by a County Council member and a number of representatives of the taxicab industry to convince the County Council to maintain closed entry and not to follow the City of Seattle. That effort was defeated about two weeks ago and in another week at long last we will have a full program in Seattle and King County with respect to the open entry issue. Frankly, in our jurisdiction we have been limping along on one foot, half in the old system and half in the new system. That does not work very well. You have got to have one or the other.

Our second reform was increasing the level of driver fitness, vehicle safety, and insurance requirements.

Third, we dropped the system of having both the County and City Councils set and regulate rates. The rates are now set by the various members of the industry. They have an opportunity four times a year to file rates. Those filed rates establish the rates for that particular company for the next quarter or until they seek to file an additional rate.

We have reinforced and refined a few other multijurisdictional programs and have eliminated a variety of nuisance requirements, such as the submission of trip sheets to the city. We also allow a number of different services to be carried out by taxicabs. For example, at least package delivery service is now permitted.

It is really difficult at this point to make a fair judgment on the results of the ordinance. We will need at least three or four years to make an accurate assessment of the effects of open entry. In the judgment of everyone I have talked to, it takes that long for a system that was regulated for 50 years to adjust to a less regulated situation. It does not happen overnight. The members of the industry, the public, and the government simply do not respond that fast to such a significant change, so I think anyone who makes conclusions, definitive conclusions, about what's happening in Seattle at this point sorely misunderstands what is going on.

Also, frankly, we have had too little good data to make an accurate evaluation. We have not had the resources in the Department of Licenses and Consumer Affairs to organize the necessary data collection tasks to be able to determine the impact. That is one reason why we appealed to the Urban Mass Transportation Administration for a grant to help us collect and evaluate data.

I can say that up to this point, and again I caution you that you are at looking at three- or four-year timeframes, industry fears have not materialized, there have not been any taxicab wars; there has not been a customer revolt, the fares have not skyrocketed, and there has not been a flood of new licenses.

Again, because of the data problem, depending upon how you count it, we have added some 20 to 80 new licenses. We will make an award at this conference if you can tell us precisely what the number is based on the data that we have been able to develop so far. There has been a slight shift away from the three big companies. We estimate that approximately 5% of the drivers have licensed themselves independently.

Two conclusions. First, lest you forget, is that the goal we have been trying to achieve in the City of Seattle is to improve taxi service to the public by improving the economic health of the taxicab industry. Second, we fervently believe the best way to accomplish that is for government not to interfere with private industry unless there is a good reason for doing so. Thank you very much.

REGULATORY REVISION IN SMALL CITIES: THE NORTH CAROLINA EXPERIENCE

Gorman Gilbert
University of North Carolina
Chapel Hill, North Carolina

In North Carolina, where we have a lot of small and medium sized cities, we have good information on the size distribution of the taxicab industry.

We generally have a system of small city operations. Ninety-one percent of the taxicab firms have fewer than ten taxicabs. We have found, at least in North Carolina, that taxicab users in small cities are very different from those in large cities. In North Carolina cities, 54% of the patrons of taxi service make less than $10,000 a year. At the other end of the scale, people with higher income levels are almost totally absent from the taxicab market. There is a very strong early month ridership peak, after the receipt of social service, social security, and welfare checks.

What all this means, is that small city taxicab operators are in a very precarious financial position. They have little time and money to attend conferences like this or even to attend conferences of taxicab operators in their home states. They serve a population that is primarily or almost entirely taxi-dependent. These are people that have really no other mode of transportation and depend heavily in a non-discretionary way on the availability of taxicabs.

Because of this, taxicab operators in small cities are particularly susceptible to competition from social service agencies. Social service agency transportation services as currently set up are in direct conflict with taxicab services, much more so than is the case in large cities. The result is that the taxicab operations in small cities are very vulnerable and are a shrinking portion of the taxicab industry. There is a very serious question of the survival of the taxicab operations in very small cities.

This is seemingly a paradox: the taxi operators that need most to be included in Federal programs are the very ones who have not the time nor the money to do so.

The regulatory environment is also quite different in small cities. You have heard a lot this morning about the question of open entry and closed entry, enforcement problems, and so forth. In the typical small city, there is open entry and very little enforcement. Very few people even know where the taxicab ordinance is, far fewer people know what is in it. In many cases the only person who can even tell where to find a copy of the taxicab ordinance is the taxicab operator.

In many cases, enforcement is either non-existent or very uneven. In one city in North Carolina, one policeman was assigned the duty of enforcing the taxicab ordinance. This is a city of over 100,000. He was available for this purpose from 1:30 to 3:00 on Thursday afternoons.

To give you further information about this, let me cite a review of taxicab ordinances that we conducted two years ago this month in North Carolina. One of my students reviewed taxicab ordinances in 33 cities, all of which had populations of over 10,000. Of these 33 cities, only 9 had any form of entry control and four or five of these had non-binding entry control. In other words, they have limits in place that are greater than the actual demand for taxicab licenses.

Only 2 of the 33 cities explicitly provided for shared riding. Group riding, however, that is three or four people riding for the price of one, was available in 27 out of the 33 cities. Contract services, or services to a social service agency on a non-meter fare, was prohibited in a number of cities.

Many had a long list of nuisance provisions that I am sure all of you are familiar with: for example, no spitting. Twenty-five cities required fingerprints of the drivers, and four cities required signed affidavits or character references for each driver as part of the application process. Several cities required an FBI check for a driver's criminal record. Health checks, particularly for venereal disease, were required in several cities. Uniforms were required in six cities, particularly at certain times of the year. One city required a sign to be placed inside the cab saying, "Passengers, for your protection, keep a record of your driver's name and record." And finally, in several of our cities, there were ordinance provisions that prohibited females from riding in the front seat if the driver happened to be male or vice versa.

The examples illustrate the fact that there are many problems with taxicab ordinances throughout the country; some of which are not peculiar to small cities. As a gross generality, we could say that many ordinances are punitive, that they are negative in nature, and provide little, if any, incentive for innovative services on behalf of the taxicab operators.

Second, many of our taxicab ordinances treat the taxicab driver, much unlike a bus driver, as a potential or perhaps an existing criminal.

Third, ordinances are grossly out of date. In our study of North Carolina, we found that the average time since the last taxicab ordinance change was 23 years.

I think we can draw two conclusions about regulatory revision from the North Carolina experiences. First, small cities should simplify ordinances to facilitate realistic enforcement. Ordinances should be permissive, rather than punitive. Regulating revision means stipulating that shared riding is in fact a legal means of service and establishing in many cases meaningful entry controls.

Second, I think we can also conclude that regulatory revision, particularly in the smaller cities, is vastly needed. I would say that for a segment of the industry that I think is in a very precarious position, regulatory revision is probably necessary but certainly not a sufficient condition for the very survival of some of these operators.

Issues and Answers

Chairperson: Ellen McCarthy

We are fortunate to have with us today a distinguished panel of representatives from Seattle and San Diego to discuss regulatory revision in their jurisdictions.

The format that we had suggested this afternoon was for those people from San Diego and Seattle who did not make a presentation this morning to make a brief statement of their position on the regulatory revision issue in their cities. Then we will open the discussion up to the floor for questions and answers.

Honorable Larry Stirling

Councilman
City of San Diego

During the re-regulation hearings in San Diego one of the drivers said, "Deregulation of the taxi industry is an unwarranted interference of government into private industry." It was at that point in time that I voted to go into regulatory reform.

I believe there are a couple legitimate areas for regulation: licensing, vehicle safety, and posting of prices. However, the number of cabs in a city or a jurisdiction is not legitimate grounds for city regulation or government regulation, and the rates that are charged are not legitimate grounds for government regulation. If you want to subsidize somebody, do it directly through a user-side subsidy instead of requiring it of the operator.

There is no way for a governmental agency to set rates and keep those rates responsive to the changing market conditions. Those rates should be allowed to go up and down and change in form to conform to the marketing needs of a particular area.

In Kansas City, a "spot" now costs $6,000. That's not the cab--that is the little decal that goes in the window. That shows that there is a cab shortage in Kansas City.

I have pointed out to the Federal government that the Intermodal Planning Group (IPG) and the 3-C transportation planning process does not pay attention to the cab industry or the alternative transit industry, and has promoted costly heavy rail, light rail, and bus systems that absorb every dollar the government will ever be able to tax or to provide.

If the attitude continues that the government should regulate and protect us from competition, the industry will eventually become a dinosaur and run itself right out of business.

The monopolistic requirements limiting cars or radios are discriminatory against minorities and make it difficult for the young, small businessman to get into the business.

The system we have developed in San Diego is not perfect; we are still in the dynamic growth stages of it, but government regulatory revision is not unwarranted intervention into private industry.

Eugene R. Leyval

Executive Director
California Taxicab Owners Association

I would like to discuss some of the experiences of taxicab drivers under the re-regulation circumstances in San Diego.

Today, San Diego driver revenue is typically $46 a day--down 18% from 1978. Out of that amount, owner-drivers must pay capital and operating costs and lease drivers must pay service fees. The employee or commissioned driver generally receives 46% of the day's revenue or approximately $21 a day. In other words, the earnings of employee and commissioned drivers do not even meet the minimum wage.

Compared to the cost of living, drivers' earnings have never been this low. Without re-regulation, as it occurred in San Diego, it is believed that drivers would be earning more today. They are now earning no more than they were in 1973, even with all the rate increases, which have increased 39% in the last 12 months.

In 1973, drivers worked an average of 5-1/2 days a week, 8 hours a day. Today, drivers must work an extra day and extra hours just to earn what they earned in 1973. This has caused concern in the industry regarding liability insurance problems and costs. Many people believe it is unsafe to have drivers on an extended shift beyond 8 to 10 hours.

We know that there has been an increase in taxi trips since 1979, but we believe that the increase is attributable to more cabs on the street. The vehicle load, however, is not up. Drivers are increasing their rates to make their revenue in the face of decreased passenger volume. Reduced revenue is pushing fares up, not the Consumer Price Index.

It is a conceded fact that re-regulation has produced 28% more operators on the street and caused an increase in services offered. There is no observable direct relationship, however, between re-regulation to allow open-entry and innovative services. Innovation and diversification of the cab industry occurs throughout the State of California without regard to regulatory pattern. Some of our largest and most innovative systems and services occur in San Diego, but they also occur in Los Angeles, the Bay area, and the Central Valley.

The industry believes that if there is going to be open entry or relaxation of entry, there should be no ceiling on fares. If we are to approach a free market situation we should allow a free market with respect to fares. In that regard, the industry was very pleased by a recent vote in the City's Council subcommittee to take the lid off of fares.

Wes Walton

Seattle Farwest Services
Seattle, Washington

The taxi industry in Seattle has been and still remains very strongly opposed to the so-called "deregulation," which boils down to nothing more than an open-entry system. Along with the open-entry, we were given the opportunity to work with a filed rate on a quarterly basis, which was one positive product of the regulatory revisions in Seattle.

As we pointed out to the legislators and the administrators from the outset, deregulation would be very detrimental to the industry, and it has proven to be so. Right now we have a very serious panic situation within our industry in Seattle. There are 60 new licenses operating, of which there are about 30 or 35 independents. Their rate structures vary from 40 to 300 percent over what we had prior to deregulation, while major companies are holding to the rate we introduced before the deregulation, which is $1 flag, $1 mile, and $12 clock.

At the airport, the rate structures are so wild that the Port of Seattle is beyond the point of knowing what they should do or how to do it. As Councilman Revelle pointed out, the association of agencies within the City of Seattle, the County of King, and the Port of Seattle, is a step in the right direction in a reciprocal program.

Our experience has been that the local administrators and local legislators did not recognize input from the taxi industry. They could not project the effects of deregulation but felt that they would try it to "see what happens."

As I said, we now have an industry in panic. Ridership is down. We have more cabs on the street than we need, and we are having wars amongst ourselves. I find that direct telephone lines at hospital facilities and hotels have been tampered with and do not operate. The independents are not radio dispatched, but can monitor the calls of the major companies and steal the calls.

If we had retained regulation, we could better control our operation and produce the results that were predicted from deregulation--namely, a more competitive marketplace, better service, and at a lower cost.

Prior to deregulation, I spent many meetings, many hours, with Metro and other agencies in developing some programs for feeder services and shared rides. When I went to the bank to secure financing, to put in the additional equipment for these programs. I was told that after 40 years of doing business with this bank that they would not provide the financing we needed at that time because of the deregulation issue. That was the first and most devastating blow that we received under a deregulation system.

Today, a license that was formerly worth about $10,000 in Seattle has a current value of absolutely zero. We had one small operator with eight cabs. He was one of the finest operators in the city and had received an offer of $50,000 for his company. Today it is absolutely worthless, and he has now closed his doors.

The equipment on the street is atrocious. Cabbies paint and name their cabs at their own discretion. Our equipment has deteriorated, and we are not in a financial position to update and upgrade because financing is not available. If this continues, it is my estimation that the taxi industry as a result of deregulation will be in a totally disastrous situation in two or three years.

Regina Glenn

Director, Department of Licenses & Consumer Affairs
Seattle, Washington

As the administrator, I am the one that, after all the deals have been cut, and the Council has made their mandates and the Mayor has directed us, has the responsibility of transforming the majority of demands into a workable plan, usually with minimal resources. I have to work with the City Council, the taxicab industry, other City departments, such as police and traffic, and somehow get all of these people to work together, be flexible, and continue to communicate.

I heard the police officer from Indianapolis mention some of the very serious problems that came up in his jurisdiction, but I am looking for ways to exchange information so that we can avoid similar problems.

I assumed my position in November of 1979, so I am a new member of the team. The first thing that I felt was needed in the Seattle taxicab industry was to develop open lines of communication. We had an opportunity to apply for an UMTA grant. We used this opportunity to try to establish dialogue with all the concerned parties. We asked the large companies, the independents, and the leased drivers if they would be interested in coming together to talk about whether or not we should apply for the grant.

The point is simply--what is the use of studying the impact of regulation reform if the participants are not interested? I think we got more out of that dialogue by letting them know that the City was honestly interested in their opinion. The major question before them was: Regulation is a mandated law, but how can we work together to improve the system?

QUESTIONS AND ANSWERS

Ms. McCarthy: Now I would like to open up the discussion for questions and answers.

Question: This is a question for Mr. Leyval. How did you obtain the figures on taxicab operators' salaries?

MR. LEYVAL: This is data directly from the San Diego cab company operators, from the payroll reports. The operators know what they are paying and they know what they are taking in from their drivers, and they know what their drivers are reporting.

COUNCILMAN STIRLING: Let me point out that that is not entirely accurate. He obtained the information from Bill Hilton, the manager of Yellow Cab in San Diego, and the data applies solely to the employee portion of Yellow Cab.

Now what Yellow Cab did was to go to a lease driver situtation where they provide a kind of a back up to the front line guys. That information is not available--presumably, the good drivers went to lease, and are making money. And what's left--over in the employee side, are the young guys and women that are being trained and are just learning the ropes. So the data as presented in all due respects, is totally skewed and misrepresentative of the situation.

Incidentally, it's not his fault. It was given to him.

MR. LEYVAL: A brief rebuttal to that. We learned this morning that there may be some indication that there is a saturation point. This probably is directly related to the lack of revenue that drivers are able to generate because of the over supply of taxicabs in San Diego. It is extremely difficult to attract drivers in San Diego in any form, whether employee lease or owner--when revenue is down.

Regardless of whose statistics you're using, if drivers are not taking permits it is because they are not making any money or have no hope of making money.

COUNCILMAN STIRLING: I would like to make a few other points.

Out of the 100 people we still have on our list who are applying for additional permits in San Diego, 15 of them are either drivers or operators, so somebody out there thinks it is worthwhile getting a permit.

Second of all, the argument that taxi owners' income is down is due much more to the cost of fuel and federal taxes than it is to any kind of regulatory reform.

In addition to that, it is incorrect to call it a glut of taxicabs. The operator or the owner may call it a "glut" because he doesn't like competition; I call it an increased supply to improve taxicab service for the people at the airports and other places in the city.

In addition to, the Yellow Cab Company in San Diego, under a regulated fee format, went bankrupt several years ago so there was two thirds of our taxi fleet simply out of business. And with the regulatory reform efforts, contrary to the gentleman that has to use this monopoly as equity, rather than his management ability, the Yellow Cab Company in San Diego reinvested and brought their fleet completely up to date, based on the face that they needed to compete with a lot of young, independent operators who had nicer and cleaner cabs.

QUESTION: This is a question for the two councilmen. Do you think that the government has no responsibility to taxicab operators for the devaluation of taxi medallions?

COUNCILMAN STIRLING: The answer is yes. The government should not be in the business of creating artificial shortages, which it had done in gasoline now. The Department of Energy has been a tremendous boon to this country--$18 billion, and it has not produced one gallon of gas that I can tell.

Government created a housing shortage by government regulation and delays and concerns, and has now created a taxi shortage so that it costs in Kansas City $6,000.

Now I don't think that the taxpayers of the City of San Diego owe you--or Kansas City--owe you, if you happen to be one of these guys, $6,000, because you bought an item that was artificially limited supply. And I think you have zero equity on that, I think it is a classic example of why we've got too much government in this country. The thing to do is cure it, not to throw more regulation after existing regulation.

COUNCILMAN REVELLE: In the interest of brevity, I will merely say that I agree.

COUNCILMAN STIRLING: To further elaborate on the term "equity." As I used that term, I was not referring to whatever a taxicab owner or operator builds up in terms of equity in his or her fleet in equipment. Of course, I hope that that would be a good investment and something to be maintained.

I was talking about the artificial, in my judgment, phony monopoly equity built up in the value of a license in a closed system, and that's a very different matter. I think that that system was wrong, and I do not feel that the local government owes anyone either legally or morally for that artificial value created solely by the government in its monopolistic regulatory system. If the taxi industry disagreed with us, they of course would have a forum in the courts. Happily, they did not choose to pursue that; I think responsibly they did not choose to pursue that.

However, if you are talking about the equity in equipment, in investment, in dispatching services, I suspect I would agree with you that there is a need to protect that equity.

MR. WALTON: From a taxicab operator's viewpoint, I would add a few comments to this discussion.

The future of taxicab services may rest with new markets, but the red tape is too heavy and restrictive. New markets for Seattle include feeder services and elderly and handicapped persons.

It is important to remember that we are working with an industry in Seattle that's been regulated for over 50 years, and most of these operators have put their life's work into this. All they own is their cab and their license, and that is what has been stripped. The ability to pursue these new fields and get involved.

We have tried for over four years to determine a method to get involved in new service areas. Now, however, that the value of the taxi companies has been stripped, it has severely affected the ability of taxi operators to pursue these new service areas. The search for new service areas is not new and is not a result of deregulation. In fact, deregulation has stopped us from proceeding sooner.

And the more that I meet with you people from the public sector, the more I find that you are realizing how important the taxicab industry is to public transportation, and you are coming to us for the input to make it work. The sooner we can eliminate a lot of the red tape, get down to business, and develop systems to provide these services that are needed and are required by Federal law, the better off we all will be.

I don't say that we cannot resolve the problem, but I think we are going to get back to serious work sessions, to reconsider revising this ordinance again, and possibly get back to the entry system which has historically been in the transportation field.

QUESTION: So you think you could have instituted regulatory revision of entry requirements of the types instituted in Seattle and San Diego in a city such as San Francisco or New York where taxi medallions sell for $35,000 to $65,000?

COUNCILMAN STIRLING: The answer is "No," but I probably would not have been elected as a councilman in New York City!

COUNCILMAN REVELLE: I think the values in our city, if I remember correctly, were between one and five thousand dollars. So your point is well taken; they were quite low. One point I forgot to make is we did look fairly extensively into trying to find a fair and equitable and workable process of a phase-out system to handle the value of the taxicab licenses. We just kept running into so many barriers that we finally decided we should either revise the regulations or not.

On the basis of principle and policy, my answer would have to be yes; but never having functioned as a Councilman in either the cities you suggested, I just don't know what their problems are and what the dynamics are. Remember, that what we did in Seattle was institute a package of reforms. When some stand up here and complain about what we did in the case of medallions, they forget to remind you that I was responsible for opening up over a million dollars worth of taxicab business that previously had been limited to one company.

The million dollars was opened up to all of the companies, whether the system was going to be regulated, closed or not, we did that ahead of time. So you have to look at our reforms as a package and judge them in balance as a series of changes; not pick one out and say, "Gee, that was really unfair" forgetting that we also added a million dollars worth of business back into the system.

Now, the one taxicab owner that had the exclusive contract is very mad at me and has right to be.

QUESTION: Councilman Stirling, do you think it is appropriate for local elected officials to disrupt a well run taxicab operation, such as Bill Hilton's Yellow Cab, and make it impossible to sell his business?

COUNCILMAN STIRLING: I will have to disagree on a couple of points. Your first allegation was that the Yellow Cab in San Diego was a well run company. A year ago, I got consistent complaints about lack of service, about raunchy vehicles, about employee turnover, and dirty, filthy, hostile drivers--the whole thing. So while I admire Mr. Hilton, I have to say the company was not one of the best run in the City. The company was not well run.

Secondly, in order to get their rates changed over ten years ago, they had to go to the City Council who could not take the heat of raising the rates against all the poor people. They made a deal with the taxi operator in private to raise the rates. Seven out of nine of the City Councilmen ended up going to jail.

So we have this little antipathy towards Yellow Cab regulation in San Diego.

The question is, whether the taxicab operator who has a monopoly should be able to not only enhance the work and repay the equity, but do that at the expense of the patrons who have no choice because there is a limit on available taxicabs.

The ultimate question is, do the elected officials say it is okay for taxi operators to have a monopoly and for elected officials to tell the citizens that either they pay the rates and ride in the available quality cab with the available quality of service, or they don't ride at all. And the answer to that, my answer to that is not only "no," but "heck, no!"

MS. BALOK: I would just like to comment that if your company is well run and you have established goodwill and have an established clientele, I see no effect upon that clientele as a result of regulatory revision. Your clients will certainly return to your company and be taking advantage of your services if your company is well run.

COUNCILMAN STIRLING: These discussions always get polarized; it seems, unadvoidable. And flash terms are used, and we don't always understand what each of us means by the use of certain terms.

I have the impression that one side believes that unlimited open entry is the only way to go, and I have the impression that the other side believes that there should be absolutely no entry. I have the impression that one side believes that a monopoly means one company in a city, and the other side has some other idea.

There are a variety of realities out there and a variety of approaches to entry. I am not aware of the industry being opposed to entry of one sort or another; I think the industry is opposed to unlimited open entry, and I know of very few major cities any more where there is a monopoly of one cab company.

I would like to suggest that one way of looking at the question of open entry is to point out that the cab industry historically has been an employer of last resort. In times of high umemployment, it was possible with relative ease to find a job temporarily in the cab industry.

And it might be suggested that unlimited open entry creates a rather elitist and exclusive situation, which means that unless you have the $14,000 that may be required to establish oneself in business, you are not going to be able to drive a cab if you need that job. You are not going to go to work for somebody where you cannot even make the minimum wage.

And so we have perhaps a topsy-turvy situation, ultimately, in the case of unlimited open entry, where the observable results among drivers are very bad. And I think we have to ask some tough questions, because I have heard a lot about the values of unlimited open entry. I am beginning to look at reports that are coming out now. I am looking at reports from operators, I am looking at reports from disinterested, objective consultant groups -- and I want to know, and I think we have to ask very carefully, what are the positive results of deregulation, what are the benefits in service to the public?

One of the things we hear is that theoretically, open entry is supposed to result in lower rates and better service. I've heard some reports of disastrous service levels in Seattle and terrible problems in San Diego at the airport. I don't see lower rates and I don't see significantly increased levels of service; and I think as the reports and as the years go by, we want to look very carefully as we get beyond theory and start looking at observable results.

QUESTION: What, if any, ought to be the Federal role in taxicab regulation. Let me start with the Seattle side.

MS. GLENN: One area that UMTA is playing a very important role in is studying the Seattle experience as a third party. It would be even more helpful if they could speed up the funding process, because the delay (90 to 120 days) in bringing in the interest groups brings in some question about how serious the local government is about the follow through. But one role is evaluating the effects of regulatory revision, doing the citizen on site open-end questioning, and helping us with the display of this information to the public.

MS. BALOK: I think there is a very valid role for the Federal government in the area of stimulating the interest for innovative services, and sponsoring the demonstration programs that they have sponsored to begin services such as taxi feeders to the mass transit system, and funding coordination studies that combine social service vehicles with taxicabs, etc. I think it is that type of technical expertise and funding that is of great value to local governments.

COUNCILMAN STIRLING: Well, I think the Federal government can provide a good service in terms of efforts to bring information and people together to discuss issues, such as this conference coordinated by PTI. I think the Federal government ought to keep up that kind of work. Other than that, I think the Federal government ought to get out of the transportation business all together.

MS. GLENN: One other area, just on that issue of what the Federal government can do, using some of the models that exist, HUD has financed the Municipal Finance Offices of America, a research and development center, that a user, practitioner, or administrator could call and ask a question. It is a kind of a hot line. Again, information sharing. That will help us.

Regional groupings are helpful. I would have appreciated it if members in our liaison group in Seattle could also have been here to talk about their version of the "chaos" that Wes had discussed.

COUNCILMAN REVELLE: I want to respond to a remark made earlier. I think it relates to the matter of trying to arrive at an objective assessment of what these various programs are achieving or not achieving. The remark, has been made by a number of people during this time period, and that is that in Seattle regulatory revision has really resulted in higher rates and lousier services, that it is not working, that people are at each other's throats, and so forth.

The only way that we can bring order out of chaos, if there is chaos, is to try and develop a system, a mechanism, or a series of systems for dispassionately assessing what has happened.

My perspective on what has happened to the taxicab industry in the City of Seattle is significantly different than Wes Walton's, and it is also different from what I understood to be the remark made.

In fact, in Seattle, and I can't speak for San Diego or New York or wherever, but in Seattle, we knew rates were going to go up, and no one who knew what was going on ever asserted that the rates were going to go down because of deregulation. There was a rate proposal on my desk for a 48% increase at the time we deregulated. In fact, the industry then instituted only a 42% increase. The only thing that we said was that we hoped that over time, in three or four years, perhaps, the increases would be less than they might otherwise have been under a regulatory system, but that would be very hard to determine.

And in fact, one of the things I would hope someone in the taxi industry in Seattle would try is to test the city's theory that one of the major reasons for the problems of the taxi industry in the City of Seattle have been the climbing rates, because the more the rates have gone up, the less revenue the companies have received, based on the very bad records that we have.

But our theory is that in our system, right now, the person who would make money is someone who would go down on the rates and up on passengers. Not the other direction.

Now having said that, I think you should be aware of a few real problems that I promised I would admit in this morning's session, and did not have time to do so. I am getting tired of dealing with these mythical, overstated problems. Let's take a look at some of the real problems that the Seattle system is facing.

The first problem has been a total lack of effective communication between government and the taxi industry. Because we fought so hard over the reforms, we barely spoke to each other for several months afterwards.

Fortunately, a new director, who came from outside the system, Regina Glenn, who is here today, came on the scene, and was able to act very effectively as a new, fresh face and mediator to begin that communication through the taxi liaison group that we were talking about earlier.

But that kind of communication and cooperation among the two must exist, or the whole program will be ineffective.

Secondly, we have a problem out at the Seattle-Tacoma airport. We never expected that the airport would deregulate fares. We thought the airport, because of their earlier statements, would continue to regulate because of the particular problem you have at the Seattle-Tacoma airport where there is a taxicab line and passengers coming in, and no real way for passengers to go shopping for fares as they might do on the street or as they can do on the telephone.

There is some significant chaos at the airport which has to be addressed. But don't throw the baby out with the bath water. We will address the airport problem. I'll be working on that during the next month with the officials of the airport in the county. That does not mean that open entry or deregulated rates is a disaster and chaos. At least not necessarily.

The third problem is that we are not telling the citizens what is going on. No one in the city of Seattle has any knowledge of the taxi reform program. They don't know what the rates are; they're posted on a postage stamp sized decal on the inside of the back window in a taxicab that I have tried to read on several occasions, and it's extremely difficult.

I had pictured some great big sign with a cartoon on it in the back of the cab that would explain what was going on, and a publicity campaign and the cooperation of the media and so forth. There has been nothing since we passed it. How could you possibly expect the consumers to deal effectively with a deregulated industry if they do not have any idea what is going on?

And by the way, I haven't received one phone call or one letter outside of the taxi industry for the past year, with respect to taxi regulation or deregulation, either a complaint or a congratulations or just a question as to what is going on. And yet, if anyone in the City of Seattle if publicly identified with this issue, it is certainly me.

We have got to look again at the fitness standards. The way to address the issue of bad equipment is, in my judgment, fitness standards and insurance standards. We need to evaluate in Seattle how well all of our revisions in that area have gone, which we haven't even touched on. And then there are some other things with respect to the frequency of rate filings and so forth.

And finally, and this is the editorial to UMTA, we've got to have the help of the Federal government in providing us with the resources and the personnel to produce an objective analysis based on data that has some credibility so we can assess what's going on. Because right now, unfortunately, it usually boils down to my claiming one thing, someone from California claiming another, and someone from the Seattle taxi industry claiming another.

Those are the problems that we in the government see in our program that we've instituted in the City of Seattle. We are going to try to address them, and as I said, there is no way that anyone can guarantee that this type of an approach is going to work or not work until we have had the time to deal with it.

ISSUES IN THE APPLICATION USER-SIDE SUBSIDIES TO TAXI SERVICE

David Koffman
Crain & Associates
Menlo Park, California

This presentation first presents a brief review of the concept, advantages, and mechanisms of user-side subsidies and then discusses five or issues that arise in the implementation of user-side subsidies.

CONCEPT OF USER-SIDE SUBSIDIES

The user-side subsidy for taxi service may be seen as a device to make taxi service cheaper to use without changing the basic free market arrangements of the taxicab business. The concept can be applied to all kinds of services, including other forms of transportation and non-transportation services. The classic example of a user-side subsidy is the food stamp program, which makes food less expensive for some people without changing the free market system of food production, distribution, and retailing. The user-side subsidy can be applied to all kinds of taxicab service, but its major application to date has been to make taxicab trips cheaper for elderly and handicapped persons. The nature of the taxicab service provided can be the usual immediate-response, citywide service provided by taxicabs to the general public, or it can be a specialized service involving features such as 24-hour advance reservations and a limited selection of destinations.

ADVANTAGES OF THE USER-SIDE SUBSIDY

A major attraction of the user-side subsidy for taxicab trips by elderly and handicapped persons is that it uses a system which is already in operation, rather than starting a new paratransit system to serve the elderly and handicapped. A second advantage is that it is generally cheaper than a specialized system because (a) economies of scale are realized by serving general taxicab business and elderly and handicapped trips using the same system, and (b) labor rates are generally lower than is the case in public transit agencies. Third, the user-side subsidy offers greater flexibility for the funding agency in the type and amount of service offered than the agency would have if it ran its own system or contracted for a special-purpose service.

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IMPLEMENTATION

A sponsoring agency makes the necessary arrangements with providers, decides who will be eligible, and establishes a mechanism for providing the subsidy. Providers can be any taxicab company that wants to participate and may also include non-profit organizations. Sometimes formal contracts are signed, specifying the service to be provided and reimbursement arrangements. However, contracts are not always necessary. Especially in the case where subsidy users take taxi trips in the same manner as other taxi patrons, a simple understanding regarding the subsidy arrangements may be all that is necessary. Eligibility may be determined by certain criteria such as age, use of special aids, or a physician's certification. An income test may be used, but very few programs do so. Even without an income test, not very many high-income people take advantage of the user-side subsidy, since they generally have other, more convenient travel alternatives. In many user-side subsidy programs, participants must formally establish eligibility, register, and obtain an identification card. In some cases, however, a much less formal system is possible. For example, with the scrip or ticket systems, scrip or tickets may be sold on a first-come-first-served basis to anyone who meets the established eligibility requirements.

MECHANISMS

As more and more localities implement user-side subsidies, a bewildering array of subsidy mechanisms has evolved--no two programs administer the subsidy in exactly the same fashion. However, the subsidy mechanisms fall into three major groups:

Scrip Systems

A scrip system works almost exactly like food stamps. The sponsoring agency sells the scrip at some fraction of its face value to eligible people who then use it to pay for rides with participating taxicab companies. In paying the ride, the scrip is treated as money equal to its face value. The taxi companies turn the scrip in to the sponsoring agency and get reimbursed for it at some agreed on rate, which can be more or less than the face value.[1] Users may be free to combine scrip with cash to pay for rides in any way they find convenient. If users are preregistered, they may have to show the taxicab driver an identification card and when they use the scrip. Berkeley, California, issues scrip which functions like traveler's checks--users sign the scrip when they purchase it and then countersign it in the presence of the taxicab driver.

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[1]Some taxicab companies sell their own scrip, which an agency can purchase and resell at a discount. The principal disadvantages are that the agency must put up cash in advance, and some scrip may get lost or go unused.

Ticket or Coupon Systems

In ticket or coupon systems the agency sells eligible people tickets or coupons, each of which is usually good for a discount on one taxicab ride. The rider gives the taxicab driver the ticket and may also pay a discounted fare (a flat fare, the regular fare minus a flat discount, a flat discount, or amounts over a certain limit). The taxicab owner turns the ticket in for reimbursement, which may be based on the usual fare or may be a flat amount for all trips. If the reimbursement is based on the regular fare, then some evidence of the fare is needed. For example, in the Los Angeles Harbor Area program, the passenger gives the driver a ticket on which the driver records the mileage and meter fare. The passenger signs the ticket to acknowledge the correctness of the information entered, which with waybills forms the basis for reimbursement. In this case, the passenger pays nothing directly to the taxicab driver. The ticket system is also used in UMTA demonstration projects in Lawrence, Massachusetts, and Kinston, North Carolina, and in the Kansas City Share-a-Fare project.

Voucher or Charge Slip Systems

The voucher or charge slip system is the only system that involves no prepurchase of any kind by users. However, users must preregister and have an identification card. At the conclusion of a taxicab ride, the user presents the identification card, pays the established user share (a percentage, a flat amount, or the fare minus a flat discount), and signs a voucher, which the driver carries in the taxicab and fills out with whatever information the program may require. The taxicab owner turns in the vouchers for reimbursement by the sponsoring agency. Disadvantages of the voucher system include: (1) the difficulty of controlling the total amount of subsidy expense, either for one individual or for the whole program, and (2) its susceptibility to fraud by taxicab owners or drivers turning in vouchers for trips that were never taken. Vouchers are used in Milwaukee, Wisconsin, and in the UMTA demonstration project in Montgomery, Alabama, and were used in the UMTA demonstration in Danville, Illinois.

Five Issue Areas

If a user-side subsidy program is to work, it needs to be good business for taxicab operators.

If the incentives are set up correctly, there is no doubt that a user-side subsidy program can be good business for taxicab operators. It will probably not, however, rescue a financially ailing operation. In the case of elderly persons without severe handicaps, there is no reason why patronage generated by a user-side subsidy should necessarily be less profitable than other taxicab business. An exception might occur if user-side subsidy patronage tended to occur in areas which were previously beyond the primary concentration of participating companies' business, as was the case in Montgomery.

In Los Angeles, an unusual situation occurred in that user-side subsidy patronage involved less group riding than is the case with other patronage, which includes many sailors going to or from the harbor. The taxicab operator succeeded in getting the program to pay for the cost of an additional order taker to handle the increased volume of business and the work of attempting to group program riders. In this case program riders called in on a separate phone line and received service that was definitely slower than that received by the general public.

A flat or zone fare system may be introduced for user-side subsidy trips to allow for shared-riding. Where most fares are determined by a meter, great care must be exercised in establishing a flat or zone fare that it is equitable and does not discourage the taxicab company from providing any particular type of trip (for example, long trips or trips within certain zones).

The essential point is that the economics of the taxi business will vary in detail from one community to another. Every user-side subsidy arrangement needs to be tailored to local requirements in such a way that it gives local taxi companies an adequate incentive to participate and provide good service, without being so excessively generous as to be a giveaway of scarce public funds.

Shared-riding is required if you use UMTA funding.

There are still no final UMTA regulations on paratransit, but present funding practice requires that taxicab operations allow share-riding in order to qualify as mass transportation. Thus, if UMTA funds are to be used, a change to the taxicab ordinance may be necessary. Many user-side subsidy programs have avoided this requirement by not using UMTA funds (for example, programs funded by the State of Wisconsin). As a practical matter, shared-riding can increase productivity only a little unless a central coordinating agency arranges vehicle tours based on reservations made well in advance. Group riding (multiple passengers making the same trip together) is much more common and is generally already legal.

A problem may arise in implementing shared-riding if a meter fare system is now used. Shared-riding usually involves detours to pick up and drop off passengers, so that charging passengers based on meter readings is likely to be unfair, or at least inexact and likely to produce arguments. Champaign, Illinois, has implemented a user-side subsidy program with shared-riding and meter-based fares. The fare to each passenger is based on an informal system whose workings have not been documented. The most straightforward solution to shared-ride fare computation is a zone system or flat fares. In Montgomery, Alabama, a zone system based on a half-mile grid was implemented for determining fares for user-side subsidy trips under an UMTA demonstration project. The grid system was controversial, and may have kept smaller operators from participating in the project; however, it now seems to work well. Such a system has been used for general shared-riding in Little Rock, Arkansas, for many years and has recently been implemented in San Diego, California, as well.

A system adopted in the Los Angeles Harbor Area program may work well if shared-riding involves only user-side subsidy trips. In this program, the user pays a flat amount, using prepurchased tickets, and the program pays the balance of the meter fare. Thus if two or more program participants are served, each pays the flat user share, and the program pays the balance of the meter fare from the first pick-up to the last drop-off.

There is a need for good record keeping and safeguards against fraud.

Every subsidy mechanism can be defrauded in some way. Good record keeping is necessary to be sure that fraud is not occurring. Taxicab operators, however, are not known for great zeal in record keeping. The point is not that taxicab operators are untrustworthy, but merely that in operating a public program it is important to be able to demonstrate that funds are not being misspent.

With a voucher or charge slip system, a taxicab operator can submit vouchers for reimbursement on trips that never occurred or that are already subsidized by some other agency. To guard against this it is necessary to insist on carefully filled-out vouchers and trip logs. It may be necessary to refuse payment on questionable vouchers, as was done in Milwaukee. In Montgomery, a 10¢ fare increase was made contingent on receiving a properly filled-out voucher for each trip. One might think that fraud would be more of an issue in larger cities. So far, however, the only case where there is serious suspicion that fraud has occurred is in a small-to-medium size city using the voucher system.

With scrip and ticket systems fraud is unlikely without participation of users. It is possible that users could sell scrip or tickets to unauthorized users, or to a taxi operator. So far there is no reported case where any suspicion exists that this may have occurred. The Los Angeles Harbor Area subsidy mechanism seems particularly fraud-resistant, since it combines the user pre-purchase feature of a ticket system with the requirement, typical of voucher systems, that each ticket turned in have trip information recorded on it. In addition, the taxi operator submits waybills as further documentation.

Clearly there is a point where antifraud measures become overly burdensome for both users and taxi operators. A balance is needed between adequate record keeping on the one hand and convenience and efficiency on the other.

There is a need to ensure that participants will receive good service.

Participants in a user-side program may receive poorer service than the general public if the operators feel that program trips are less profitable than others, if program trips are out of the way, if a great premium is put on attempting to group program trips, or if an operator is not in a position to expand service to handle the increased volume of trips generated by the user-side subsidy. Steps to minimize quality of

service problems include making program trips indistinguishable from others when the trip request is made and setting up the financial incentives so that program trips are as profitable to serve as others. Of course an operator who now provides poor service to the general public should not be expected to provide good service under a user-side subsidy program.

Taxicab service can be part of the general public transportation system.

There may be great potential for taxicabs to fill holes in the public transportation system or take over service from conventional transit operations where they are uneconomical. Taxicabs may be able to provide service on low-ridership routes, at certain times, or on extensions of routes to outlying areas and do it at a cheaper rate per passenger than conventional transit service can. In this case it seems reasonable to subsidize taxicab trips for the general public, and a user-side subsidy is one way to accomplish this. Such a service was implemented as part of a Service and Methods Demonstration project in Danville, Illinois. It was thought that people would like the convenience of taxicabs. It turned out that service quality was poor, and that the public had a very poor image of taxicabs as compared to buses. If taxicabs are to assume a role as part of public transportation systems, taxicab operators will have to convince the public that they offer pleasant, clean, and reliable service.

In summary, the user-side subsidy is an attractive way to provide service for elderly and handicapped persons, and possibly for the general public. There are pitfalls, however, and a successful program must be carefully designed with attention to the realities of the taxicab business and the transportation needs of each community.

SHARED RIDE TAXICAB SERVICE

Jerry Wilson
Yellow Cab Company
Kansas City, Missouri

Let's get serious about using taxicabs. Saving time, fuel and taxi dollars can't be all bad!

Do you have a fixed feeling that taxicabs only run back and forth to the airport or do you picture yourself trying to hail a cab to make the New York theatre?

Well the facts are that taxicabs do those jobs, but 98% of all trips made by taxicabs are to the doctor's office, medical clinics, hospitals, grocery stores, and to make package deliveries.

Taxicabs also have been transporting the handicapped both in traditional taxicabs and in special vehicles for many years. We, for example, operated handicabs in Denver and in Phoenix in 1966 using crude manual ramps and simple seat belt type restraints. Today there are many special vehicles for the elderly and the handicapped operated throughout the country by taxicab companies. Some are operated under contracts with government agencies or social service organizations. Some are operated as normal demand-responsive service.

Taxicab operators now operate contract services for mobility-impaired persons. Examples include Yellow Cab, Houston; Yellow Cab, Austin; Yellow Cab, Fort Worth; Yellow Cab, Orange County, California; Yellow Cab, Omaha; Yellow Cab, Phoenix. These are some examples of communities that have decided to get serious about using taxicabs to supplement regular scheduled transit.

An unusual opportunity exists to utilize the time and cost saving taxicab services in implementation of programs specifically designed to comply with the transitional requirements of Section 504 of the Rehabilitation Act.

Contracts with taxicab companies, if used to their full potential, will carry transit and their respective communities through very difficult, time consuming, and cost escalation periods. I suggest that taxicab companies are not the problem, they are part of the solution.

The International Taxicab Association has issued a policy statement supporting shared-ride taxicab service, and it is as follows:

> The International Taxicab Association hereby states its approval and encouragement of the adoption of shared ride taxi principles to all localities where they are not already present.

The ITA proposes a massive effort, both to comply with the Federal requirements of having shared-ride service available as a precursor of reduced fuel taxes, but also as a recognition of the fact that there are a significant number of potential customers that may be priced out of the traditional exclusive ride taxicab market.

In many locations, regulatory change is required in order to allow taxicab operators to provide these alternative services as part of public transportation and a concerted effort of the members of ITA to move for these changes is also hereby acknowledged, and encouraged.

Shared riding in taxicabs is not a newly discovered potential. We progressed through the one on one, or private chauffeur era of the Thirties, into the World War II days and late Forties and early Fifties by multiple loading to the same direction from bus stations and railroad stations, sometimes with the aid of a load solicitor or starter. I well remember loading cabs at the old L & N depot and the Greyhound Bus Station in Evansville. It was very simple technique. You just placed passengers in cabs who were going in the same general direction. Since the fare was based on the zone basis, it was uncomplicated and straightforward. Examples of this type of shared-riding continue, particularly from airports, conventions, and sports events. The recent Kentucky Derby and the 500-mile race at Indianapolis are great examples of multiple load sharing in taxicabs.

If you have seen the Peso Cab operated in Mexico City, I am sure that this simple system impressed you as it did me as a very highly efficient, low cost operation.

Shared riding is relatively simple to put together. It's a matter of determining in advance the origins and destinations and matching these units into a same direction trip. The complications are the fare determination for the individual units within the shared mode. Zone, or per unit, fixed rates are easy to handle as they may be quoted and probably will be utilized more if shared-riding by taxicabs gains its maximum potential.

Several meter manufacturers have indicated a willingness to design the capacity to calculate ride segment fares into their meters if we, the industry, will set the guidelines. So far no one that I know operates a successful shared-ride service using the meter.

Denver has the tariff filed along with Indianapolis and a few others, but to my knowledge they are not moving many patrons in these type trips.

Many cities are engaging in contracts with taxi companies to set up shared-ride services for the transportation disadvantaged. Examples are Kansas City, Austin, and Cleveland.

Others are mixing this service with coordinated van services, usually operated on contracts with the taxi operator. Columbus and Fort Worth have working systems in place.

We, as taxi operators, have the in-place operations to work with local, State, and Federal government officials to save tax dollars, energy, and time to move those who need to be moved.

The various laws and intent therein funding transportation from a Federal level, almost without exception, require participation by private providers such as taxicab companies to the maximum extent feasible.

How many in this audience feel taxicabs up to this time have been given that opportunity?

Leave this forum with an open mind on looking into the possibility of contracting with your local taxi operator to set up a viable, cost effective, shared-ride program for your community.

Technological Innovations -- Highlights

VEHICLES

James Bautz
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The Federal government has led the development of prototype vehicles and passenger service evaluation for paratransit since 1974. Congress provided the Urban Mass Transportation Administration (UMTA) with funding to support ridesharing experiments that had been hampered by a lack of suitable vehicles primarily due to the automotive industry's reluctance to pay for the development and tooling costs required for mass production.

An important objective of UMTA's program is, therefore, to stimulate automotive industry interest in producing a low-cost paratransit vehicle and to obtain an assessment of these vehicles by paratransit operators. Engineering design, fabrication, and production of prototype paratransit vehicles have been contracted to three automotive companies. Independent in-service use, testing, and evaluation will be performed, under similar contracts, by the International Taxicab Association and the National Center for Barrier-Free Environment.

The evaluators completed their assessment of the basic vehicle requirements in April 1980. These included, but were not limited to, low acquisition and operating costs, low, flat floor for improved accessibility, and easy conversion for either wheelchair accomodation or cargo load. On the basis of that evaluation of design and mockup, UMTA will be moving ahead with the production of 50 to 100 vehicles.

FARE COMPUTATIONS

G. Richard Wyckoff
General Manager
VDO-Argo Instruments
Long Island City, New York

Taxi meters have historically been the only means of providing the public with a visual statement of charges. Today's electronic taximeter can compute (1) an automatic fare increase after a predetermined distance or dollar figure, (2) an out-of-town rate, (3) extra charges in addition to the main fare, and (4) an automatic night rate. It can show elderly rates, priority peak-period rates, medi-van rates, and almost any other rate imaginable.

Taximeter manufacturers, however, are reluctant to enter the shared-ride taximeter market for fear of designing an unaffordable or unacceptable product. There have been no clear signals from the taxicab industry regarding the exact functions contemporary meters should perform nor any definitive statements from the Federal government specifying acceptable weights and measures.

It is possible with today's electronic technology to create a fare and operating structure for shared-ride ranging from a flat discount for all customers to a discount according to the number of passengers in the taxicab. On the management information side, it might be desirable to record data regarding total miles, paid miles exclusive, number of trips exclusive, extra charges, number of shared-ride trips, number of shared-ride passengers, and the time elapsed during paid miles.

As the world's largest taximeter manufacturer, we would not benefit from designing a product with more features than are necessary or desirable. It is our hope that definitive statements on need and design will emerge from users and regulators in order to permit a final design that truly reflects market conditions.

FARE COMPUTATIONS

Dwight Baumann
Carnegie-Mellon University
People's Cab Company
Pittsburgh, Pennsylvania

We have been working for some time on the issue of what should be the appropriate cash register for the taxicab industry. The cash register connotes an accountability that has long been absent in the taxicab business; the only transportation business in this country where you don't know when you get in what the final fare is going to be.

We have developed a computer-based system for fare calculations in shared-ride paratransit transportation services called RSVP (Ride-Shared-Vehicle Paratransit) based upon a coordinate grid representation of the service area street network that not only simulates as accurately as possible what a standard taximeter would accomplish, but computes and displays fares in advance and estimates times for trips within a specified origin and destination.

RSVP has been tested in Pittsburgh to examine the efficiency and equity issues of exclusive ride and shared-ride taxi services. The system is being evaluated on, but not limited to, the following criteria: (1) that a consistent fare for a specific trip be guaranteed, since fares are computed using an algorithm and a well-defined data base, and (2) that the system be sensitive to spatial density, utilizing traffic analysis zone patterns which establish fine grids in the downtown and coarser grids in outlying areas.

The RSVP system of shared-ride taxi service thus far has illustrated that the taxicab industry could play role in providing paratransit services while adding incentives of greater accountability and substantial system status information to the taxicab operator.

FARE COMPUTATIONS

Ronald L. Kirby
Director, Transportation Studies
The Urban Institute
Washington, D.C.

Cities operating with taxi meters but wishing to institute shared-ride service might want to convert to a grid-fare or a micro-zone system. Though it is a much coarser instrument than the taximeter, the grid-fare system tends to have smaller zones than the regular zone system and allows for fares to be computed by a horizontal and vertical count of the grids traversed. A rate structure for the first grid plus each additional grid yields the fare for a particular trip.

Initial resistance to the grid-fare structure has been encountered from taxicab operators who claim that it presents complicated fare computations and establishes too low a rate. The institution of an administrative fee in Montgomery, Alabama, gave each operator $.20 per correct voucher, which provided a satisfactory incentive for higher revenue and increased aptitude.

The difficulty with this approach obviously depends upon the layout of the street system; the grids can get tortuous and complicated as in San Diego or they can be extremely simple given a street system of rectangular grids, as in the case in Montgomery. Inequities are an additional concern--short trips that cross a zone will almost always incur a higher shared-ride fare than that tallied by an exclusive-ride meter, while longer trips that stay within a zone will generate a much lower fare than the meter, and taxicab drivers are reluctant to serve such trips. This situation presents on anomaly that is difficult to overcome.

DISPATCHING

Basil Potter
TRANSMAX, INC.
Anaheim, California

The provision of shared-ride services will generally fall into two types of systems: centralized dispatch and centralized call taking.

The first system converts service areas into traffic zones and basically performs dispatching for what could amount to the equivalent of 20 cab companies. The system uses an MIT algorithm, graphically displays all tours made, automatically dispatches, and features an automatic callback mechanism. The disadvantage is that the central plant of this type of system is expensive, costing approximately $800,000. This cost makes the system most attractive to an association of several taxicab companies serving a large area.

Another system, centralized call taking, is easily implemented and institutionally acceptable. Calls that would normally go to a taxicab company are sent to a central office, which distributes the calls by the prearranged rules. The dispatch is checked by computer to validate that the vehicle is indeed in the pick-up area and that its last call allows it to pick up. Under this type of system, the right of refusal remains intact, allowing the central office to dispatch the call to another company.

We are entering a world of computer design and applications for taxicabs. Centralized dispatching and call taking are only two of the computer-assisted dispatching systems available today to the taxicab industry.

APPENDIX A

TAXICAB INNOVATIONS: REGULATIONS AND OPERATIONS

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Maurice Audette
Department of Transport Canada
Montreal, Quebec

Phyllis B. Azriel
City Manager's Office
Evanston, Illinois

Elaine M Balok
City Manager's Office
San Diego California

William G. Barker
North Central Texas Council
of Governments
Arlington Texas

Gary Barrett
Public Technology Inc.
Washington, D.C. 20036

Craig A. Bates
American Cab
Kansas City Missouri

Dwight Baumann
Carnegie-Mellon University and
People's Cab Company
Pittsburgh, Pennsylvania

James Bautz
Urban Mass Transportation
Administration
Washington D.C.

A. Jeff Becker
Tidewater Metro Transit
Norfolk, Virginia

Paul R. Belanger
Belgoma Transportation Ltd.
Sault Ste. Marie, Ontario

Douglas Birnie
Urban Mass Transportation Administration
Washington, D.C.

Hon Ernest J. Brewer
City Council
Elyria, Ohio

Admiral James Brown
Tidewater Metro Transit
Norfolk, Virginia

Larry Bruno
Urban Mass Transportation
Administration

Cynthia J. Burbank
U.S. Department of Transportation
Washington, D.C.

Philip L. Burgert
Kansas City Times
Kansas City, Missouri

Nicholas Cambas
Yellow Cab Company of Tampa, Inc
Tampa, Florida

Rick Capri
South Florida Taxi Drivers
Association
Tampa, Florida

Stephan Chait
City Department of Traffic
and Parking
Boston, Massachusetts

Wanda J. Champion
City of Kansas City
Kansas City, Missouri

Robert L. Christine
Toedman Cabs, Inc.
Kansas City, Missouri

Mary Martha Churchman
Urban Mass Transportation Administration
Washington, D.C.

Benjamin Castellano
U.S. Department of Transportation
Kansas City, Missouri

Jack Cox
Teamsters Local 572
Carson, California

Walter A. Davenport
Vancouver Cab Company
Vancouver, Washington

John H. Davidson
Orange Coast Yellow
Cab, Inc.
Fountain Valley, California

W.P. Dillard
Dillard Cab Company
Kansas City, Missouri

Charles Donald
Urban Mass Transportation Administration
Kansas City, Missouri

Carol Sue Epps
Yellow Cab, Inc.
Kansas City, Missouri

Russell Farber
East-West Gateway Coordinating
Council
St. Louis, Missouri

Paul Fish
Urban Mass Transportation Administration
Washington, D.C.

Dale Fitschen
Regional Transportation Authority
Chicago, Illinois

Keith Forstall
Multisystems, Inc.
Cambridge, Massachusetts

Vern Foster
Yellow and Red Cabs
Livonia, Michigan

Sharron Frank
Yellow Cab, Inc.
Denver, Colorado

Robert Galbraith
Hillsborough County Taxicab Commission
Tampa, Florida

Pat M. Gelb
DeLeuw, Cather & Company
San Francisco, California

Gorman Gilbert
University of North Carolina
Chapel Hill, North Carolina

Marvin L. Glassman
Columbus Green Cabs, Inc.
Columbus, Ohio

Regina Glenn
Seattle Department of Licenses & Consumer Affairs
Seattle, Washington

J.P. Golinvaux
Iowa Department of Transportation - Public Transit Division
Des Moines, Iowa

Keith W. Graham
Kansas City Transportation Department
Kansas City, Missouri

Gary Green
Dallas Public Utilities Division
Dallas, Texas

Lance Grenzeback
Greater Bridgeport Transit District
Bridgeport, Connecticut

Richard E. Hair
Colorado Springs, Colorado

John W. Hall
Black & White-Checker Cabs
Little Rock, Arkansas

Arthur L. Handman
Greater Hartford Transit District
Hartford, Connecticut

Corinne Hayward
Urban Mass Transportation Administration
Washington, D.C.

Carla Heaton
U.S. Department of Transportation
Cambridge, Massachusetts

Neil Herber
Digital Methods Ltd.
Ottawa, Ontario

Roy C. Herring
Jackson Department of Transportation
Jackson, Mississippi

Bruce W. Houston
Elyria Yellow Cab, Inc.
Elyria, Ohio

Donald Howery
Los Angeles Department of Transportation
Los Angeles, California

Joseph G. Huggler
New Jersey Department of Transportation
Trenton, New Jersey

Richard Hunt
Indianapolis Yellow Cab, Inc.
Indianapolis, Indiana

W.B. Hurd
Consultant
Alexandria, Virginia

Robert Jacobs
St. Charles Transit Company
St. Charles, Missouri

Christine Johnson
Chicago Area Transportation Study
Chicago, Illinois

W.W. Johnson
Clearwater Yellow Cab Company
Clearwater, Florida

William J. Jurkiewicz
Care Cab
St. Louis, Missouri

Ronald F. Kirby
The Urban Institute
Washington, D.C.

David Koffman
Crain & Associates
Menlo Park, California

Robert Kranz
Mt. Express
Crested Butte, Colorado

Robert Krause
Secretarial Representative
U.S. Department of Transportation
Kansas City, Missouri

Charles A. Krouse
U.S. House of Representatives
Washington, D.C.

Lee LaFontaine
Salem Public Transit Division
Salem, Oregon

John Laney
City Manager's Office
Kansas City, Missouri

Barbara Latini
CONTAX Systems, Inc.
Boston, Massachusetts

J. J. Lemieux
Quebec Department of TPT
Montreal, Quebec

Eugene R. Leyval
California Taxicab Owners Association
Sacramento, California

Robert B. Lilley
Cardinal Cab Co.
Warren, Ohio

Paul V. Logue
Yellow Cab Company
Chicago, Illinois

J. B. Long
Federal Highway Administration
Fort Worth, Texas

Ellen McCarthy
Consultant
Hartford, Connecticut

Arlene V. Malone
New York City Department of Transportation
New York, New York

Margot D. Massey
Texas State Department of Highways and Public Transportation
Austin, Texas

Gerald Miller
The Urban Institute
Washington, D.C.

R. Gregory Mills
Montgomery County Department of Transportation
Rockville, Maryland

Lynn Mitwol
Public Technology, Inc.
Washington, D.C.

Nancy Moser
Lincoln Department of Transportation
Lincoln, Nebraska

Stewart A. Nelson
Mid-America Regional Council
Kansas City, Missouri

Beverly Norman
Urban Mass Transportation
Administration
Kansas City, Kansas

Corney Oliver
Independent Drivers
Association
Denver, Colorado

Helene M. Overly
Public Technology, Inc.
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Katherine A. Perry
Public Technology, Inc.
Washington, D.C.

Louise Pittman
Urban Mass Transportation
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Kansas City, Missouri

Basil Potter
TRANSMAX, Inc.
Anaheim, California

Benita Ransom
Atlanta City Council
Atlanta, Georgia

Frederick A. Rasmussen
Louisiana Department of
Transportation & Development
Baton Rouge, Louisiana

C.M. Reilly
U.S. House of Representatives
Washington, D.C.

Cassandra Reinsel
National League of Cities
Washington, D.C.

Eldon Renner
Nebraska Department of Roads
Lincoln, Nebraska

Hon. Randy Revelle
Seattle City Council
Seattle, Washington

Leroy Robinson
Yellow Cab Cooperative
Association
Denver, Colorado

Joan M. Roeseler
Urban Mass Transportation
Administration
Kansas City, Missouri

Jon Rose
Public Utilities Department
Dallas, Texas

Sandra Rosenbloom
University of Texas
Austin, Texas

Jon Roth
Chicago Transit Authority
Chicago, Illinois

Hon. Pat Russell
Los Angeles City Council
Los Angeles, California

Leon F. Sachs
Office of Transportation
Administration
Miami, Florida

Lynn Sahaj
Urban Mass Transportation
Administration
Washington, D.C.

Robert Samuels
Planco
Glenco, Illinois

Flora W. Schaufler
White Top, Safeway & Yellow,
Checker Cabs, Inc.
Jackson, Mississippi

Marguerite Schellentrager
City of Spokane
Spokane, Washington

Jean Schiedler-Brown
Seattle Department Licenses
& Consumer Affairs
Seattle, Washington

Margaret Schwartz
Public Technology, Inc.
Washington, D.C.

Byron Senegal
Reliable Taxicab Co., Inc.
Oakland, California

David I. Shapiro
United Independent Taxi, Inc.
Los Angeles, California

Robert Siller
City of San Antonio
San Antonio, Texas

Morley L. Smith
Guillon, Smith, Marguart
& Associes LTEE
Montreal, Quebec

Scott Smith
Federal Highway Administration
Kansas City, Missouri

Mary H. Snyder
Central Transportation Planning
Staff
Boston, Massachusetts

Donald E. Somers
Yellow Cab Company
Red Bank, New Jersey

Edwin C. Stahl, Jr.
Comfort Para-Transit Systems,
Inc.
Woodcliff Lake, New Jersey

Eugene Stalians
Paul's Yellow Cab Co., Inc.
Pomona, California

Howard J. Stephens
Best Cabs, Inc.
Wichita, Kansas

Opal Harper Stephens
Best Cabs, Inc.
Whichita, Kansas

Hon. Larry Stirling
San Diego City Council
San Diego, California

Donna Tarwater
University of Tennessee
Knoxville, Tennessee

Julio Vilardell
Metropolitan Transit Authority
Wichita, Kansas

Lee Waddleton
Urban Mass Transportation
Administration
Kansas City, Missouri

Wesley Walton
Seattle Far West Service
Seattle, Washington

Charles B. Wenner
Columbus Department of Safety
Columbus, Ohio

James West
Spokane City Council
Spokane, Washington

Amy Wexler
Multisystems, Inc.
Cambridge, Massachusetts

Victoria M. Whelan
City of San Diego
San Diego, California

Thomas L. White
Yellow Cab Company
Tulsa, Oklahoma

Paul D. Williams
Centrodyne Corp. of
America
South Burlington, Vermont

William R. Williams
Yellow Cab Co. of Raleigh Inc.
Raleigh, North Carolina

Jerry Wilson
Yellow Cab Company
Kansas City, Missouri

John Wright
Charlottee Department of Traffic
Engineering
Charlotte, North Carolina

G. Richard Wyckoff
VDO-ARGO Instruments Inc.
Long Island City, New York

G. Richard Wyckoff, Jr.
Yellow Cab Co.
Baton Rouge, Louisiana

Sgt. Gerald L. Young
Indianapolis Taxicab Commission
Indianapolis, Indiana

Sigmund Zilber
Zilber Taxicab Service Inc.
Miami, Florida

APPENDIX C

AGENDA

May 5, 1980

7:00	Registration
7:30	Continental Breakfast
8:30 - 11:15	Plenary Session • Call to Order Gary Barrett, Program Director, Public Technology, Inc. • Welcome John Laney, Assistant City Manager, Kansas City • Remarks Donald Somers, President, International Taxicab Association Robert Krause, Secretarial Representative, U.S. Department of Transportation Lee Waddleton, Regional Director, Urban Mass Transportation Administration; Region VII James Bautz, Director, Office of Service and Methods Demonstrations, UMTA • Panel Discussion - Taxicabs Today Overview: Ronald Kirby, Urban Institute Comments: David Alschuler, Multisystems, Inc. William Barker, North-Central Texas Council of Governments Donald Somers, International Taxicab Association James Bautz, Office of Service and Methods Demonstrations, UMTA Questions and Answers
11:15	Break
11:30 - 12:15	Small Group Workshops on Taxicabs Today
12:30	Lunch • The Honorable Pat Russell, Councilwoman, Los Angeles - Taxis for Public Transportation

2:00 - 4:00	Plenary Session • Panel Discussion - Service Innovations and Free Enterprise Chairperson: Gorman Gilbert, University of North Carolina Shared Ride - Jerry Wilson, Yellow Cab Taxi Feeder to Transit - Gerry Miller, Urban Institute User-side Subsidy - David Koffman, Crain and Associates Protection and Participation of Free Enterprise - David Alschuler, Multisystems, Inc. Questions and Answers
4:00 - 5:00	Small Group Workshops on Service Innovations and Free Enterprise
5:30	Reception

May 6, 1980

8:00	Continental Breakfast
8:45 - 11:00	Plenary Session • Panel Discussion - Regulations Chairperson: Sandi Rosenbloom, University of Texas History of Regulations: Robert Samuels, Planco Overview: Pat Gelb, DeLeuw, Cather & Company City Examples:

Dallas	Gary Green, Director, Public Utilities
Indianapolis	Sargeant Gerald Young, Comptroller's Office
San Diego	Elaine Balok, Assistant to the City Manager
Dade County	Leon Sachs, Chief, Taxicab Regulations
Small Cities	Gorman Gilbert, University of North Carolina
Seattle-King County	The Honorable Randy Revelle, Councilman, City of Seattle

Questions and Answers

	Break
11:15 - 12:30	Small Group Workshops on Regulations
12:30	Lunch
1:30 - 2:30	• Issues and Answers: San Diego and Seattle-King County Moderator: Ellen McCarthy, Consultant

San Diego	Seattle-King County
Elaine Balok, Assistant to the City Manager	Regina Glenn, Director Department of Licenses and Consumer Affairs
Hon. Larry Stirling, Councilman	Hon. Randy Revelle, Councilman
Eugene Leyval, Executive Director, California Taxicab Owners Association	West Walton, Seattle Far West Service

2:30 - 4:30	Plenary Session • Panel Discussion - Technological Innovations Chairperson: John Davidson, Orange Coast Yellow Cab

Vehicles	James Bautz, Office of Service and Methods Demonstrations, UMTA
Fare Computations	Richard Wyckoff, Argo Taxi Meters
	Dwight Baumann, Carnegie-Mellon University
	Ronald Kirby, Urban Institute
Dispatching	Basil Potter, Transmax, Inc.
Questions and Answers	

4:30	Adjournment

APPENDIX D

FEDERAL INVOLVEMENT IN PLANNING AND FUNDING[1]

Introduction

Within the U.S. Department of Transportation, the Urban Mass Transportation Administration (UMTA) is authorized to assist in the development of comprehensive and coordinated mass transportation systems. In 1980 UMTA will distribute more than $3 billion to assist in the purchase of equipment and facilities, provide funds for planning, support research and demonstration projects and help defray operating expenses for public transportation systems.

With the exception of the section 16(b)(2) program, UMTA funds are available directly only to States and local public bodies.[2] Thus, while taxicab operators can become involved directly in the planning process, they can participate in the capital and operating programs only by entering into a contract with a State or local public body.

Program Planning

Most UMTA-assisted local programs must be developed through a transportation planning process. Urban programs must meet very specific planning requirements, while programs under the the section 18 program (which applies to non-urbanized areas) do not.

- Urban Programs - For urban areas the planning requirements are spelled out in the U.S. Department of Transportation joint planning regulations. Local programs must be included in the local Transportation Improvement Program (TIP), which sets forth the projects to be undertaken in the next three to five years and the sources of funds to support the projects.

In the development of the local TIP, consideration must be given to number of factors of interest to taxicab operators. These include the maximum possible use of private mass transportation companies, an analysis of existing conditions of travel, transportation facilities, and systems management, and an evaluation of alternative transportation systems management improvements.

The TIP is developed by the area's metropolitan planning organization (MPO) as designated by the Governor of each State, in cooperation with the State and operators of publicly-owned mass transportation services. The MPO is composed of elected officials or their representatives. However, the work of the MPO is normally carried out by a Technical Advisory Committee (TAC), whose members are representatives of the professional staffs of the participating jurisdictions and agencies.

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1. From Taxicabs and Federal Programs: A Handbook prepared by Public Technology, Inc. for the U.S. Department of Transportation and the International Taxicab Association, 1980.

2. Section 16(b)(2) funds are available to private non-profit agencies.

Private providers can be included as participants on the TAC at the discretion of the committee or can provide information to the TAC at appropriate points in the planning process. They generally participate as members of MPO Citizen Advisory Committees. Public hearings provide another opportunity for participation in the transportation planning process.

- Non-urban Programs - In non-urban areas, the Federal planning requirements are spelled out in the emergency regulations for public transportation for non-urbanized areas. Section 18 funds are allocated to States on the basis of the population in their non-urbanized areas. The States develop a program of projects to use these funds.

In the development of a project application, public bodies must consider involvement by private enterprise, provide a description of efforts to coordinate with public and private providers, and establish a conflict resolution mechanism by which private providers' disputes arising from the program can be settled.

The annual program of projects is usually submitted prior to the beginning of the fiscal year.

Taxicab operators should contact the State to insure that they are on the mailing list. In addition, the operator may ask to be included on State committees for private providers (where they exist).

Specific UMTA Programs

- Urban Mass Transportation Act of 1964, as amended.

Section 3 - Provides capital grants to assist States and local public bodies in the acquisition, construction, reconstruction, and improvement of facilities and equipment for use in mass transportation service in urban areas and in coordinating such service with highway and other transportation facilities. State and local public bodies are eligible recipients. Private transportation companies may participate under contractual arrangements with a public grantee. UMTA pays 80% of the cost; the local share is 20%.[3]

Section 5 - Provides grants on a formula basis for the capital and operating expenses of urban mass transportation systems. State and local bodies are eligible recipients. Private transportation companies may participate under contractual arrangements with a designated recipient. For capital projects, the UMTA share is 80%, the local share is 20%. With respect to operating assistance, the UMTA share is up to 50% of the deficit.[3]

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[3]Sections 3,5,6, and 8 of the Urban Mass Transportation Act of 1964 as amended, require that opportunities for participation by private providers, including taxicab operators, be afforded whenever possible. The act provides that no Federal funds shall be used to support State and local programs unless private mass transportation companies are given consideration.

Section 6 - Provides grants for up to 100% of the cost of research, development and demonstration projects. UMTA's Service and Methods Demonstration program has provided support for a number of programs involving taxicabs including the Danville, Illinois and Kinston, North Carolina, user-side subsidy demonstrations, and the Portland, Oregon agency coordination demonstration.[3]

Section 8 - Provides funds to metropolitan planning organizations for the development of transportation plans in urban areas. In some cases, grants may be made directly to other State and local public bodies. The UMTA share is 80%; the local share is 20%.[3]

Section 16(b)(2) - Authorizes grants for the purchase of equipment to be used to transport elderly and handicapped persons. Eligible recipients are private, non-profit organizations. Programming of the projects is done at the State level and the project does have to be included in the local Transportation Improvement Program.

Section 16(b)(2) funds are available only when mass transportation services are unavailable, insufficient or inappropriate. UMTA requires that non-profit organizations seeking section 16(b)(2) funds publicize their intent to do so in order that other carriers, including taxicab operators providing shared-ride services, may have an opportunity to provide the service. Taxicab operators who wish to provide these services for elderly and handicapped persons should ask the UMTA Regional Office to notify them when applications are filed under Section 16(b)(2).

Section 18 - Authorizes the apportionment of funds to States based on their population in non-urbanized areas. Funds may be used for capital operating, or project administration expenses. At the Federal level, the section 18 program is administered by the Federal Highway Administration. Section 18 grants may be made to State and local public bodies, non-profit organizations, and operators of publicly-owned transportation systems. The point of contact is the State agency designated by the Governor. (See Table 2)

The Federal share for capital projects and project administration is 80%; the local share is 20%. For operating assistance, the Federal share may not exceed 50% of the deficit.

The section 18 program requires that private transit and paratransit operators be allowed to participate to the maximum extent feasible. To do this, the States are urged to coordinate with private providers and required describe their notification process, discuss how the program will be carried out in a State management plan, and develop a conflict resolution process to negotiate differences.

- Rehabilitation Act of 1973

Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified handicapped individual...shall, solely by reason of his handicap, ...be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under any program or activity conducted by any Executive agency...

The U.S. Department of Transportation regulations implementing Section 504 were issued May 31, 1979 (44 Fed. Reg. 31442; 49 C.F.R. Part 27). The following explanations are from the supplemental information accompanying the regulation:

Public transit buses...for which solicitations are issued after [July 2, 1979], must be wheelchair accessible...Within 10 years, half the buses used in peak hour service must be wheelchair accessible and these buses must be utilized before inaccessible buses during off-peak hours so as to maximize the number of accessible buses in service.

- ...all new rapid, commuter and light rail (trolley and streetcar) facilities must be accessible...

- ...existing rapid rail facilities must be made accessible over time...

- For Federally-assisted urban mass transportation systems that will not be accessible by July 2, 1982, interim accessible transportation must be provided, until those systems are accessible. Subject to specified spending criteria, this interim service must be available in the normal service area, during normal service hours, and must be developed in cooperation with an advisory group of local representatives of handicapped persons. The service, to the extent feasible, must meet a number of criteria as to convenience and comparability to regular mainline service. The recipient must use its best efforts to coordinate special services in the locality to meet the service standards. The recipient must spend an amount equal to 2% of its UMTA Section 5 funds on the provision of interim service unless the advisory group agrees with the recipient that lower expenditures will provide an adequate level of service.

A key element of the accessibility requirements is the development of a Transition Plan. The plan identifies the transportation improvements and policies needed to achieve accessibility and the interim accessible transportation to be provided by those Federally-assisted systems that will not be accessible by July 2, 1982.

The Transition Plan is developed once and covers the period of time until the system achieves accessibility. However, the plan must be refined and updated to ensure that it continues to provide facilities and services that can be effectively utilized by elderly and handicapped persons.

The planning process must involve public participation, including that of handicapped persons, and public and private transportation operators. It is important that taxicab operators who are interested in providing accessible service for elderly and handicapped persons, participate in the development of the Transition Plan. The plans were due July 2, 1980, except for areas with existing inaccessible rail systems, where they are due in January 1981.

APPENDIX E

TRANSPORTATION PROGRAMS

AUTHORIZED BY THE URBAN MASS TRANSPORTATION ACT OF 1964, AS AMENDED

SECTION	PROVISIONS	ELIGIBILITY	MATCHING RATIO
3	Provides discretionary grants for acquisition, construction, reconstruction and improvement of facilities and equipment for use in mass transportation service in urban areas.	State and Local Public Bodies	Federal 80% Local 20%
5	Provides funds on a formula basis for capital and operating expenses of urban mass transportation systems.	State and Local Public Bodies	CAPITAL Federal 80% Local 20% OPERATING Federal up to 50% Local 50%
6	Provides discretionary grants for research, development and demonstration projects. The Service and Methods Demonstration Program is funded under this section to test innovative service plans and delivery systems.	State and Local Public Bodies	Federal can fund as much as 100%
8	Provides funds for development of transportation plans and programs, including plans for transporting elderly and handicapped in urban areas.	State and Local Public Bodies MPO in accordance with Unified Transportation Work Program	Federal 80% Local 20%
16(b)(2)	Provides discretionary grants to private non-profit corporations and associations for the purchase of equipment to be used to transport the elderly and handicapped.	Private Non-profit Agencies	Federal 80% Local 20%
18	Provides funds on a formula basis for capital and operating expenses for projects in non-urbanized areas which are included in the State program of projects.	State and Local Public Bodies Private Non-profit Organizations	CAPITAL AND ADMINISTRATIVE Federal 80% Local 20% OPERATING Federal up to 50% Local 50%

HOW DO TAXICAB OPERATORS GET INVOLVED?

- HOW CAN I OBTAIN FEDERAL FUNDS TO OPERATE A PUBLIC TRANSPORTATION SERVICE?

  Taxicab operators can participate through contractual arrangements with State and local public bodies, but cannot directly receive Federal funds. In the case of user-side subsidies, funds may be made available to operators meeting specified minimum requirements, and a contract may not be required.

- UNDER WHAT CIRCUMSTANCES CAN A STATE OR LOCAL BODY CONTRACT WITH A TAXICAB OPERATOR?

  There are many circumstances in which a taxicab operator may enter into a contractual arrangement for service. The initiative may come from the public body that needs a special service, or from the taxicab operator who has a good idea for service to be developed.

- MUST I HAVE SHARED-RIDE SERVICE?

  Yes, exclusive-ride service is not eligible for Federal assistance. The Urban Mass Transportation Act of 1964, as amended, requires that a transportation provider receiving UMTA funds be a mass transportation carrier. To qualify as a mass transportation carrier, the taxicab operator must have a shared-ride service.

- CAN THE LOCAL JURISDICTION BUY VEHICLES FOR MY USE?

  The Local jurisdiction or the publicly-owned transit agency may purchase vehicles and lease them to a private operator for a nominal rental, as little as $1.00 a year.

- CAN ANY TAXICAB OPERATOR QUALIFY TO RECEIVE CONTRACTS?

  Most jurisdictions award contracts through competitive bidding. Bidders respond on the basis of the service to be provided and the qualifications required of the bidder in the formal request for bids. The award is made to the lowest responsible bidder.

- CAN SMALL TAXICAB COMPANIES QUALIFY TO PROVIDE CONTRACT SERVICE?

  Yes, but a one- or two-cab company may find it difficult to spend the time required to obtain information and respond to requests for service. This type of company may choose to share the administrative burden by forming a cooperative association with other companies.

- WHAT ABOUT RURAL AREAS?

  Contract taxicab service in areas with less than 50,000 population can be provided under Section 18 of the Urban Mass Transportation Act of 1964, as amended. In this instance, the taxicab operator has to contact the State, (see the list of state transportation contacts, Table 2) for information regarding local city, town, or county programs.

- WHAT ABOUT NEW OR INNOVATIVE IDEAS?

  The Urban Mass Transportation Administration, through the Service and Methods Demonstrations Program, can provide up to 100% of the costs of demonstrating new concepts. As with the other programs, the private taxicab operator should work with the local jurisdiction or transit operator, which would contact the UMTA representative for further information. Past demonstrations have included user-side subsidies, computer-assisted dispatching, and taxi feeders.

APPENDIX G

URBAN MASS TRANSPORTATION ADMINISTRATION
REGIONAL ADMINISTRATORS

Region I

Richard H. Doyle, Regional Administrator
Kendall Square, 55 Broadway
Cambridge, Massachusetts 02142 (617) 494-2055

Region I includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

Region II

Hiram Walker, Regional Administrator
Suite 14-130, 26 Federal Plaza
New York, New York 10007 (212) 264-8162

Region II includes New Jersey, New York, and Puerto Rico.

Region III

Peter Stowell, Regional Administrator
Suite 1010, 434 Walnut Street
Philadelphia, Pennsylvania 19106 (212) 597-8098

Region III includes Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia.

Region IV

Carl Richardson, Acting Regional Administrator
Suite 400, 1720 Peachtree Road, N.W.
Atlanta, Georgia 30309 (404) 881-3948

Region IV includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

Region V

DJ Mitchell, Regional Administrator
Suite 1740, 300 S. Wacker Drive
Chicago, Illinois 60606 (312) 353-2789

Region V includes Illinois, Indiana, Ohio, Michigan, Minnesota, and Wisconsin.

Region VI

Glen Ford, Regional Administrator
Suite 9A32, 819 Taylor Street
Forth Worth, Texas 76102 (817) 334-3787

Region VI includes Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

Region VII

Lee Waddleton, Regional Administrator
Suite 100, 6301 Rock Hill Road
Kansas City, Missouri 64131 (816) 926-5053

Region VII includes Arkansas, Louisiana, New Mexico, Nebraska.

Region VIII

Lou Mraz, Regional Administrator
Suite 1822, Prudential Plaza
1050 17th Street
Denver, Colorado 80265 (303) 837-3242

Region VIII includes Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming.

Region IX

Dee Jacobs, Regional Administrator
Suite 620, Two Embarcadero Center
San Francisco, California 94111 (415) 556-2884

Region IX includes Arizona, California, Hawaii, and Nevada.

Region X

Aubrey Davis, Acting Regional Administrator
Suite 3142, Federal Building
915 Second Avenue
Seattle, Washington 98174 (206) 442-4210

Region X includes Alaska, Idaho, Oregon, and Washington.

APPENDIX H
STATE CONTACTS FOR SECTIONS 16(b)(2) AND 18
PUBLIC TRANSPORTATION PROGRAMS

	SECTION 16(b)(2) CONTACT	SECTION 18 CONTACT
ALABAMA	Bob Jackson Alabama Commission on Aging 740 Madison Avenue Montgomery AL 36104 205/832-6640	Charles Simpson, Bureau of Urban Planning, Alabama Highway Department 11 South Union Street Montgomery AL 36104 205/832-5345
ALASKA	Dennis Dooley, Director Transportation Planning Alaska Department of Transportation and Public Facilities PO Box Z Juneau AK 99801 907/465-3900	Same as Section 16(b)(2)
ARIZONA	Bob Thake, Program Manager Department of Transportation 206 S. 17th Avenue Phoenix AZ 85007 602/261-7434	Ronald Ross, Section Manager, Transit Department of Transportation 206 S. 17th Avenue Phoenix AZ 85007 602/261-8333
ARKANSAS	Mary Wilson State Highway Department PO Box 2261 Little Rock AR 72203 501/569-2286	Jim Head, State Transit Administrator Highway & Transportation Department PO Box 2261 Little Rock AR 72203 501/569-2286
CALIFORNIA	Charles Davis California Department of Transportation PO Box 1499 - 1120 N Street Sacramento CA 95807 916/322-5480	Ron Hollis, Chief Financial Programs & Analysis Division of Mass Transportation Department of Transportation PO Box 1439 Sacramento CA 95807 916/445-4229
COLORADO	Richard A. Evans, Director, Division of Planning 4201 E. Arkansas Avenue Denver CO 80222 303/757-9266	Same as Section 16(b)(2)
CONNECTICUT	Len Lagsis, Manager Mass Transportation Planning Division Connecticut DOT 24 Wolcott Hill Road PO Drawer A Wethersfield CT 06109 203/566-3961	James Sanders, Transportation Planner Mass Transportation Planning Division Department of Transportation 24 Wolcott Hill Road Wethersfield CT 06109 203/566-4675
DELAWARE	William Osborne, Director of Trans. Authority for Specialized Trans. 221 S. Dupont Highway Newcastle DE 19720 302/571-2995	John Richter, Chief of Surface Transit Department of Transportation PO Box 778 Dover DE 19901 302/678-4593
FLORIDA	Dave Duffy Division of Mass Transit Department of Transportation 605 Suwannee Street Tallahassee FL 32304 904/488-7390	Richard Rossell, Program Manager Bureau of Surface Transit Department of Transportation 605 Suwannee Street Tallahassee FL 32304 904/488-1586
GEORGIA	Wayne Jackson, Chief Project Development Branch Bureau of Mass Transportation Department of Transportation 2 Capitol Square Atlanta GA 30304 404/656-6000	Same as Section 16(b)(2)

	SECTION 16(b)(2) CONTACT	SECTION 18 CONTACT
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WEST VIRGINIA	Rod Jenkins, Director Department of Finance & Administration Public Transportation Division 1900 Washington St., Room A-863 Charleston WV 25305 304/348-0428	Same as Section 16(b)(2)
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IDAHO	Stuart Gwin Public Transportation Supervisor Transportation Department 3483 Rickenbacker Street Boise ID 83705 208/334-3183	Same as Section 16(b)(2)
ILLINOIS	Enid Magidson Div. of Public Transportation Department of Transportation 300 North State Street Chicago IL 60610 312/793-2111	Same as Section 16(b)(2)
INDIANA	John Niemi, Transportation Coord. Indiana Commission on Aging 215 N. Senate Avenue Indianapolis, IN 46202 317/633-5948	John Parsons, Administrator Planning Services Agency Division of Public Transportation 143 W. Market - Suite 300 Indianapolis IN 46203 317/232-1470
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APPENDIX I
URBAN CONSORTUM
TRANSPORTATION TASK FORCE

The Urban Consortium Transportation Task Force actively pursues solutions to priority needs in urban transportation. Members of the Transportation Task Force have management responsibilities spanning the fuel range of local government transportation services. Current members are:

- George Simpson (Chairperson)
  Assistant Director
  Department of Engineering
  and Development
  City of San Diego
  San Diego, California

- Gerald R. Cichy
  Director of Transportation
  Montgomery County
  Rockville, Maryland

- Mr. Richard F. Davis
  General Manager
  Kansas City Area Transportation
  Authority
  Kansas City, Missouri

- Kent Dewell
  Deputy Director, Public Works
  Department of Transportation
  Division
  City of San Jose
  San Jose, California

- David Gurin
  Deputy Commissioner
  New York City Department of
  Transportation
  New York, New York

- Edward M. Hall (Vice President)
  Street Transportation
  Administrator
  City of Phoenix
  Phoenix, Arizona

- William K. Hellmann
  Chief of Interstate Division
  for Baltimore City
  Baltimore, Maryland

- Robert P. Hicks
  Administrator
  Planning and Traffic
  Engineering Division
  Department of Transportation
  Detroit, Michigan

- Rod Kelly
  Director, Office of
  Transportation
  Dallas, Texas 75201

- Frank Kiolbassa
  Director of Public Works
  City of San Antonio
  San Antonio, Texas

- Alan Lubliner
  Center City Circulation
  Project Manager
  Department of City Planning
  City of San Francisco
  San Francisco, California

- Mr. Dennis McCrosson
  Special Assistant to the
  Administrator
  City of Indianapolis
  Department of Metropolitan
  Development
  Department of Planning & Zoning

- Jim Parsons
  Chief Transportation Planner
  Office of Policy and
  Evaluation
  City of Seattle
  Seattle, Washington

- Julie Sgarzi
  Director of Research
  Mayor's Office
  City of Los Angeles
  Los Angeles, California

APPENDIX J

ABOUT THE SPONSORS

PUBLIC TECHNOLOGY, INC., a nonprofit, public interest organization, was established in 1971 as a cooperative national research and development effort for cities and counties of all sizes. Its purpose is to help local governments improve services and cut costs through practical use of applied science and technology. PIT provides a broad range of services to its member jurisdictions and serves as the Secretariat to three national networks, ones of which is the Urban Consortium.

URBAN CONSORTIUM FOR TECHNOLOGY INITIATIVES is a coalition of 37 major urban governments, 28 cities and 9 counties, with populations over 500,000. Established in 1974, the Urban Consortium brings together local and Federal officials, and appropriate representatives of the research community and private industry in a cooperative effort to address the problems of America's cities and counties.

INTERNATIONAL CITY MANAGEMENT ASSOCIATION is the professional and educational association of appointed administrators in cities, counties, and councils of governments. Since its founding in 1914, ICMA's purpose has been to enhance the proficiency of professional administrators and to strengthen the quality of urban government through professional management.

INTERNATIONAL TAXICAB ASSOCIATION, originally founded in 1917, is comprised of managment personnel who own and operate taxicab fleets. ITA's purpose is to further the knowledge of individuals in the area of effective and efficxient operation of taxicab companies.

NATIONAL LEAGUE OF CITIES represents municipal government. Established in 1924, the League now represents 49 State municipal leagues and more than 800 cities directly. The League is an advocate for its members in Washington, D.C., in the legislative, administrative, and judicial processes that affect them.

U.S. DEPARTMENT OF TRANSPORTATION, URBAN MASS TRANSPORTATION ADMINISTRATION, OFFICE OF SERVICE AND METHODS DEMONSTRATIONS, improves the quality and efficiency of urban transportation by sponsoring the implementation of new transportation management techniques and innovative transit services throughout the United States.

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