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WORKSHOP/SEMINAR
REQUIREMENTS STUDY

Rudolph G. DiLuzio



February 1976

FINAL REPORT

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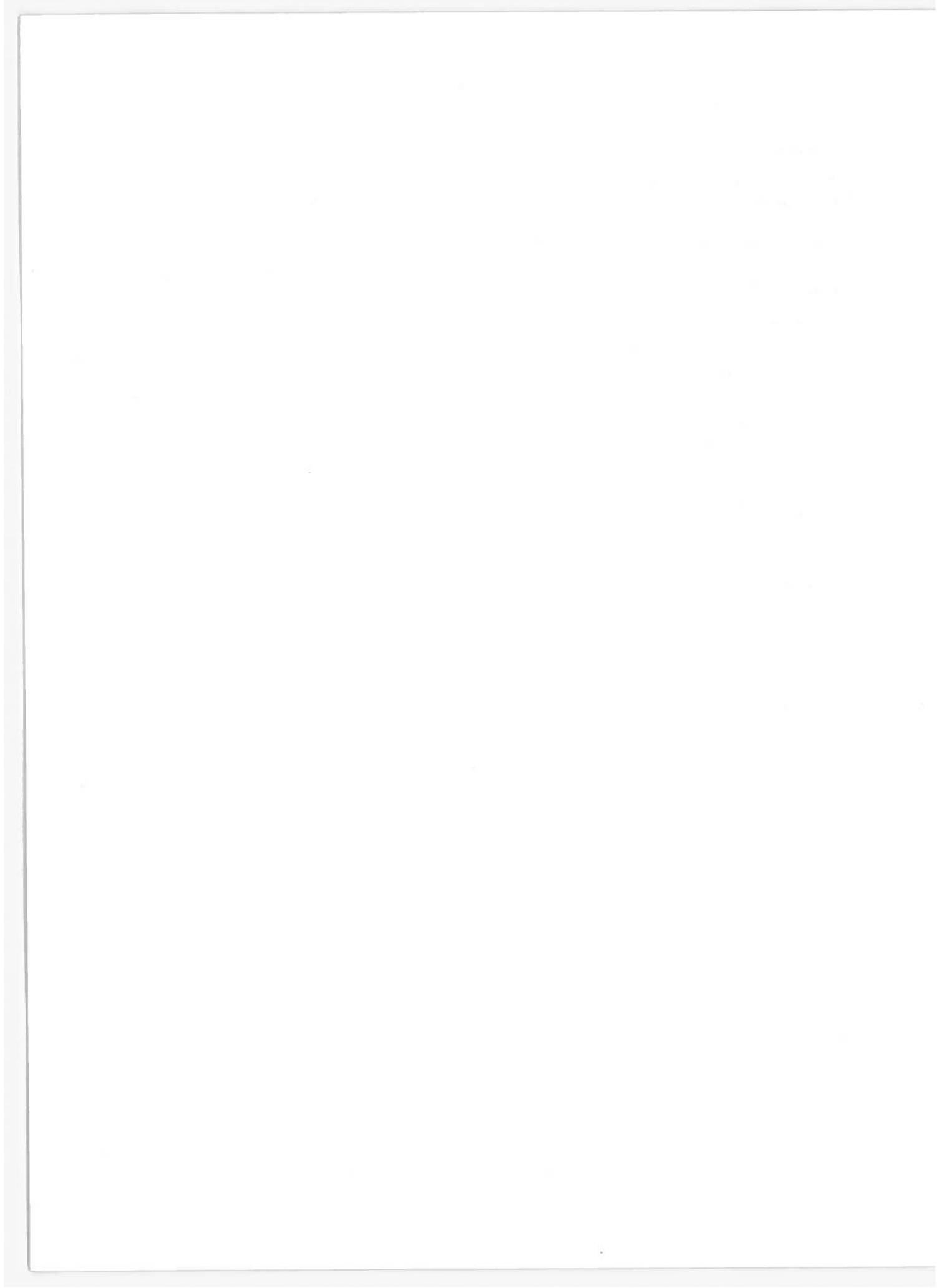
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16. Abstract <p>The feasibility of using the workshop/seminar technique as an effective communication tool for technology sharing was affirmed by the use of a national survey of potential users of Federal DOT Research and Development products. The survey encompassed on-site interviews at numerous government and academic organizations. A diversity of geographic, institutional, and professional perspectives was obtained.</p> <p>A total of over 100 transportation related areas of interest was refined to provide 10 workshop/seminar subject candidates. The survey results articulate state, local, and regional government transportation information needs and attitudes.</p>			
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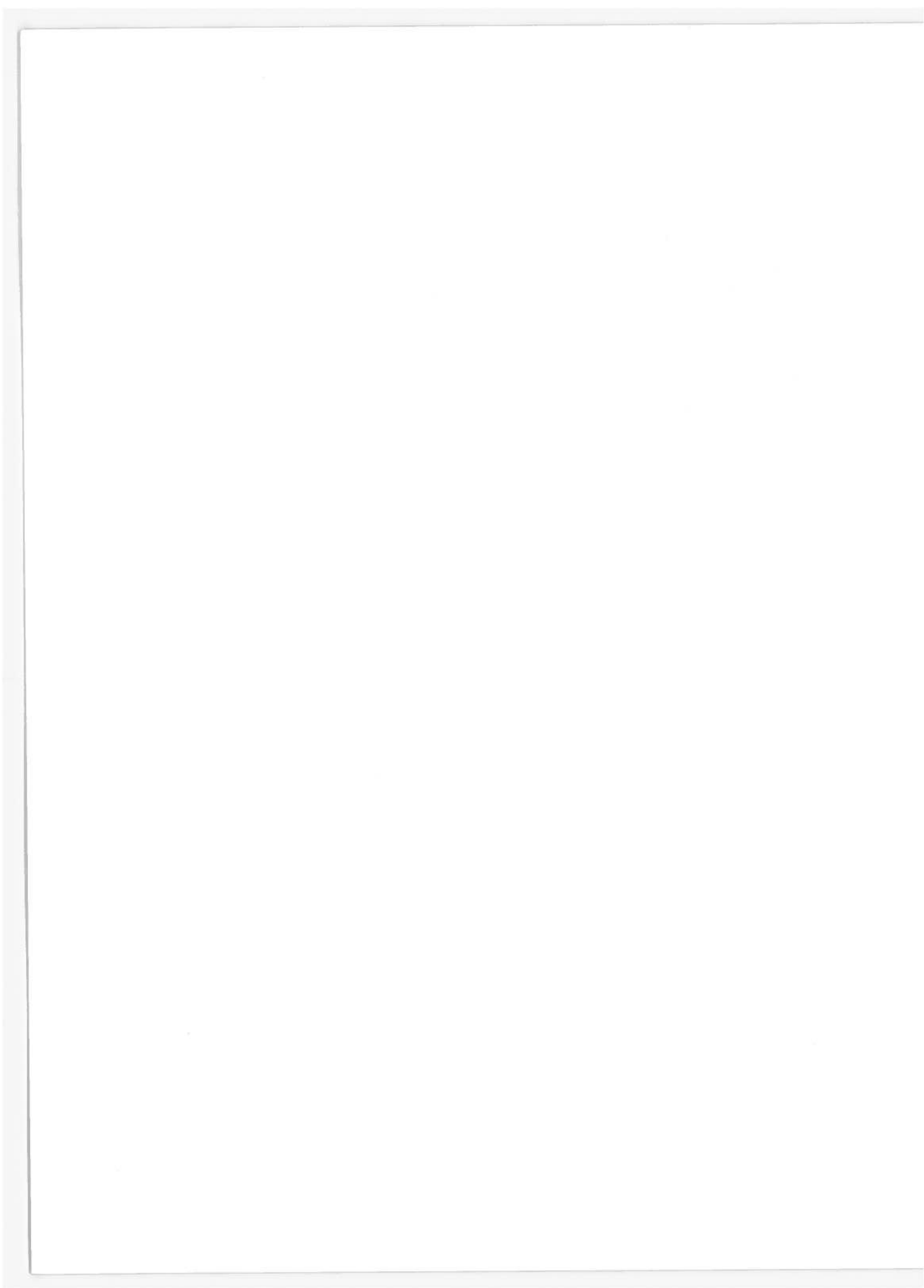


PREFACE

This document summarizes the results of the recent Workshop/ Seminar Requirements Study sponsored by the U. S. Department of Transportation, Transportation Systems Center, Technology Sharing Program Office.

A message emphasized time and again is that stronger communication mechanisms between and among the Federal, state, regional, and local governments must be developed more fully if Technology Sharing is to achieve its true potential in the transportation sector. And here we use the term TECHNOLOGY SHARING not in the strict context of hard scientific and technological applications but in the broadest sense of information sharing...information ranging from technological state-of-the-art data to the so-called "soft sciences" such as socio-economic analysis to operational experiences.

A viable TECHNOLOGY SHARING program must be considered as communication on any given problem between someone with a recognized need and someone with the know-how to provide the solution for application to that need. Among the mechanisms available for this vital communication is a workshop/seminar program attuned to the needs of the user. It must be recognized that a workshop/seminar program has a number of variations as an effective tool for communication. The emphasis at the Transportation Systems Center is to use it as the means to develop a state-of-the-art information repository which has relevance and application to state and local authorities and their needs. The appropriate documentation is produced in draft form by the Department. It is then reviewed and refined on a collective



basis by selected subject authorities from the Federal, state, and local sectors.

The workshop/seminar is utilized as the interchange forum. The ultimate output includes a state-of-the-art document which reflects the representative experience and perspectives of the session participants. Most important, the state-of-the-art document is responsive to the capabilities through which the state and local needs must be met. It was to the exploration of the effective use of such a program that this study was directed.

The author wishes to express appreciation to all those who participated in this study. The sincere interest displayed by many within the Department of Transportation and the desire to provide a positive service to the transportation community was impressive. No less impressive was the explicit willingness of state, regional, and local officials to participate and cooperate in programs geared to meeting existing transportation needs.

The technical direction and assistance provided by R. V. Giangrande and Robert A. Smith of the Transportation Systems Center's Technology Sharing Program Office was a contributing factor to the effective compilation and analysis of the field data. Albert J. Gravallesse of PRIMA-TEC, Incorporated, is also recognized for his participation and expert guidance in the scoping and accomplishment of this study.

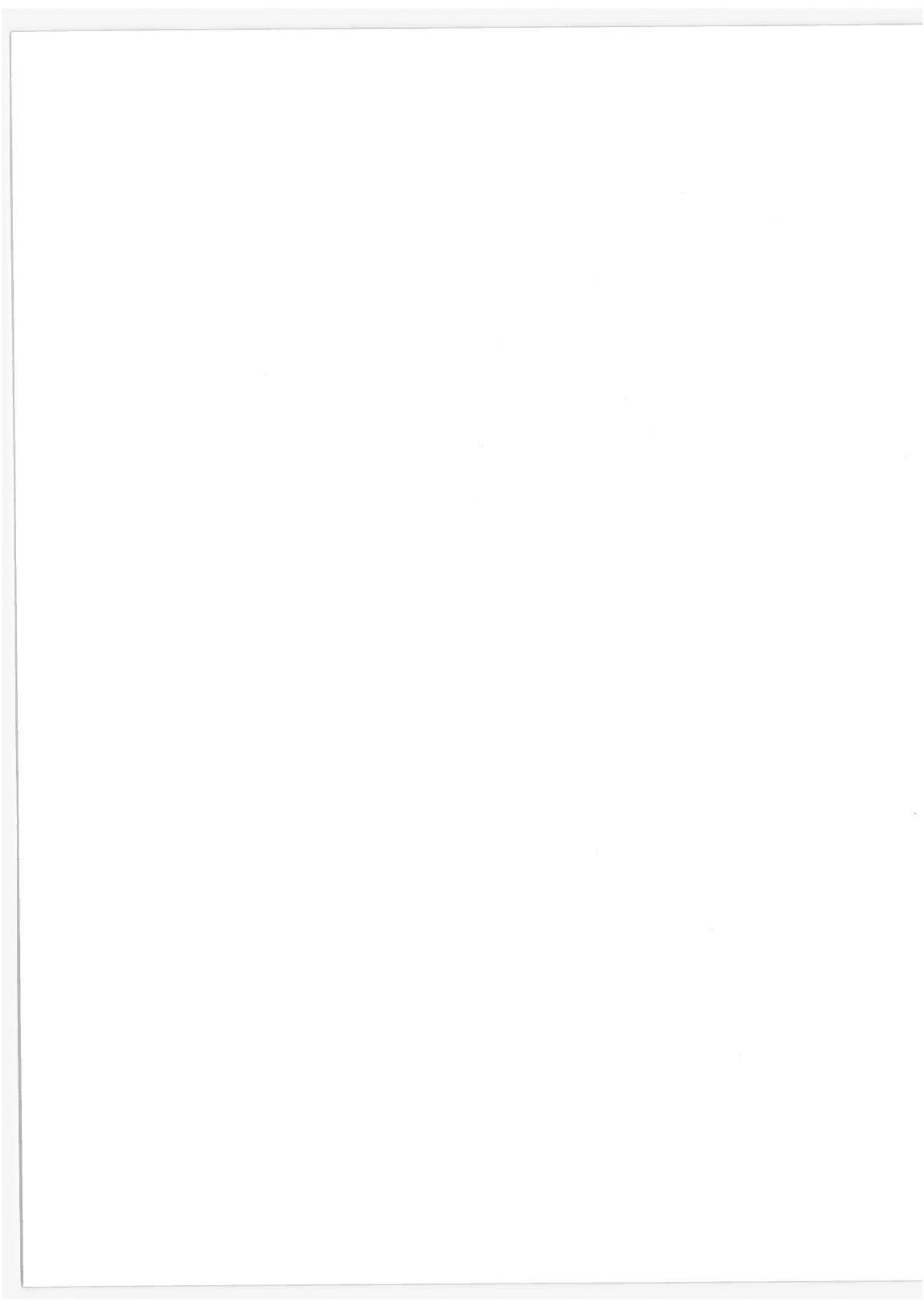


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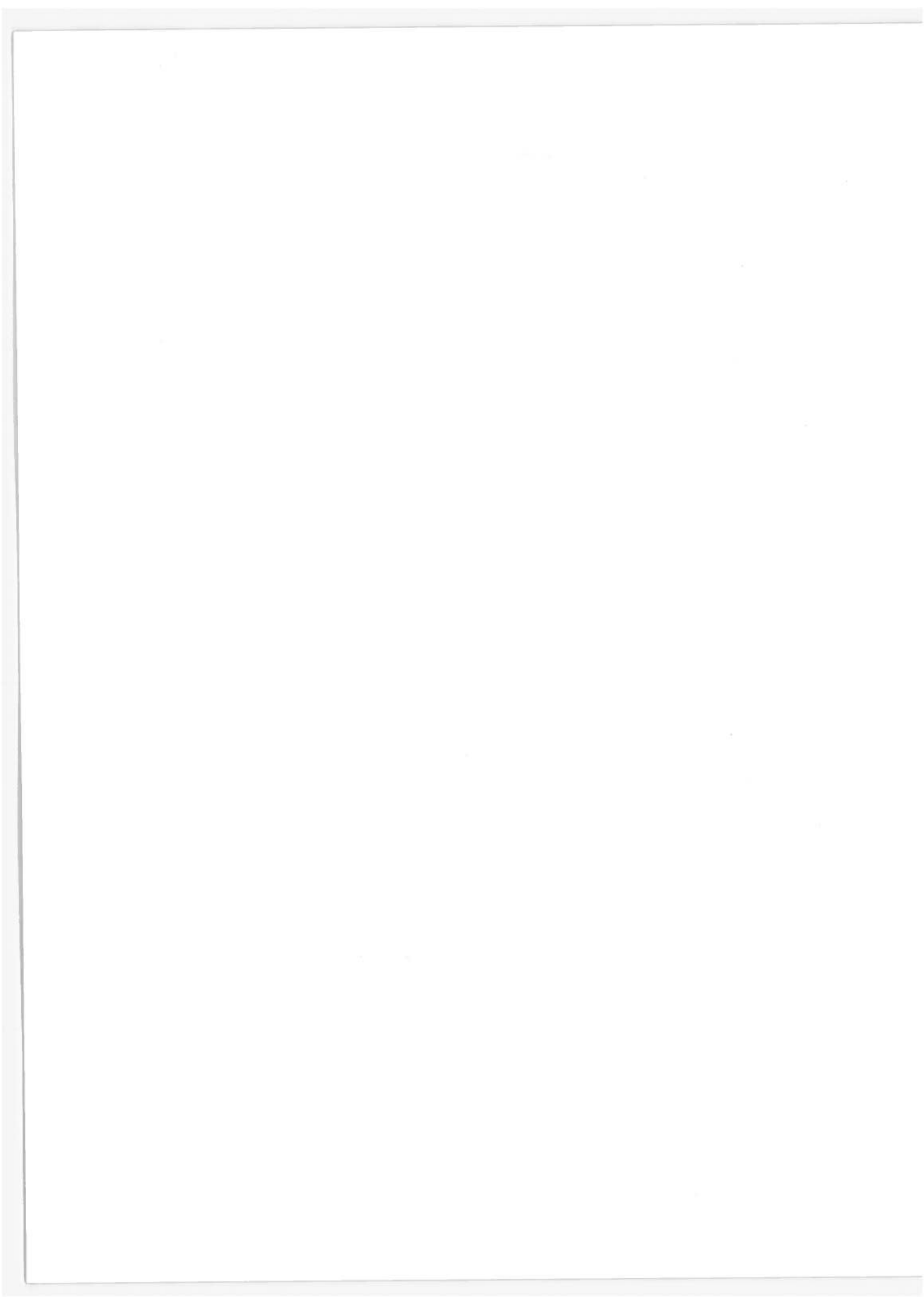
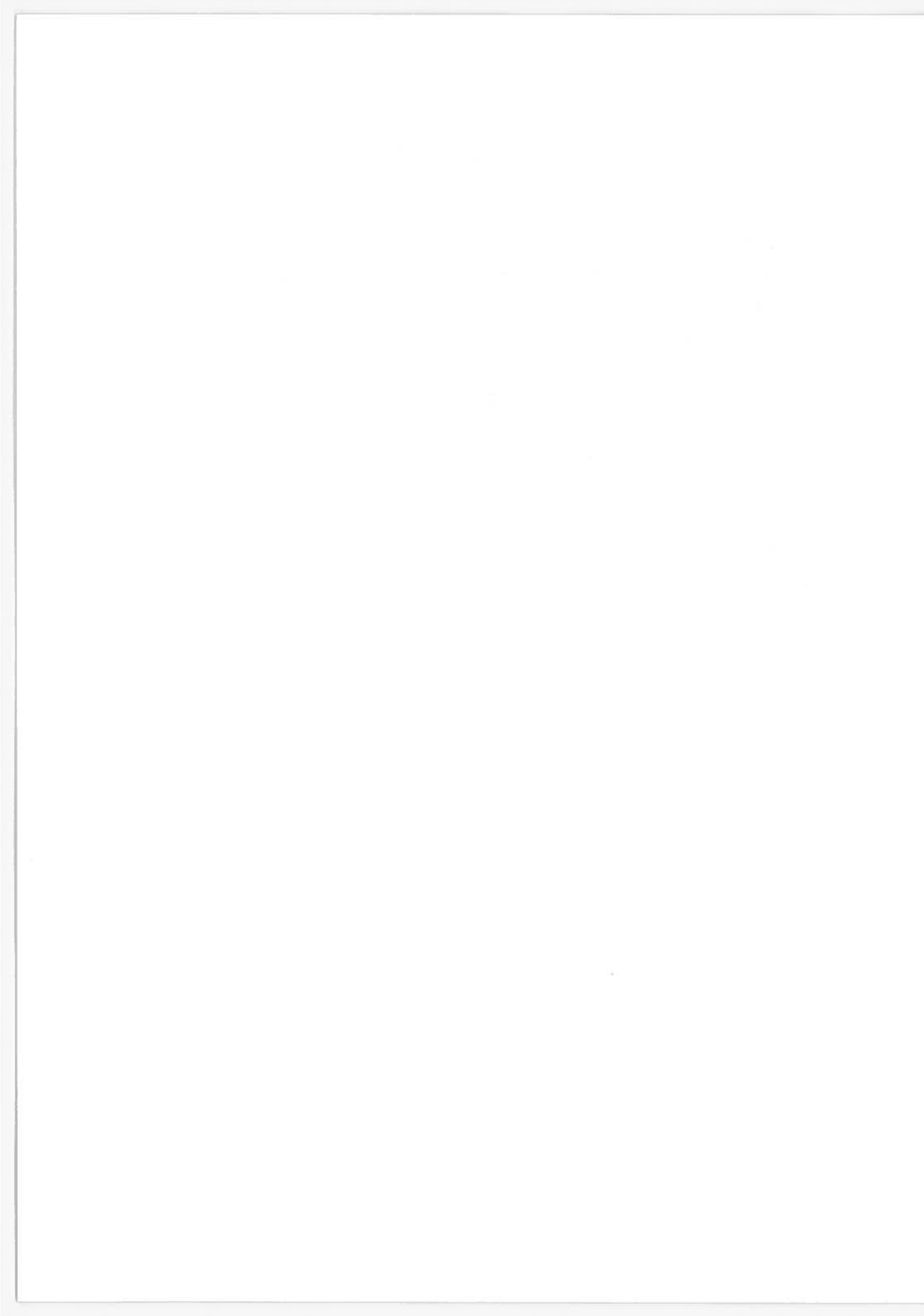


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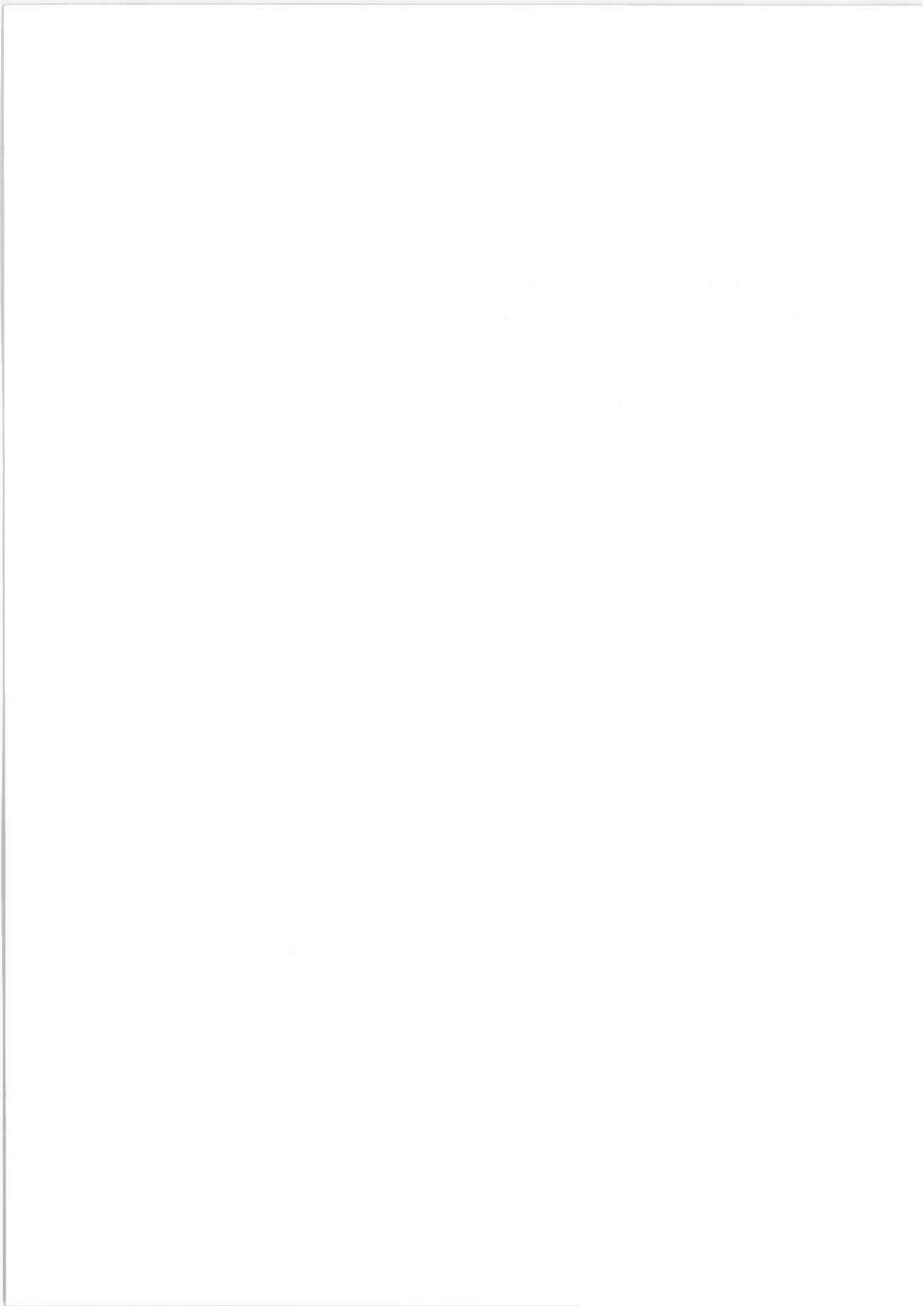
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1. INTRODUCTION

One of the main objectives of the Department of Transportation's (DOT) Research and Development (R&D) activities is to develop and provide technology which is appropriate to alleviate transportation problems on national, regional, state, and local scales. For this process to be effective, it is necessary that DOT's R&D efforts be responsive to state and local needs and that the results of the R&D efforts be effectively and actively disseminated to the ultimate users. The Transportations Systems Center (TSC) has been designated by the Secretary of Transportation as the focal point in support of the Department for the exchange of technical, economic and planning information with state and local agencies. In this role, TSC supports the modal administrations and the Office of the Secretary in the collection and effective dissemination of the results of the research, development, and demonstration activities. A Workshop/Seminar Program is envisioned as one of several activities which can facilitate this technology dissemination, transfer, and sharing process.

In this connection, it is important to note that there are two main factors which must be carefully considered in any process of transferring or sharing technology, namely:

- a. an understanding of the prioritized needs as perceived on the state and local level, and
- b. an understanding and realistic assessment of what technology is actually ready to be applied to state and local needs.

Consequently, successful technology transfer requires that the technology be sufficiently well in hand so that it can be reliably and effectively applied on a state and local level and that it addresses a high priority need. It is generally not useful to push for the adoption of technology which addresses low priority needs since it does not engage the attention of state and local personnel and also suffers in the resource allocation process. Nor is it productive to rush insufficiently developed technology to service high priority needs. The failure of the technology to "solve" satisfactorily the urgent need can lead to widespread disappointment which then hinders rather than helps technology utilization in the future.

At this point it should be noted that the process of technology transfer and sharing is further complicated by the fact that substantial differences of opinion can exist between the Federal government and state and local authorities with respect to the prioritization of needs as well as the readiness of technology to address these needs. Consequently, it is essential that effective communications mechanisms be used to: (1) afford state and local personnel the opportunity to establish priorities and voice their needs so that the Federal R&D program is responsive to these needs; and (2) afford the Federal agencies the opportunity to disseminate information on the outputs of the R&D program so that regional, state, and local agencies can better utilize the technology outputs.

Properly conceived workshops and seminars can be a key component in the overall information dissemination and feedback process. Personal interchange between the developers of technology and potential users of the technology

is essential to the rapid and efficient transfer of information. However, a high degree of relevancy and interest is required to optimize the use of workshops and seminars. Consequently, the topics of the various sessions and the attendance at each session have to be carefully examined to assure that priority needs are addressed and that appropriate working and implementation level state and local personnel will be attracted to the sessions.

Accordingly, this study addresses itself to identifying those products of DOT programs whose utility and utilization would be especially improved by conducting workshops and seminars for users. It has involved the participation of state, local, and regional government personnel who have an appreciation for the day-to-day problems and requirements at the "working levels" of government. The study integrated the potential user's perspective of his transportation related needs with the DOT's existing R&D products which would be amenable to information transfer through the workshop/seminar mechanism.

Although the primary focus of the study is on the workshop/seminar tool for technology sharing, the field investigators gave wide latitude to the state and local officials to express themselves fully relative to their feelings about a Federal technology sharing program and the inter-related aspects of communication and cooperation between Federal and local levels of government. This obviously provided a greater insight into local government attitudes, problems, and views which must be recognized by the Federal government for any kind of Federal/local assistance program to work.

The observations and conclusions drawn from these insights gained are incorporated into the overall analysis and recommendations which may be applied to the conduct of a viable technology sharing function within the Department of Transportation.

2. SUMMARY

Technology Transfer...the communication of the results of Federal R&D efforts from the Federal level to state, regional, and local government levels in a manner which encourages practical application of the R&D product and presumably meets existing needs at these levels. There are many variations to this definition, of course, but basically, they all relate to the fact that for technology transfer to be considered effective and successful, there must be eventual use or implementation of the R&D product being transferred.

This logically leads us to what products at the Federal level are capable of being transferred, what products actually have application, what is needed at the state/local level, how should the transfer be achieved, what are mechanisms for "communication," and how do we maximize the probability of success, in both the transfer process and ultimate implementation of the product.

It is to these questions that this study is directed. Although the scope of this study is limited and addresses one technology sharing tool, namely, the workshop/seminar, it naturally encompasses consideration of the practical aspects of a viable technology sharing program; the attitudes of the people who are involved with transportation systems, both within the DOT and at the state/local levels of government; and their needs and desires toward such a program and their commitment to making it work.

The DOT has certainly addressed itself to the development of a technology sharing program, the mechanisms of which

are delineated in Appendix D; however, it is a fact that the application of technology at the state and local level can be improved. As stated in Technology Sharing "... the Department (of Transportation) must assure that state and local needs are reflected in its R&D and that the results of its R&D are being actively disseminated to the ultimate users."¹

The workshop/seminar program is viewed as a prime tool for technology transfer if handled properly: recognizing the needs and limitations of the potential user; identifying his needs; ensuring that the potential recipient of information recognizes his need; attuning the workshop/seminar to the particular requirements and backgrounds of the attendees; identifying and inviting the "right" individuals to the session; and establishing the direction and criteria for follow-on and implementation as applicable to the workshop/seminar session.

The approach taken to identify these factors relative to the workshop/seminar technique involved a field survey which encompassed both DOT personnel within the Office of the Secretary (OST), modal administrations, and users of transportation systems and planning techniques at the state and local levels of government. A total of 102 people were interviewed, of whom 19 were at the DOT; the remaining 83 represented 55 state, local, and other agencies.

1. Technology Sharing, U. S. Department of Transportation, Washington, D.C., September 1973.

The field interviews were structured to the workshop/seminar issues; however, the interviews allowed considerable latitude for discussion of all factors which impact a state/local/Federal relationship insofar as technology sharing is concerned. The parameters for discussion which were formulated are as follows in Sections 2.1 and 2.2.

2.1 DOT Personnel

- o What R&D programs are felt to be ready now for transfer to local levels?
- o What R&D programs will be ready in the "near future" (1-2 years)?
- o If active experience in technology transfer:
 - 1) How was it done?
 - 2) How successful was it?
 - 3) What were the obstacles?
 - 4) What are your suggestions for improvement in a technology transfer program?
- o How do you feel about the workshop/seminar approach as a technology sharing mechanism?
- o Views on:
 - 1) User needs
 - 2) User interest
 - 3) Funding availability
 - 4) Priority of R&D projects as they would relate to information dissemination through a workshop/seminar.

2.2 Field Survey

- o Transportation related areas of interest and concern.
- o How have these areas been addressed in order to answer the "interest and concern?"
- o Is there active planning (or other) involvement with "other" governmental elements?
- o Where/how would a workshop/seminar help?
(If it would not help, why not?)
 - 1) Suggested subjects for a workshop/seminar program.
 - 2) What would you expect to derive from a workshop/seminar?
 - 3) Who would attend?
 - 4) What obstacles would be anticipated relative to workshop/seminar participation (e.g., time, funding, etc.)?

Virtually all who were interviewed, regardless of activity or position, were very responsive and anxious to contribute to the study. Quite naturally, views and opinions of the field respondents differed relative to subject matter and approach for workshop/seminar candidates based on geographical and institutional perspectives; however, the general, overall attitudes toward the DOT were comparatively consistent.

These attitudes revolved around a "credibility gap" between DOT and the state/local governments. This "gap" appears

to be due to the fact that the states and locals (especially the locals) feel that DOT has absolutely no grasp of what their "real" problems are, but instead goes off on various R&D programs having no relationship to the immediate transportation needs. (It is emphasized that UMTA is synonymous with DOT insofar as the majority of Federal/local inter-relationship remarks are concerned.) It is further emphasized that whether or not the attitudes expressed are justified is not at issue; no attempt is made to evaluate these attitudes; however, the fact that they do exist must be taken into consideration in Federal/state/local interactions, and certainly the attitudes must be dispelled if there is to be a semblance of meaningful communication among the various levels of government. At the risk of sounding self-serving, it may be noted that the field survey associated with this study resulted in many remarks to the effect that "perhaps DOT is moving in the right direction" in that they are soliciting opinions and recommendations from "users"; i.e., they (the users) are being afforded an opportunity to be heard relative to their problems and needs.

Specific field survey respondent suggestions for workshop/ seminar subject matter provided a total list of over 100 transportation related areas of interest. This list was consolidated to provide 33 major candidate topics. In turn, the topics were further assessed and prioritized both through application of quantitative data; i.e., based on the number of times the particular subject was suggested by field respondents, and through application of judgment factors based on the emphasis, interest, and need expressed through personal interviews (refer to Section 4, "Field Survey"), with the final iteration providing 10 workshop/seminar subject candidates.

Closely integrated with the latter analysis were the survey results of the DOT interviews which identified their view relative to state/local needs and gave the necessary insight into DOT capabilities in meeting workshop/seminar program requirements. Again, as in the field interviews, the respondent reaction was most cooperative; however, the prevailing feeling which emanated from these interviews was that a disturbingly large number of DOT personnel do not have a definitive understanding or appreciation of transportation problems as perceived by those at the state/local levels of government. There were, of course, significant exceptions, but the conclusion drawn here is that there are attitudes of "research first," and then a search for the application of that research product, rather than an identification of the "problem" and then application of research resources toward solving the problem, and then a "transfer" of the R&D output through the appropriate communication mechanisms.

Although this situation does not apply universally, the fact that it exists at all gives substance to the "credibility gap" that was found among the state/local personnel.

The next significant point relative to Federal/state/local communication is the passive attitude found in many quarters of the DOT; i.e., although state/local needs are being recognized and addressed through appropriate R&D, there is no follow-through with the "product" insofar as "transfer" and utilization is concerned. Rather, the latent question appears to be "why doesn't someone ask for this if they need it?" The fact of the matter is that those who may need "it" often do not know exactly what "it" is, probably do not know that "it" is "there," and even if they did,

they probably would not know who to ask. This situation obviously does not apply to the state/local governments with sophisticated planning and research staffs who do not know how to take the initiative in seeking out this information. It does apply to the overwhelming majority of local governments who do not have this capability, yet must cope with serious transportation issues.

This problem may certainly be resolved with proper emphasis and direction to the meaning of technology sharing. As was so aptly expressed by the Honorable Milton G. Shapp, Governor of Pennsylvania, "We must use the findings of science and technology to stimulate new industrial growth in the private sector; we must bring the wonder of modern science and technology to bear upon the pressing problems of our times; and we must succeed in integrating scientific and technological knowledge into the policy making and operational apparatus of government."²

This report does not intend to infer or imply that the Federal DOT bears the total responsibility for technology sharing. The state and local governments certainly must share the responsibility. They must recognize their internal needs and resources and define where the Federal DOT may help them in developing the management, capability, and mechanisms to apply the technology provided. But it is at the Federal level that commitment to the program must start - commitment in the sense of top-level support in terms of objectives and resources to meet those objectives.

2. Resolutions of the National Action Conference on Intergovernmental Science and Technology Policy, Action Now, Pennsylvania Office of Science and Technology, Department of Commerce, Harrisburg, Pennsylvania, August 1972.

The sincerity of the DOT personnel engaged in R&D activity is impressive, and the professional capabilities evident throughout the DOT are more than a match for meeting the "needs." Established technology sharing programs, notably in the FHWA and TSC, are worthy of note, but a total Department commitment to the technology sharing concept is not clearly evident, although there are exceptions.

The study results confirm the feasibility of a workshop/seminar program as a step toward effective technology sharing. The subject matters for which there is a need and matching DOT capabilities have been identified on a national basis and acceptance of such a program by state and local government officials is felt to be a virtual certainty, if it is properly structured and presented. The next critical phase in their effort should be the refinement of an effective workshop/seminar program to maximize both effectiveness of delivery and dissemination of information to the proper governmental elements.

To accomplish this, the available existing state/local communication mechanisms and internal relationships to be addressed and utilized must be evaluated. The local interrelationships, what each element of government is responsible for, what each is doing; how each derives its information, how they impact on one another; their cooperation or non-cooperation with one another; and their relationship to the whole must all be comprehensively assessed in order to clearly delineate institutional elements which constitute the framework through which the DOT must address its resources. The approach for technology transfer through the workshop/seminar may then be designed in a manner which

takes into account these intergovernmental dynamics which determine the ultimate success or failure of the program, with success being measured as the ultimate utilization of the information provided.

There has been much rhetoric over the past few years on the need for technology sharing and the barriers to it. We are almost to the point where there is rhetoric about the rhetoric, but the basic problem still exists, namely, effective communication and cooperation. Marvin Mandel, President of the Council of State Governments, referred to this when he stated, "During the last two or three years, there has been a proliferation of studies and much rhetoric on the need for, and barriers to, bringing science and technology to bear upon the pressing human problems of our times and into the policy making and operation of government at all levels, especially at the state and local level. The fact that this is a very formidable task which is not amenable to an early system-wide treatment and follow-through, seems to have discouraged us from breaking the problem down into workable components and attacking them a step at a time."³

The workshop/seminar program has the potential to be a significant such step in the overall enhancement of a viable DOT technology sharing effort.

3. Report to the Council of State Governments, Intergovernmental Uses of Federal R&D Centers and Laboratories, The Council of State Governments, Lexington, Kentucky, April 30, 1973.

3. METHODOLOGY--GENERAL APPROACH

The broad objective of this contract was to identify a number of areas where workshops and seminars would be particularly useful in increasing the utilization of DOT R&D results applicable to priority needs of regional, state, and local users. To achieve this objective, it was necessary to indertake two major activities.

One major activity consisted of a survey of potential users of this technology to determine their priority needs and interests and to determine which of the technology available for their use is of the greatest interest to regional, state, and local personnel. Since there exists a wide variety of user personnel, efforts centered on obtaining representative samplings of operating and planning personnel from regional, state, and local agencies.

At the same time a broad survey of completed and ongoing DOT R&D programs was conducted in order to select available technology that could be applied to state and local needs. It was important during this phase to assess what technology was really ready to be transferred as well as to determine for which technology or programs workshops/seminars would have the greatest impact on increased utilization.

The integration and iteration of the results of these two activities culminated in the selection of specific topics for workshops/seminars together with a description of the most appropriate approach for each workshop/seminar.

The broad scope of DOT's R&D activities and the great

number and variety of potential end users made it impractical and undesirable to apply a brute force approach to these activities.

Instead, a well designed, selective survey strategy was used encompassing the following major steps:

- a. The user survey was accomplished through discussions with 83 carefully selected personnel from 54 regional, state, and local agencies. Through personal discussions with these individuals, a candidate list of topics for workshops/seminars was compiled.
- b. Concurrently, a DOT technology and program survey was accomplished through the combination of a rapid documentation survey and personal interviews with the sponsors of R&D at DOT, followed by discussions with the appropriate modal administrations. These activities resulted in a candidate list of topics for workshops/seminars which was compatible with their capital grants and technical assistance and planning activities. A final review of the candidate list was accomplished through discussions with key individuals at OST who are familiar with both the R&D activities as well as regional, state, and local problems.
- c. A comparison, analysis, and iteration was made between this list generated by these knowledgeable users and the list representing DOT's inputs. The end product of this process was a single list of candidates representing the best combined thinking of these various groups of people. Additional information on user needs

was also obtained from other government and non-profit organizations which receive requests for assistance from regional, state, and local sources.

Consequently, the final priority list of candidate workshops/seminars evolved through the inputs of all major participants in the R&D process at DOT, the resource managers in the operating administrations at DOT who provide funding to regional, state, and local agencies, and a wide cross section of working level users at all levels of regional, state, and local agencies.

4. FIELD SURVEY

4.1 General

The field survey addressed itself primarily to those state, regional, and local officials who have interrelationships of varying degree with UMTA and FHWA. It should be noted that regional and local thinking often reflects UMTA and DOT as one entity, just as state highway personnel relate basically to FHWA. None of the agencies interviewed had any direct involvement with FAA, FRA, NHTSA, or the USCG.

It is important to keep this fact in mind to assess the field survey expressions in their proper perspective, particularly with respect to "attitudes" and "communication."

The attitude expressed by field respondents to the workshop/seminar approach was overwhelmingly favorable. This was caused not so much by the workshop/seminar program as such, but by the fact that a Federal agency was actually taking the trouble to come "down" to working level personnel to find out what they were thinking and what their actual needs were.

The prevalent thinking by those interviewed within state and local levels of government is that DOT has been far removed from their "real" problems and that although communication with Federal agencies is difficult at best, it is worse with DOT. Indicative of this feeling was the comment made by a local community mayor: "Historically, there has been a large gap between DOT and the local community. This can be seen when you read newspaper accounts of program announcements made by DOT in Washington, which are never mentioned at the local level." Many variations of this same comment were received throughout the country, but modified by the expressed hope that our being there was indicative of DOT "moving in the right direction."

A "credibility gap" between DOT and state/local government was certainly evident throughout our discussions with transportation systems users at all levels of government. It is most definitely felt, whether accurately or not, that DOT (and most notably, UMTA) is perceived as not understanding what is really needed by the ultimate users of DOT products, and that DOT's R&D develops a product without any prior attempt to determine the ultimate usefulness. It is likewise perceived that after development, DOT attempts to find a market for the product. Now, rightly or wrongly, these are prevalent attitudes, and attitudes which must be dispelled if DOT is to establish credibility with state and local governments. The establishment of "credibility" is a major step in developing open communication between and among the various governmental levels, from Federal to local. Only with this open communication and professional trust will any kind of technology sharing program work, including the workshop/seminar mechanism.

State and local government officials involved with transportation planning or operations are more than willing to participate in technology sharing programs. Almost without exception, they recognize the necessity for the information which may be provided through a centralized source at DOT, and it is this centralized source which they seek.

The fact of the matter is, however, that there is not any office performing the total aspects of a technology sharing function as envisioned by former Secretary of Transportation John A. Volpe. In his remarks of October 18, 1972, Secretary Volpe stated, "I have charged the office of my Assistant Secretary for Systems Development and Technology with the responsibility for seeing that our state and local technology sharing efforts move forward rapidly and effec-

tively." He went on to say, "To make transportation technology sharing effective, we first need a centralized source of competence and information on modal/multimodal/intermodal transportation technology, systems, and planning. We have that source in the form of the Transportation Systems Center (TSC)." To be sure, the Office of the Assistant Secretary for Systems Development and Technology (R&D Policy Analysis Division) and the Transportation Systems Center (Technology Sharing Program Office) are fulfilling these objectives within the limits of their resource capabilities; but they do not have the functional visibility nor staff resources to fulfill their charter as a central information source. The locals look at DOT as a maze of overlapping, uncoordinated administrations which, first, do not appear to be overly responsive to their perceived needs, and, secondly, have no clear avenue through which information may be obtained, much less one through which they may determine what is available.

Those state and local agencies which have utilized TSC's Technology Sharing Resources have extolled the services provided; those who have not (and they were in the majority) strongly felt that a focal point for technical assistance programs was needed in addition to the mechanisms for technology sharing which are presently in place.

4.2 Field Survey Respondents

An overview of the "types" of individuals interviewed during the course of the field survey as well as the institutional structures which were involved is provided as background information to the survey (see Table 4-1a and b).

The sample represents a true diversity of transportation products user personnel and was chosen to provide a cross

section of geographical, institutional, and professional elements. This fact is of utmost importance in attaching a high confidence factor to the field survey interpretation and subsequent recommendations based on respondent views, attitudes, and expressed needs from their individual perspectives.

The sample section was based on a basic set of criteria as shown below. Although each criterion does not apply to every individual interviewed, taken as a composite group they do comprise a representative national sample, possessing the following characteristics:

- a. Close association with the Federal DOT
- b. Have served on DOT panels and advisory groups
- c. Recipients and administrators of Federal funds
- d. Are a cross section of institutional decision makers and implementers of transportation R&D, ranging from the gubernatorial and state DOT level to the local traffic engineer
- e. Come from geographically and demographically diverse transportation interests (ranging from rural Maine to congested New York City to sprawling Los Angeles).

TABLE 4-1a
SUMMARY OF ORGANIZATIONS AND INDIVIDUALS
CONTACTED/INTERVIEWED

Source	Federal DOT	State: DOT, DPW, High way Dept.	Regional: RPC, COG, County	Transit District Transit Authority	Municipality	Other	Total
Organizations	6	7	15	13	14	6	61
Individuals	19	16	18	22	21	6	102

TABLE 4-1b

OVERVIEW OF FUNCTIONAL POSITIONS INTERVIEWED

- o Office of the Governor
 - Science and Technology Advisor to the Governor
- o State Department of Transportation (or equivalent)
 - Assistant to the Secretary of Transportation
 - Assistant to the Commissioner of Public Works
 - Highway Engineer
 - Mass Transit Division Chief
 - Deputy Secretary for Planning
 - Planning Director
 - Planning Research and Technology Division Chief
 - Route Planning Division Chief
 - Transportation Studies Engineer
- o Regional Planning Commission; Council of Governments
 - Executive Director
 - Demonstration Project Director
 - Principal Planner
 - Research Engineer
 - Technical Services Director
 - Transportation Planning Director
- o County Government
 - Chairman, County Board of Commissioners
 - Special Assistant to the County Manager
 - Assistant Director of Planning
- o Regional Transit District
 - Chairman
 - Executive Director
 - General Manager
 - Deputy Administrator for Operations
 - Planning Director
 - Transportation Planner

Table 4-1b (continued)

- o Municipality
 - Mayor
 - Staff Advisor to the Mayor
 - Administrative Assistant to the First Selectman
 - City Manager
 - Community Development Director
 - Director of Planning
 - Principal Planner
 - Superintendent of Public Works
 - Technology Assessment Director
 - Traffic Engineer
 - Transportation Director
 - Transportation Planner
- o Transit Authority
 - Chairman
 - Executive Administrator
 - Deputy Administrator for Operations
 - Marketing Division Manager
 - Program Development Manager
 - Routes and System Director
 - Transportation Planner
 - Transit Director
 - Transit Division Manager
- o University and Other
 - University of Colorado, Bureau of Governmental Research and Services
 - Northwestern University, Department of Industrial Engineering and Management Sciences (telephone interviews)
 - University of Tennessee, Transportation Research Center
 - American Transit Association
 - National Science Foundation Federal Liaison Office of Intergovernmental Science and Research Utilization
 - Public Technology Incorporated

NOTE. - Eleven states, including the District of Columbia, were visited during the interviewing.

4.3 Representative Views as Expressed by Field Respondents

The following compilation of comments provides a candid insight to the prevalent attitudes and views of field survey respondents; the comments are taken from the field investigator's notes. Individual names are not used, but the institutional agency and level of government are identified:

- o The workshop/seminar is a good tool for information sharing ... but, there are too many duplications of effort in this area between the DOT and industry programs ... there should be a coordinating body of some kind.

Transit Association
Summer, 1974

- o The major problem with information transfer and systems implementation is the institutional one ... there is a lack of pulling together by government officials and communities as a whole.

Transportation Planning Division
State
Summer, 1974

- o I'm skeptical of so-called technology assistance programs; there is usually much promised, but little given.

Planning Department
City
Summer, 1974

- o Perhaps DOT should have an effective marketing system for their information banks so that people would know what is available from where.

Regional Planning Commission
Summer, 1974

- o A very useful service which could be provided (by DOT) would be to issue periodical interpretive bulletins of new transportation legislation and Federal memoranda.

Regional Planning Commission
Summer, 1974

- o The subject matter of a workshop/seminar session must lend itself to implementation within a "reasonable" period of time.

Regional Planning Commission
Summer, 1974

- o It is absolutely phenomenal how long it takes to process a grant application through UMTA ... it is not a "cooperative" process ... we have had our application for a grant to buy seven buses sent back to us time and again for nit-picking items ... we have been waiting three years to clear the paper-work hurdles.

Department of Transportation
City
Summer, 1974

- o DOT has a propensity for program announcements through the news media without giving details to the states.

Department of Highways
State
Summer, 1974

- o The rural communities and RPC's could use some type of technology transfer directory ... a compilation of available technology with catalogued abstracts ... this would be extremely valuable to a small agency which doesn't have the staff research personnel necessary to review all materials received nor to track-down various studies which are available, but which would require extensive research effort to identify.

Regional Planning Commission
Summer, 1974

- o A 95 is a "Catch 22" for us (rural RPC's) ... a program review is solicited by DOT ... we cannot respond because of lack of staff ... then we cannot get staff funding assistance because we did not respond.

Regional Planning Commission
Summer, 1974

- o We (rural communities) need a national policy for rural transportation, and within that, a viable program for rural mass transit ... the Federal agencies cannot overwhelm the rural communities with the same criteria and programs as for large urban areas; if they do not recognize this and take the proper approach, the result will simply be non-responsiveness to requested actions.

Regional Planning Commission
Summer, 1974

- o The implications of land-planning to total transportation systems must be recognized by those responsible for effecting a viable system.

Regional Planning Commission
Summer, 1974

- o Transportation systems planning has been done in a vacuum by all levels of government, including the Federal Government. There must be integrated policy making and policy planning.

County Administration
Region
Summer, 1974

- o If UMTA and DOT are so concerned about the transit situation, why does it take two years to process a grant application? How can they tolerate such delays?

Transit District
Region
Summer, 1974

- o Address today's problems ... don't present (at workshop seminars) exotic solutions for the year 2000.

Planning Division
Transit District
Summer, 1974

- o A basic area of need which must be addressed is the management of a planning process, which is not well understood by a good many of those at the state and local levels (of government) who are responsible for the process.

Operations Management
Transit District
Region
Summer, 1974

- o UMTA must establish credibility in the presentation of information ... overall image of UMTA is not good ... a workshop/seminar program will be supported by potential participants only if they feel that it is worth expending their time at the session ... past performance (by UMTA) generally does not indicate that it would be so.

Operations Division
Transit District
Regional
Summer, 1974

- o The problem with UMTA and TSC research programs is that many of them ... particularly TSC's ... have no practical application ... as for UMTA, there isn't any direction to their programs; they are not thought out but more of a "let's try it" approach ... this has soured the transit operations.

Transportation Planning Division
Transit District
Region
Summer, 1974

- o A DOT sponsored and conducted seminar would have much more appeal (to local governments) than one by a private firm. The feeling exists ... among local government people ... that a private firm, such as a consultant, is looking beyond the seminar in terms of possible business with those attending ... this might flavor their presentation, whereas the Federal agency would be totally objective.

Planning Department
City
Summer, 1974

- o I receive a veritable mountain of data each day (from DOT). It is virtually impossible to read it all ... there should be some type of periodic bibliography which would enable a selective review.

Transportation Planning Office
State
Summer, 1974

- o TRISNET is a very useful and necessary system; however, I feel that there should be an intensive, coordinated effort within DOT to ensure that information from all transportation agencies is included in the data file ... this means the individual administrations and offices within DOT and outside services such as the ATA.

Transportation Planning Office
State
Summer, 1974

- o States are inundated with information from DOT; unfortunately, much of it doesn't apply to everyone ... it is not regionalized and so forth ... for example, a rural state is not particularly interested in subway systems ... handling of all the information received would require a larger (clerical) staff than they feel is necessary ... would prefer that DOT provided information on an applicable basis.

Department of Highways
State
Summer, 1974

- o The difference in communication procedures among DOT administrations creates internal (to the states) coordination problems ... for example, while UMTA will deal directly with a region (such as a COG), FHWA works through the state government structure.

Department of Highways
State
Summer, 1974

- o A data clearing house ... a central data bank to consolidate transportation information is vitally needed to facilitate field research on any particular subject.

Transit Authority
City
Summer, 1974

- o DOT has been rather remote with local governments, but perhaps they are moving in the right direction with the workshop/seminar concept.

Planning Department
City
Summer, 1974

- o Federal regional office personnel often never come to the community they are "working" with ... you must go to them ... as a consequence, they have no feel for the existing environment and field situations.

Transit District
Regional
Summer, 1974

- o On-site visits/tours of actual operational systems are worth more than any information sharing device such as a workshop/seminar.

Operations Management
Transit District
Regional
Summer, 1974

- o There should be greater coordination within DOT (among administrations) of the seminar presentations of related topics ... UMTA and FHWA sessions in particular are such that they could be better interrelated ... the problem which often impacts us is that different groups are sent to the separate seminars, with the result that neither group gets the full benefit of the information available.

Department of Highways
State
Summer, 1974

- o UMTA does not provide timely information to state and local agencies relative to on-going studies ... only thing that we get now are announcement bulletins too late after the fact to be useful ... there should be a monthly newsletter which would keep people abreast of in-process studies ... would avoid duplication of efforts at state levels plus provide a guide to information sources.

Division of Mass Transit
State
Summer, 1974

- o Information on in-process DOT studies does not get out to the state and local levels quickly enough ... we must take the initiative to find out what DOT is doing.

Division of Transportation Planning
State
Summer, 1974

- o There must be encouragement for local governments to interrelate and communicate ... DOT could be an effective force in establishing the appropriate forums ... must get key decision makers to these forums for discussion of policy formulation.

Transportation Planning Staff
Office of the Mayor
City
Summer, 1974

- o There is a definite need for some type of "transit guide" for local officials ... a non-technical document which would cover the broad spectrum of transportation, from a Federal DOT directory to a state-of-the-art compilation.

Transportation Planning Staff
Office of the Mayor
City
Summer, 1974

- o A cooperative effort at the Federal level (inter- and intra-agency) is a must for the coordination of information dissemination programs ... there is a need for cross-institutional information dissemination and packaging.

Council of Governments
Regional
Summer, 1974

- o DOT definitely should have a focal point for technology sharing.

Office of Science and Technology
State
Summer, 1974

As pointed out, these selected comments are illustrative of overall attitudes on both a geographic and institutional basis. It is felt to be extremely important that both "needs" and "problems" as perceived by the so-called "working-level" elements be recognized and understood prior to any technology sharing effort with individual governmental structures. Only then can a relevant program be structured and effective dialogue established between the DOT and appropriate governmental entities to be involved in the technology sharing process.

4.4 CANDIDATE WORKSHOPS AND SEMINARS

The technique employed for the development of the final ten workshop/seminar candidates included a complete analysis of the field survey, integrating the information elicited from field user personnel with that from DOT sources. Iterations included quantifying responses as to subject matter and applying judgment factors on an intuitive basis, the latter being dependent on the field investigator's evaluation of individual field respondent contributions. The next major factor considered was the ability of the DOT to provide substantive support to each program in that needs are compatible with available technology that can be applied to state and local sectors.

To this point a list of candidate workshop/seminar topics was developed which met two basic criteria, namely:

- a. the technology in question is ready to be applied to state and local needs
- b. information transfer through the mechanism of workshops/seminars is considered appropriate from the view of both state/local and DOT personnel.

Table 4-2 presents a list of the ten workshop/seminar topics of highest priority, while Sections 4.4.1 through 4.4.10 present the details.

TABLE 4-2
PRIORITY LISTING OF TEN
WORKSHOP/SEMINAR CANDIDATES

Rank	Topic
1	Planning Process for a Transportation System
2	Technology Review
3	Bus Systems
4	Management Systems
5	Demand-Responsive Systems
6	Marketing Techniques
7	Elderly and Handicapped
8	Rail Systems
9	Procurement
10	Rural Public Transportation

4.4.1 Planning Process for a Transportation System

There is a vital need to provide the basic framework for integrated transportation system planning. It is recognized that a workshop/seminar to cover every aspect of a planning process would be impractical, if not impossible. Nevertheless, presentation of the latest available techniques which may be applied to the diverse elements of a comprehensive plan would go a long way in synthesizing viable approaches to effective planning. Examples:

- o Organization of a Transportation Planning Process - to include such matters as governmental/institutional relationships...participant cooperation...best way to achieve prioritization of projects...etc.
- o Plan Evaluation Techniques - current state-of-the art... methodology to be used in the evaluation of a plan relative to goals and over-all system
- o Cost/Benefit Comparison and Analysis of Various Systems
- o Cost/Benefit Analysis Techniques...assessment of system cost...cost effectiveness
- o Land-use and Transportation Planning Integration...comprehensive planning
- o Systems Approach to Transportation Planning
- o Pricing and Estimating Techniques for Transportation Systems

- o Modeling Techniques
- o Multi-Modal Planning
- o Environmental Planning and Environment Impact Statement Preparation
- o Traffic Control Planning Systems
- o Citizen Participation Mechanisms

4.4.2 Technology Review

The most enthusiastic suggestions received were those for "tell us what's available and where and how to get it." Such a session can and should also provide the forum for information interchange among the participants. Examples:

- o Technology Review - a review of all technologies which have been developed and how they relate to local governments and their long-range transportation planning... integration of new technology into planning...the fundamentals of transportation systems...what is available today for today's problems?
- o What Assistance is Available Through DOT - how does one find out?
- o Demonstration Project Review - what has been tried and results...what is underway?
- o International Transportation Systems - state-of-the art, operations, etc.

- o Problem Situation Review - what led to their creation... specific examples...case studies...how the same problems can be avoided and corrected...benefits through transit experience of selected cities.

4.4.3 Bus Systems

Among many of those interviewed, bus systems are seen as a means of addressing transportation requirements now, within the scope of readily available technology and equipment (exclusive of capital funding requirements). There must be an integration of system planning, operations, and management techniques. Special mention is made of "scheduling and routing," especially for the relatively larger city systems. It was pointed out by those familiar with operations that the scheduling and routing function is a "dying art."

Examples:

- o Public versus Private Bus Systems
- o Effects of Subsidies
- o Methods of Improving Existing Bus Systems
- o Bus Scheduling and Routing
- o Bus Feeder Systems - interrelated bus systems
- o Operational Maintenance - cooperation between drivers and maintenance personnel ... shop operations ... diagnostics ... training
- o Contra-Flow and Express Bus Lanes
- o Signal Technologies
- o Design of Bus Garages
- o Bus Technology ... types of buses ... operating experiences

4.4.4 Management Systems

A prevalent opinion voiced is that there is a dearth of qualified middle-management personnel among transit properties. There must be an integration of management principle application to transit system operations and their particular peculiarities. Examples:

- o What constitutes a "management system," i.e., marketing, management development, control systems, financial systems, etc.,...the interrelationships
- o Transit Management - address the day-to-day management problems...not the theory
- o Management Development (personnel)...also, interest in salary subsidies or grants for hiring and training of recent college graduates...one year program to be conducted by transit authorities...human resources development...training
- o Organizational Structure Analysis of a Transit System
- o Grant Administration

4.4.5 Demand-Responsive Systems

There is a proliferation of interest in "dial-a-ride" bus systems, particularly by communities wishing to address what they feel to be their obligation to the so-called transportation disadvantaged. Examples:

- o General Overview...characteristics of a Demand-Responsive (D-R) System

- o Dial-a-Ride
- o Jitney Service
- o PRT (Note: This category would be addressed to audiences on a very selective basis, more so than other D-R Systems)
- o Taxis as an Integral Part of a Transportation System

4.4.6 Marketing Techniques

The need for an effective marketing program as an integral part of a transit system is recognized. Required are the techniques to bring this function into focus with transit operations. Examples:

- o Marketing Function as it relates to the organizational structure of typical transit systems
- o Sales, Advertising, and Community Relations Aspects of Marketing and their relationship to creating a "better" image and to increasing transit system ridership

4.4.7 Elderly and Handicapped

We are in a time of acute awareness of the problems of the elderly and handicapped. Many municipalities are sincerely attempting to direct limited resources to identifying and meeting the specialized transportation needs of this group, but they require assistance and direction in order to realize

maximum benefits from their efforts. Example:

- o Transportation for the Elderly and Handicapped

4.4.8 Rail Systems

The emphasis should be on technological innovation and relevant state-of-the-art information. A major area also to be addressed is intercity goods movement. Examples:

- o Rail Utilization
- o Rail R&D
- o Rapid Transit R&D

4.4.9 Procurement

Obtaining the best return on capital grant dollar expenditures may relate to a considerable degree to the quality of the request for bid/proposal. Those responsible for the bid/proposal preparation often have not had the background experience in such preparation or in procurement and evaluation techniques. Examples:

- o Procurement Procedures...how do you write a request for bid; what research resources are available to determining hardware availability; which manufacturer handles what... contract writing
- o Technique for Writing Specifications
- o Establishment of Request for Proposal (RFP) Criteria

- o Capital Equipment Procurement...hardware evaluation and assessment

4.4.10 Rural Public Transportation

Those associated with transportation responsibilities in rural areas have expressed a feeling of benign neglect by the DOT. Further, it is felt that in those instances where there have been attempts to address programs to rural areas, the tendency has been to simply apply programs designed for urban areas. The message is that the distinct characteristics of the rural environment must be recognized and incorporated into rural transit program designs.

Examples:

- o Rural Transportation
- o Transportation needs of the rural poor, elderly, and handicapped
- o Application of Dial-a-Ride Systems in a rural environment.

4.5 Approach to a Workshop/Seminar Program

4.5.1 General

There are a number of specific ingredients which should be included as critical elements of a workshop/seminar program; their importance is particularly emphasized because they are also a composite view from potential workshop/seminar attendees. They are the elements which the field users perceive as contributing to successful sessions. They

broadly apply to all workshop/seminar structure:

- a. The DOT must recognize both the needs and limitations of the potential R&D recipients
- b. It must be ensured that the potential recipient of appropriate information recognizes his need.
- c. Groups of individuals from a given area who must later work in concert to achieve specific objectives should be brought together; one must address the area infrastructure which will determine whether or not "implementation" will be achieved.
- d. Those making the presentation and the attendees should "relate" to each other; e.g., a professor of mechanical engineering explaining engine diagnostics to a group of mechanics is not considered as effective as having a qualified garage superintendent as the presenter.
- e. The manner and terms of the presentations must be tailored to the particular backgrounds of the attendees.
- f. The sessions should be structured so as to allow for dialogue between those making presentations and attendees as well as allowing for the open exchange of ideas among the panelists.
- g. The overall program should include round-table discussions among panelists and attendees.

- h. The panel composition should include "experts" from within the geographic area of attendees whenever possible.
- i. The degree of technology presented must not be beyond the need of the potential user.
- j. The subject matter and techniques presented must lend themselves to implementation within a reasonable period of time.
- k. To effectively communicate with the broad range of users in the transportation community it is necessary to consider the development of documents through the workshop/seminar tailored to a variety of needs. The documents would, in effect, expand the dissemination capabilities of the forum many-fold. One approach which might be followed would be, as the Technology Sharing Program is currently doing, to have a "state-of-the-art" document developed as an output product of the workshop/seminar. In recognition of the fact that user familiarity with subject matter will vary considerably, the Technology Sharing Program has established three document "levels":

Level 1: A general-interest publication, introductory in nature, designed to aid the user in gaining basic familiarity with, and understanding of, the subject area.

Level 2: A publication providing technical and related information to augment understanding and decision-making by managerial, planning, and operating personnel.

Level 3: A highly technically oriented publication, specific and detailed in nature, designed for authoritative reference by transportation technical specialists.

Related audience composition as expressed in the above "levels" must be taken into consideration when structuring individual workshop/seminars which are intended to address specific needs.

4.5.2 Marketing

It is recognized that the proliferation of workshops and seminars on various and sundry subjects is considerable, with state and local government officials receiving innumerable invitations to various sessions. The result is that they often have difficulty reviewing them all, much less being able to assess what is truly worthwhile. It is felt, therefore, that a very definite marketing approach must be employed to fully utilize the workshop/seminar as an effective technology sharing tool. Incorporated in the approach should be such steps as:

- a. Identify need, related to specific geographical and institutional areas.
- b. Define clearly the workshop/seminar goals, objectives, and value to the local audience.
- c. Focus on institutional relationships and infrastructures in order to identify key individuals who would have to be involved in the implementation or positive use of information provided; an identification of "who makes things happen" within the given area.

- d. Address the scope and intent of the workshop/seminar to the individuals identified above, being clear and precise as to how the information may help once it is transferred.
- e. Structure the workshop/seminar panels such that the presentations are by government personnel (insofar as possible); it is recommended that use of consultants be kept to a minimum in that there is an inherent distrust of consultant presentations by state and local government personnel. The prevalent feeling is that the session will be more of a "selling" job by the consultant with a view toward future contacts than a sincere, straightforward attempt to help with the problems at hand.
- f. Ensure that the "reliability" of the proposed session to the prospective attendees is absolutely clear and, whenever possible, that the potential near-term benefits are recognized.

4.5.3 Workshop/Seminar Design

It is not felt to be feasible to attempt to design an overall approach for each workshop/seminar candidate topic in addition to the general guidelines presented. Although the basic technical elements would in all probability remain constant, the emphasis and method of presentation must be tailored to the selected audience, with a view toward the possible follow-up action desired from the group.

Approaches will vary not only from topic to topic, but from topic to infrastructure being addressed, etc. Each workshop/

seminar must be considered on an individual basis with careful analysis of the need to be met, how it can be met, what it will take for implementation (if applicable), what is expected to result from the workshop/seminar session as it applies to a geographic and/or institutional structure, who are the key individuals to be invited to attend, what are the communication and action mechanisms to be employed to support the anticipated required follow-on activity to the workshop/seminar, and how all this will be integrated.

The premise is, of course, that the workshop/seminar is not an end in itself, but a vital link in meeting total technology sharing objectives.

4.5.4 Possible Hindrance to the Conduct of Workshop/Seminars

Although the response from users and potential users of DOT R&D products to the workshop/seminar concept was extremely good, it was obvious that individual organization budget constraints could be a substantial inhibiting factor insofar as attendance is concerned. Two factors which could serve to counteract this problem in part are:

- a. Conduct seminars on a regional basis so as to minimize travel expense to the participants.
- b. Schedule and announce workshop seminar programs sufficiently in advance so that those wishing to attend may include them in their budgets; a minimum six-month advance notification would be required in most instances.

5. INTERGOVERNMENTAL TECHNOLOGY AND COMMUNICATION SHARING

5.1 Intergovernmental Communication

Any effort to increase technology sharing and enhance technology utilization in the United States will come up against an infinite number of complex problems. These problems can and must be confronted as an integral part of the development of any workshop/seminar program which is to provide a meaningful service to state and local governments.

To maximize both effectiveness of delivery and dissemination of information to the proper governmental elements, one must recognize the available existing mechanisms and internal state/local government relationships to be addressed and utilized. The institutional elements must be identified within a given region together with their interrelationships: what each is responsible for and is doing, their impacts on one another, and their relationship to the whole. The hierarchy of needs within the region should also be identified as they relate to the institutional elements and to the whole.

The DOT may then structure the approach to provide the information to the proper governmental elements to ensure ultimate positive action based on information provided; the need to definitize existing frameworks for communication and intergovernmental relations is a basic step to establishing the foundation for effective information sharing.

This in no way means that the communications process is the only barrier to be overcome in the execution of a technology sharing program; however, it is most definitely a major

inhibiting factor when not addressed properly.

As stated in the report, Research and Development Priorities in Pennsylvania, "...Intergovernmental bureaucratic linkages provide continuous communication among levels of government in the Federal System...Increasingly, responsibility for information dissemination and utilization of policies and programs in the intergovernmental system has devolved upon administrators. The conception of states and localities as the experiment stations for innovation in the Federal system becomes increasingly strained as one loses sight of the role intergovernmental bureaucracy has played in the diffusion of innovation throughout the Federal system. There needs to be additional research which describes the nature of vertical interagency transactions and communications and conditions and consequences of these transactions for community problem solving..."⁴

The identification through this study of specific areas of "need" and market potential for applicable DOT R&D products is but the first step in the design of an effective tool for meeting technology sharing objectives; namely, to increase the utility and utilization of the R&D products for the ultimate benefit of the state/local governments.

The approach must be geared to maximizing the potential benefits of the information being provided. And again, it is stressed that to do so requires a systematized methodology

4. Workshop, Research and Development Priorities in Pennsylvania, Center for the Study of Science Policy, Institute for Research on Human Resources, The Pennsylvania State University, University Park, Pennsylvania, August 1973.

for delivery and implementation follow-up within existing governmental frameworks. This will be no easy task, as outlined by Robert Crawford in his paper, The Application of Science and Technology in Local Governments in the United States. As said by Mr. Crawford, the problems that technology must confront involve social, economic, political, and legal considerations. Moreover, in total there are more than 81,000 local governmental units...with about 38,000 of these units being general local governmental authorities such as counties, cities, townships, towns, boroughs, and the like. Each state has its own arrangements for local government structures and authorities. While many of these are similar to arrangements in other states, many are different as well⁵. Extracting from the International City Management Association report entitled A Strategy for Support of Local Government Science and Technology Programs, he goes on to say, "...there are a range of specific barriers to technology utilization, that must be confronted. These range from a lack of understanding by local officials regarding the need for science and technology and a concomitant inability to define problems in technical terms, to an inability of the science and technology community to understand the technological needs of local governments (even when adequately communicated) and the complexities of the decision-making process in that sector."⁵

5. Crawford, Robert, "The Application of Science and Technology in Local Governments in the United States," Reprinted from Studies in Comparative Local Government, Vol. 7, No. 2, Winter 1973, published by the International Union of Local Authorities, The Hague, The Netherlands.

The above succinctly provides a realistic overview of the conditions through which the DOT resources must be applied in the execution of a technology sharing effort of which the workshop/seminar program is a part. The purpose of introducing these conditions to the program discussion is not to suggest that success faces insurmountable obstacles, but to emphasize that for positive program results, the "real-world" conditions must be fully recognized and approached accordingly.

5.2 Information Dissemination Mechanisms

The workshop/seminar mechanism, properly applied, can be an extremely effective tool within the overall context of technology sharing. However, it is important to recognize the other existing sources of information within the DOT so as to keep this one "tool" in context. The DOT report, Technology Sharing, was designated to provide an overview of the mechanisms and programs available. A synopsis follows in Table 5-1.

TABLE 5-1

DOT MECHANISMS AND PROGRAMS FOR TECHNOLOGY SHARING

Agency	Mechanisms for Communication	Programs for Technology Sharing
OST	Secretarial Representatives DOT Technical Advisory Board Urban Transportation Advisory Council Intermodal Planning Groups in the Field Technical Pipeline Safety Standards Advisory Committee	Program of University Research National Transportation Studies Urban Planning/Systems Studies Gas Pipeline Safety Program Transportation Safety Institute Information System (TRIS) "Stimulation" Portion of OST/DOT R&D
FHWA	FHWA Field Offices FCP Documents Highway R&D Annual Report Traffic Control Devices Committee National Highway Institute Highway Research Information Service (HRIS)	HP&R Funds - Research Portion NCHRP R&D Contract Program National Highway Institute State Program
UMTA	UMTA Field Offices Associate Administrator for R&D Transit Research Information Program (TRIP)	UMTA R&D Programs Managerial Training Grants University Research & Training Grants
FAA	FAA Field Offices Flight Information Advisory Committee FAA Academy Annual Planning Review Conference	Portion of FAA R&D Program
FRA	FRA Field Offices Safety Information System (SIS) Railroad Research Information Service (RRIS) High Speed Ground Transportation Test Center	Portion of R&D Budget Railroad Safety Program Grade Crossing Program Urban Railroad Relocation Railroad Network - Core System High Speed Rail Systems Advanced Systems Hardrock Tunneling

Table 5-1 (concluded)

Agency	Mechanisms for Communication	Programs for Technology Sharing
NHTSA	NHTSA Field Offices National Highway Safety Advisory Committee National Motor Vehicle Safety Advisory Council National Conference of Governors Highway Safety Representatives	R&D Traffic Safety Research Accident Investigation & Analysis Vehicles in Use Research Demonstration Alcohol Safety Action Project Alcohol Public Education Selective Traffic Enforcement Project Driver Control Systems Support Manpower Development
USCG	Close working relationships with state and local governments in the broad realm of marine law enforcement, search and rescue, marine environmental protection, port safety, and boating safety.	
TSC	Supports the DOT in the exchange of technical, economic, and planning information with state and local sectors of the transportation community.	

6. CONCLUSIONS AND RECOMMENDATIONS

It is evident that the so-called transportation "working level" personnel, the planners and transit operators alike, would support a substantive technology sharing effort in general, and a workshop/seminar program in particular. In turn, it is evident that the DOT has eminently qualified personnel resources to address such an effort totally, and certainly there are the R&D products, which, adequately presented to the proper source and in the proper manner, would be contributing to the making of a better urban society through the application of these resources. Certain basic conclusions and recommendations which evolve are:

- o Many "working-level" personnel in the field have no conception of what is available in the way of technological assistance from the DOT or how to go about getting such assistance (highway personnel are excluded from this category inasmuch as the communication channels from FHWA are firmly established and effective).
- o There is a definite need to stress "soft-sciences" information, not just the so-called "hard" technology.
- o A technology sharing program must actively promote its products to achieve anywhere near meaningful utilization. As stated by Jeffrey T. Hamilton, Director, Technology Utilization Office, NASA, "The best method to consistently achieve optimum technology utilization in the private sector is to look at the technology as a firm in the private

sector would...as a means to either make or save money. As long as that perspective is kept in mind and every effort is used to create awareness, the transfer, and more important utilization will occur."

- o Each topic identified herein as being of priority need cannot be projected as being an all-encompassing item for every geographic and institutional entity per se. The design of the technology sharing mechanism (e.g., the workshop/seminar) must recognize differences which exist in various regions of the country as an integral part of the program design and address those differences accordingly. The major points to consider are:
 - a. Identify the need
 - b. Identify the resources to meet the need
 - c. Identify the institutional framework through which the program must initially and ultimately work
 - d. Ascertain the proper technology sharing tool (it is assumed that the workshop/seminar will be considered as a prime tool)
 - e. Develop the methodology for addressing the need and the specific institutional framework.

Two major points which cannot be overstressed come to the forefront time and again:

- o The concept of a focal point for technology sharing effort is more critical than ever. As has been stated, local governments particularly view the DOT as a maze of overlapping agencies. They do not know where or to whom to address their problems, and what is worse, they feel to even attempt to broach the bureaucratic maze would be hopeless. The result is all too often inaction. The further benefits to be derived from a focal point, however, would be in the ability to marshal and coordinate all agency resources, to direct these resources in a manner which would complement one another while eliminating duplications and to coordinate agency response to "real-world" needs to be continually evaluated by a central agency responsible for the technological support of state and local governments.

- o It has been recognized time and again that among the principal barriers to effective technology sharing and utilization are the structural and institutional ones. In its 1972 report, Urban Transportation Research and Development, the Committee on Transportation of the National Academy of Engineering suggested that "the increasing focus on the quality of urban life clearly calls for a better understanding of the interactions and the functions of metropolitan areas. This, in turn, requires an enhanced program of analysis and real-world experimentation."⁶

6. Urban Transportation Research and Development, National Academy of Engineering, Washington, D.C., 1972.

It was further acknowledged that the major difficulties in improving transportation systems lie in the institutional structure - the political, jurisdictional, social, and other community organization systems which impact the economic order and the like.

It is, therefore, strongly recommended that in the pursuance of the development of a viable technology sharing program, a comprehensive study be accomplished which would identify those governmental elements and structures which exist within the nation. It would also identify the institutional elements such as state departments of transportation, councils of government, and so forth within a given region and delineate the interrelationships, what each is responsible for doing, their impact on one another and their relationship to the whole. Then one could interrelate the application of the workshop/seminar technique, from information "dispersal" to implementation or use requirements within the identified framework. In this way, the state, regional, and local needs as delineated within this report will be responded to in a manner which should maximize the changes for successful technology sharing.

7. REFERENCES

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5. Crawford, Robert, "The Application of Science and Technology in Local Governments in the United States," Reprinted from Studies in Comparative Local Government, Vol. 7, No. 2, Winter 1973, published by the International Union of Local Authorities, The Hague, The Netherlands.
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The Municipal Year Book - 1973, International City Management Association, Washington, D.C., 1973.

APPENDIX A

ALPHABETICAL LISTING OF WORKSHOP/SEMINAR CANDIDATE - TOPICS (AND SUBTOPICS) AS SUGGESTED BY FIELD SURVEY RESPONDENTS

AIRPORTS

- o Ground Access to Airports
- o Off-Shore Airport Systems

BIKEWAYS

BUS SYSTEMS

- o Public versus Private Bus Systems
- o Effects of Subsidies
- o Methods of Improving Existing Bus Systems
- o Bus Scheduling and Routing
- o Bus Feeder Systems - interrelated bus systems
- o Operational Maintenance - cooperation between drivers and maintenance personnel ... shop operations ... diagnostics ... training
- o Contra-Flow and Express Bus Lanes
- o Signal Technologies
- o Design of Bus Garages
- o Bus Technology ... types of buses ... operating experiences

CITIZEN PARTICIPATION MECHANISMS

- o Techniques for Citizen Participation in the Planning Process
- o Techniques for Acquiring Citizen Support of Airports

DEMAND-RESPONSIVE SYSTEMS

- o General
- o Dial-a-Ride
- o Jitney Service
- o Personal Rapid Transit (PRT)

ELDERLY AND HANDICAPPED

- o Transportation for the Elderly and Handicapped

ENERGY

- o Energy Efficiency in Transportation Systems
- o High-Capacity Energy Storage

ENVIRONMENTAL PLANNING AND IMPACT STATEMENT PREPARATION

- o Environmental Impact Statement (EIS) Preparation - including responsibilities by whom for what
- o Environmental Impacts of a Transportation System
- o Environmental Planning on a Regional Scale
- o Central Business District (CBD) Considerations, particularly air quality control

FINANCIAL SYSTEMS

- o Financial Management
- o Accounting
- o Cost Control
- o Financial Data Management

FIXED GUIDEWAYS

- o Land-use Impacts; Associated Impacts

FRINGE PARKING

FUNDING

- o Application Preparation
- o Flow of Monies
- o Identification of Types of Programs Funded
- o Types of Funding Available, from where, eligibility criteria

GOODS MOVEMENT

- o Urban Goods and Inter-City Freight Movement

GRANT ADMINISTRATION

- o Grant Management

INSTITUTIONAL INTERRELATIONSHIPS

- o Policy Bodies - examples of governmental/institutional structures and how they relate to transportation
- o Federal Agency Interrelationships - within DOT... relationships to state, regional, and local government

LABOR IMPACTS AND NEGOTIATION TECHNIQUES

- o Labor Negotiation Techniques
- o Section 13c Ramifications

LEGAL ASPECTS OF TRANSPORTATION SYSTEMS

MANAGEMENT SYSTEMS

- o What constitutes a "management system": e.g., marketing, management development, control systems, financial systems, etc...the interrelationships
- o Transit Management - address the day-to-day management problems...not the theory
- o Management Development (personnel)...also, interest in salary subsidies or grants for hiring and training of recent college graduates...one year program to be conducted by transit authorities... human resources development...training
- o Organizational Structure Analysis of a Transit System

MARKETING TECHNIQUES

MULTI-MODAL PLANNING

- o Multi-Modal Regional Planning Techniques Assessment; Evaluation; Trade-off Benefit Determinations
- o Intermodal Systems and Facilities Integrations: e.g., from airplane, within airport to city, etc...also to include physical facilities design, integrated schedules, marketing aspects, and so forth.

MODELING

- o UMTA Transportation Planning System (UTPS)
- o Sketch Planning - for small areas
- o Trip Generation and Traffic Assignment
- o Project Impact Analysis
- o Signal Control and Traffic Flow
- o Modal Split Analysis
- o Forecasting Techniques - transportation demands such as passengers and equipment...traffic prediction modeling
- o Data Analysis...what do you do with the data derived from simulation models...who should use it and how.

PLANNING PROCESS FOR A TRANSPORTATION SYSTEM

- o Organization of a Transportation Planning Process - to include such matters as governmental/institutional relationships...participant cooperation... best way to achieve prioritization of projects

- o Plan Evaluation Techniques - current state-of-the art...methodology to be used in the evaluation of a plan relative to goals and overall system
- o Cost/Benefit Comparison and Analysis of Various Systems
- o Land-use and transportation planning integration... comprehensive planning
- o Systems Approach to transportation planning
- o Pricing and Estimating Techniques for Transportation Systems.

POLICY AND LEGISLATION

- o Legislative Impacts...from the Federal to local government level
- o Transportation Planning...the policy and philosophy
- o Impact and Interpretation of Hardware Systems by Legislators
- o Legislative Techniques to Stimulate Innovations

PROCUREMENT

- o Procurement Procedures...how do you write a request for bid; what research resources are available to determine hardware availability; which manufacturer handles what...contract writing
- o Technique for Writing Specifications
- o Establishment of RFP Criteria
- o Capital Equipment Procurement...hardware evaluation and assessment.

RAIL SYSTEMS

- o Rail Utilization
- o Rail R&D
- o Rapid Transit R&D
- o Suburban Rail
- o Automated Train Control
- o Noise Abatement
- o Wheel Technology

RECREATIONAL TRAVEL IMPACTS

- o Recreational Travel - sociological aspects...motivating forces...modes...impacts

RURAL PUBLIC TRANSPORTATION

SOCIO-ECONOMIC ANALYSIS

- o Socio-Economic Impact Assessments and Analysis of Transportation Systems
- o Fare Structure Impacts - change in demand as a function of socio-economic effects
- o Environmental and Economic Impacts of Transportation Systems on a CBD
- o CBD Development/Redevelopment and Related Transportation Considerations

TAXI-CABS

- o Taxis as an Integral Part of a Transportation System

TECHNOLOGY REVIEW

- o What is Available through DOT - how does one find out
- o What is Available - the fundamentals of transportation systems...what is available today for today's problems
- o Technology Review - a review of all technologies which have been developed and how they relate to local governments and their long-range transportation planning...integration of new technology into planning
- o Demonstration Project Review - what has been tried and results...what is underway
- o International Transportation Systems - state-of-the-art, operations
- o Problem Situation Review - what led to their creation... specific examples...case studies...how the same problems can be avoided...benefits through transit experience of selected cities.

TRAFFIC ENGINEERING AND TRAFFIC CONTROL SYSTEMS

TUNNELING

- o Tunneling Techniques

WATERBORNE TRAVEL

APPENDIX B

COMPOSITE ROSTER OF PERSONNEL INTERVIEWED

PART I: STATE/LOCAL/REGIONAL/UNIVERSITY

STATE	ORGANIZATION	NAME AND TITLE
California	Science and Technology	A. Earle Davis, Director
	Division of Mass Transportation (CALTRANS)	George E. Gray, Deputy Division Chief
	California Department of Transportation (CALTRANS)	Henry L. Begin, Special Assistant to the Deputy Director for Transportation Planning
	Planning Research and Technology	James B. Borden, Chief
	Office of the Mayor Los Angeles	Norman Emerson
	Southern California Transit District	Frank Barnes, Deputy Administrator for Operations
		A. Ralph De La Cruz, Principal Analyst
		Joel Woodhull, Transportation Planner
		Joseph Cooper, Transportation Planner
	Southern California Association of Governments	Raymond Remy, Executive Director
	Association of Bay Area Governments	Peter L. Shaw, Transportation Planner
	Sacramento Regional Area Planning Commission	Robert E. Goldman, Director of Technical Services
Metropolitan Transit Commission	Timothy J. Bach, Director Physical Planning	
Bay Area Rapid Transit District (BART)	Paul N. Bay, Assistant Executive Director	
		Larry Dahms, Acting General Manager

STATE	ORGANIZATION	NAME AND TITLE
Colorado	<p>Planning and Research Division; Department of Highways</p> <p>Regional Transportation District</p> <p>Denver Regional Council of Governments</p> <p>Planning Office; City and County of Denver</p> <p>Bureau of Governmental Research and Services - University of Colorado</p>	<p>Ken Mick, Transportation Studies Engineer</p> <p>Ralph E. Jackson, Planning Director</p> <p>Robert H. Friis, Chief, Transportation Planning Section</p> <p>Robert A. Damerau, Assistant Director of Planning</p> <p>Barry M. Pell, City Planner</p> <p>Prof. Royal Daniel Sloan, Jr. Director</p>
Connecticut	<p>Bureau of Planning and Research</p> <p>Division of Route Planning</p> <p>Greater Bridgeport Transit District</p> <p>Westport Transit District</p> <p>Greater Bridgeport Transit District</p> <p>Greenwich</p> <p>Greater Hartford Transit District</p>	<p>Lembit Vahur, Assistant Director of Planning</p> <p>Gordon Spencer, Highway Associate Engineer</p> <p>Stephen M. Stolicny, Division Chief</p> <p>Adrian Leahy, Executive Director</p> <p>Richard Bradley, Executive Director</p> <p>Edward Boman, Administrative Assistant to First Selectman</p> <p>Michael Gratt, Chairman</p> <p>Paul F. Hannigan, Traffic Engineer</p> <p>Arthur L. Handman, Executive Director</p>

STATE	ORGANIZATION	NAME AND TITLE
Florida	<p>Dade County Commissioner</p> <p>Tampa Bar Area Rapid Transit Authority</p> <p>Tampa Bar Area Rapid Transit Authority</p> <p>Pinellas County Board of County Commissioners</p> <p>Central Pinellas Transit Authority</p>	<p>John Dyer, Special Assistant to the Dade County Manager</p> <p>Norman H. Thompson, Jr. Executive Administrator</p> <p>George R. Brumfield, Chairman</p> <p>George R. Brumfield, Chairman</p> <p>W. P. Barnes, Transit Director</p>
Illinois	<p>Northern Illinois Planning Commission</p> <p>Chicago Transit Authority</p> <p>Chicago Transit Authority Operations Planning Department</p> <p>Chicago Transit Authority</p> <p>Chicago Urban Transportation District</p> <p>Department of Public Works - Research and Development Division</p> <p>Department of Industrial Engineering and Management Sciences - Northwestern University</p>	<p>Matthew Rockwell, Executive Director</p> <p>William Boyd, Transportation Officer</p> <p>Joanne Vlecidides, Manager Program Development</p> <p>Frank J. Misek, Director Routes and Systems</p> <p>Steven Kabala, Manager Marketing Division</p> <p>Erland A. Tillman, Project General Manager</p> <p>Charles Lustig, Planner</p> <p>Douglas Zeman, PhD, Director Technology Assessment Project</p> <p>Albert H. Rubenstein</p>

STATE	ORGANIZATION	NAME AND TITLE
Maine	Department of Transportation	Fred A. Campbell, Jr. Director of Bureau Safety
	Androscoggin Valley Regional Planning Commission	John J. Jaworski, Planning Administrator - Assistant to the Executive Director Stuart A. Cunningham, Principal Planner
	Southern Kennebec Valley Regional Planning Commission	John B. Forster, Planner/Administrator
Massachusetts	Department of Transportation and Construction	Byron W. Gilchrist, Special Assistant to the Commissioner of Public Works Mathew A. Coogan, Special Assistant to the Secretary of Transportation
	Department of Community Affairs	John Dalton, Director Municipal Planning
	Northern Middlesex Area Commission	Kurt E. Schork, Assistant Director William G. O'Hare, Assistant Planner
	Metropolitan Area Planning Council	Anthony J. DiSarcina, P.E., Director of Transportation Planning
	Springfield	Stephen H. Pitkin, Director of Community Development
	Holyoke	Robert Bateman, Planning Director
	Northampton	Sean M. Dunphy, Mayor
	Chicopee	Gregory Z. Szyluk, Administrative Assistant to the Mayor Eric Person, Federal Funds Coordinator
	Worcester	Francis McGrath, City Manager
	Stoneham Waltham	William J. Reid, Jr. Superintendant of Public Works Alan McClennen, Planning Director

STATE	ORGANIZATION	NAME AND TITLE
New Mexico	<p>State of New Mexico</p> <p>State Highway Commission</p> <p>The Middle Rio Grande Council of Governments</p> <p>City of Albuquerque Planning Department</p> <p>Albuquerque Department of Transportation</p> <p>Planning Department City of Santa Fe</p>	<p>Frank C. DiLuzio, Administrative Assistant and Science and Energy Advisor to the Governor</p> <p>Anthony Gonzales, Planning Director</p> <p>Donald Hayes, Assistant Planning Director and Supervisor of Planning and Programming Research</p> <p>Kenneth M. Howell, Transportation Planner</p> <p>Frank Horan, Acting City Manager</p> <p>George Carruthers, Principal Planner</p> <p>Clyde G. Sharrer, Transportation/Aviation Director</p> <p>Thomas W. Gore, Manager Transit Division</p> <p>Harry Moul, City Planner</p> <p>Paul H. Gleye, Assistant City Planner</p>
New York	<p>Tri-State Regional Planning Commission</p> <p>New York City Planning Commission</p> <p>Mid-Town Planning and Development</p>	<p>Dr. J. Douglass Carroll, Jr. Executive Director</p> <p>George Haikalis, Research Engineer - Public Transportation Division</p> <p>Clarke C. Rees, Principal Planner - (and Acting Director)</p> <p>Nan Rokaw, Executive Assistant to the Director</p>
Pennsylvania	<p>Pennsylvania Department of Transportation</p>	<p>Jack Kinstlinger, Deputy Secretary for Planning</p>
Washington, DC	<p>Metropolitan Area Transit Authority</p> <p>Metropolitan Washington Council of Governments</p>	<p>Matthew Platt, Assistant Director</p> <p>Peter B. Moreland, Director Urban Corridor Demonstration Projects</p>

STATE	ORGANIZATION	NAME AND TITLE
Other	The University of Tennessee American Transit Association National Science Foundation Public Technology Incorporated	Kenneth W. Heathington, Ph.D., PE Transportation Research Center Herbert J. Scheuer, Assistant to the Executive Vice President Harold F. Metcalf, Program Manager J. Robert Havlick, Senior Vice President

PART II: U.S. DEPARTMENT OF TRANSPORTATION

AGENCY	OFFICE	NAME AND TITLE
Office of the Secretary	Office of Transportation Planning Assistance	Richard Bouchard, Director
	Office of Environmental Affairs	Martin Convisser, Director
	The Deputy Secretary	Dr. James Costantino, Executive Assistant
	Office of Transportation Planning Analysis	Ira Dye, Director
	Office of R&D Policy	Alfonso B. Linhares, Chief, R&D Policy Analysis Division
	Office of Systems Engineering	Robert L. Maxwell, Asst. Director for Project Management
	Office of Systems Engineering Office of R&D Policy	William C. Steber, Director (Acting) Jerry D. Ward, Director
Federal Highway Administration	Office of Development	Howard L. Anderson, Director
	Office of the Associate Administrator for Planning	William L. Mertz, Associate Administrator (Acting)
	Office of Research	Charles F. Scheffey, Director
Federal Rail Administration	Office of Policy, Plans and Programs	William E. Loftus, Deputy Associate Administrator
Urban Mass Transit	Office of Transit Management	Judith K. Kaplan, Technical Information Specialist
	Office of Transit Management	Stephen G. McConahey, Director
	Office of Transit Planning	Robert H. McManus, Associate Administrator
	Office of Research and Development	Lloyd J. Money, Associate Administrator
	Office of Transit Management	Charles T. Morison, Jr. Transit Training Coordinator
United States Coast Guard	Research and Development	Dr. Charles C. Bates, Chief Scientist
National Highway Traffic Safety Administration	Research and Development	Dr. Gene G. Mannella, Associate Administrator

APPENDIX C
MAIL SURVEY

General

A national mail survey was initially planned to augment the field survey. However, in view of the expanded personnel interview program conducted as part of the field survey, the mail survey activity was truncated as an item of the workshop/seminar requirements study.

An overview of the mail survey pre-design follows as a guide for possible future use in obtaining information from state, regional, and local governments relative to their views of DOT R&D applications to local transportation needs through the workshop/seminar mechanism.

Description of Survey Plan

1. Potential Respondent Universe

Potential users of DOT R&D products are spread over 81,000 local governments (county, municipality, and township) in the United States, in addition to the state governments and other regional type agencies (Planning Commissions, Councils of Government, etc.) of which there are over 600. Respondents would be selected from among this total number.

2. Survey and Sample Design

The survey would be accomplished in a manner which would

ensure an appropriate representative sampling, reflecting both governmental structure and geographic cross section. Agencies to be surveyed are as follows:

- a. State Departments of Transportation or equivalent (i.e., Public Works, Highway Commission, etc.)
- b. State Agencies for Local Affairs
- c. Regional Councils (includes councils of government, regional planning commissions, and economic and local development districts)
- d. Municipalities (specific communities would be identified for the sample from those delineated by the 1974 National Transportation Study, Manual 11, Volume 2).

The mailing list would be developed from the American Road Builders Association Directory of Transportation Agency Personnel, National Association of Regional Councils Directory, International City Management Association Municipal Year Book, and the 1974 National Transportation Study, Manual 11, Volume 2.

The survey questionnaire would incorporate items which would highlight appropriate profile characteristics of the governmental unit being surveyed as well as eliciting valid response to specific items relevant to the workshops and seminars.

Drafts of the initial proposed survey questionnaire and covering letter are shown in Exhibit 1.

Note that the workshop/seminar topics as expressed in the first questionnaire item correspond to topics derived from the field survey. The questionnaire format itself would be further refined prior to finalization for print.

D R A F T

Dear.....

The U. S. Department of Transportation is having a study conducted, one of the basic objectives of which is to determine what information that you, as a potential user of the Department's developed products, would like to see transmitted through a workshop/seminar approach. We would like your personal assessment as to which products, particularly of research and development programs, would be of the greatest value to state, regional, and local governments in meeting transportation-related needs. Views and comment from your perspective as a prospective attendee relative to what subject matter you would like to see included in a series of transportation workshops and seminars will aid immeasurably in the development of a viable program attuned to the needs of the user.

The workshop/seminar approach would generally be one which would establish a forum for the imparting and exchange of information among a group who have similar transportation-related interests. This would include presentations from individuals who have both the technical knowledge of the subject matter and the understanding of operational and implementation realities experienced by state and local governments. The forum would further afford attendees the opportunity to participate in round-table discussions where there would be an interchange of ideas and approaches to the problems at hand.

We earnestly solicit your help in this study. The enclosed questionnaire should be completed and returned to us by .

Very truly yours,

Enclosure (1 questionnaire)

D R A F T

QUESTIONNAIRE

TRANSPORTATION WORKSHOP/SEMINAR PROGRAM

"Application of U.S. Department of Transportation
Technology and Science to State and Local Needs"

DEFINITION: In the following questions, the term "activity" refers to your organization whether state, city, borough, town, township, village, county, council of governments, regional planning commission, or development district.

1. Based on your own assessment, rank the following potential workshop/seminar topics according to their importance in your activity (rank the items: 1 = most important; 2 = next most important; , etc. If no interest in an item, so indicate with a zero (0).)
 - a. Bus Priority Systems
 - b. Bus Run Cutting and Vehicle Scheduling
 - c. Bus Service, Inventory, and Maintenance System
 - d. Dial-a-Ride Bus Systems/Demand Responsive Systems
 - e. Environmental/Transportation-Related Impacts and Assessments
 - f. Financial Accounting and Reporting
 - g. Land-Use and Transportation Planning Integration/ Comprehensive Planning Techniques
 - h. Marketing/Market Research and Promotional Techniques
 - i. Railroad-Highway Grade Crossing Safety
 - j. Transportation Needs of the Elderly and Handicapped
 - k. Transportation State-of-the Art/A General Overview for the "Decision Makers"
 - l. Transportation State-of-the Art/A General Overview for Transportation Planners and Operations Personnel
 - m. Urban Railroad Relocation and Rail System Planning
 - n. What is Available from the U.S. Department of Transportation
 - o. Other (specify) _____

D R A F T

2. For each item of interest above, what would you expect to derive from a workshop/seminar? (Check all those applicable)

	<u>State-of-the- Art General Overview</u>	<u>Detailed Operating Information</u>	<u>Experience Benefit of Others</u>	<u>Other (Specify)</u>
a.	_____	_____	_____	_____
b.	_____	_____	_____	_____
c.	_____	_____	_____	_____
d.	_____	_____	_____	_____
e.	_____	_____	_____	_____
f.	_____	_____	_____	_____
g.	_____	_____	_____	_____
h.	_____	_____	_____	_____
i.	_____	_____	_____	_____
j.	_____	_____	_____	_____
k.	_____	_____	_____	_____
l.	_____	_____	_____	_____
m.	_____	_____	_____	_____
n.	_____	_____	_____	_____
o.	_____	_____	_____	_____

3. Intergovernmental and institutional problems often impede or have impeded effective implementation of transportation planning or operational programs. Please check and/or specify those problems which you have encountered.

- | | |
|---|---|
| <input type="checkbox"/> a. Conflicting Standards | <input type="checkbox"/> f. Inadequate Funding |
| <input type="checkbox"/> b. Inadequate Local Policy | <input type="checkbox"/> g. Fragmentation of Responsibility |
| <input type="checkbox"/> c. Inadequate Federal Policy | <input type="checkbox"/> h. Other (specify) |
| <input type="checkbox"/> d. Overlapping Programs | _____ |
| <input type="checkbox"/> e. Inadequate Communication | |

4. Do you feel that workshop/seminars are an effective tool in achieving a transfer of knowledge and understanding?
 Yes No

If "No", what communication mechanism do you suggest be employed?

D R A F T

5. What factors would encourage you to attend a workshop/seminar which you would consider relevant because of subject matter? (Check those applicable)

- a. Nominal Registration Fee (e.g., \$20.00) d. Length of WS/S no more than: (check one)
- b. Able to commute to WS/S Location 1 day 3 days
- c. WS/S Location at a "Convention" City 2 days 4 days
- e. Reputation of Panelists or Discussion Leaders
- f. Other (specify)
- _____
- _____

6. Questionnaire Completed by:

Name: _____ Title: _____

7. Activity:

- a. Name. Please specify _____
- b. Check one:
- State _____ County _____ Region _____
- City _____ Borough _____ Town _____
- Township _____ Village _____
- Council of Governments _____
- Regional Planning Commission _____
- Regional Transit District _____
- c. Population _____

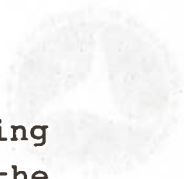
APPENDIX D
A CASE STUDY

The Technology Sharing Program Workshop on Demand-Responsive Transportation, which was held on June 4-6, 1974, in Philadelphia, Pennsylvania, is an apt example of a well conceived and executed session.

Pre-planning and preparation was accomplished by both the Technology Sharing Program (TST and TSC) and the Urban Mass Transportation Administration. Although it did not include an institutional structure analysis, it did embody significant essential elements such as identification of pertinent subject matter, method of presentation, invitation of specific potential attendees, inclusion of eminently qualified panelists who related to the workshop attendees, and so forth. The results were that the session was enthusiastically received by the participants and it did indeed accomplish its stated objectives.

The exhibits herein, which include an analysis conducted by the TSC of the workshop proceedings, give a further insight to the approach, content, and success of the Demand-Responsive Transportation Workshop.

An additional unique feature and success of this workshop was the review, critique, and refinement of a working document on demand-responsive systems. The final document, which has achieved national prominence and recognition, is a direct result of a cooperative effort between the DOT and attendees at the workshop who represented a good cross section of the professional transportation sector.



This workshop proved out the methodology for developing an effective product for technology sharing through the bringing together of all aspects of the state-of-the-art and introducing critiques by potential users. It culminated in the production of a viable document in a most cost-effective manner.

On June 1, 1972, the workshop was held at the Air Force Research and Development Command, Dayton, Ohio. The workshop was held in the form of a series of sessions.

The workshop was held in the form of a series of sessions. The sessions were held in the form of a series of sessions.

- Session 1: Introduction
- Session 2: State-of-the-art
- Session 3: Critiques
- Session 4: Summary

A total of 15 participants attended the workshop. The participants were from various organizations and agencies. The workshop was held in the form of a series of sessions.

The workshop was held in the form of a series of sessions. The sessions were held in the form of a series of sessions.

Handwritten signature

Director of Research & Development
U.S. Air Force Research & Development



DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION ADMINISTRATION
WASHINGTON, D.C. 20590

On June 4-6 the Urban Mass Transportation Administration, in conjunction with the Department of Transportation's Technology Sharing Program, is sponsoring a Workshop on Demand Responsive Transportation. This Workshop, the first of a regional series on this subject, will be held at the Bellevue Stratford Hotel in Philadelphia.

Invitees have been limited to transit operators and state/local Government transportation planners. The major goals of the Workshop are to impart technical and operational information about demand responsive transportation and to answer specifically the following questions:

- What is demand responsive transportation?
- Where is it applicable?
- Where is it in use?
- How are demand responsive systems operated?
- What are the implementation requirements?

A technology sharing document discussing demand responsive systems will be distributed and used as a guide throughout the session. At the end of the Workshop, we will seek your assessment of the effectiveness of this material for subsequent workshop sessions and general distribution. In addition, an optional tour of the Haddonfield (N.J.) Dial-A-Ride will be available at the conclusion of the Workshop.

A preliminary program is enclosed. Please indicate your attendance, or that of your representative, no later than May 14. We are looking forward to an informative and stimulating Workshop and hope that your organization will be represented.

Sincerely,

A handwritten signature in black ink that reads "Stephen G. McConahey". The signature is written in a cursive, flowing style.

Stephen G. McConahey
Director,
Office of Transit Management

Enclosures

GENERAL INFORMATION

WORKSHOP

ON DEMAND RESPONSIVE TRANSPORTATION

LOCATION

The workshop is being held at the Bellevue Stratford Hotel at Broad and Walnut Streets in downtown Philadelphia. The location is convenient for public or private transportation.

REGISTRATION

The registration card must be returned along with the \$15 registration fee on or before May 14th. Attendees will be provided two lunches, a reception (hors d'oeuvres and cash bar) and workshop documents. Name tags will be available at the registration desk outside the Clover Room.

ACCOMMODATIONS

For your convenience arrangements have been made to hold a block of rooms at the Bellevue Stratford. Special rates for Government employees are \$16 single and \$22 twin; for non-Government employees the special rates are \$20 single and \$27 twin. Please return the hotel accommodation card with your registration.

SPONSORED BY

URBAN MASS
TRANSPORTATION ADMINISTRATION
AND
TECHNOLOGY SHARING PROGRAM
U.S. DEPARTMENT OF TRANSPORTATION



JUNE 4, 5, 6,
1974

EXHIBIT 2

BELLEVUE STRATFORD HOTEL
PHILADELPHIA, PA.



AGENDA

WORKSHOP ON DEMAND RESPONSIVE TRANSPORTATION

Tuesday, June 4

WELCOME

8:30 - 8:45 **AL LINHARES/DOT** Technology Sharing Program

8:45 - 9:00 **STEPHEN MCCONAHEY/UMTA** Office of Transit Management

DEFINITION OF CONCEPTS. STATE-OF-THE-ART

9:00 - 10:00 **DANIEL ROOS/Massachusetts** Institute of Technology
(10:00 - 10:15 coffee break)

WHERE IS IT APPROPRIATE? HOW IS IT BEING USED?

Moderator, **ELDON ZIEGLER/UMTA**

10:15 - 11:00 **Regina Transit System**, Saskatchewan, Canada (feeder distribution)

GERALD McADOO/RTS

11:00 - 11:45 **Haddonfield, N.J.** (local suburban service)

(11:45 - 1:00 lunch)
Moderator, **ANTHONY SIMPSON/DAVE** Systems, Inc.

1:00 - 1:45 **Davenport, IO. and Hicksville, N.Y.** (taxi operations)

KENNETH HEATHINGTON/Univ. of

1:45 - 2:30 **Tennessee**
Naugatuck Valley, Conn. and St. Petersburg, Fla. (specialized)

JIM YOUNG/UMTA

(2:30 - 2:45 coffee break)

2:45 - 3:30 **Ann Arbor Transportation Authority** (small urban area)

KARL GUENTHER/AATA

3:30 - 4:15 **Rochester Transit System** (areawide)

ROBERT AEX/Rochester Genesee Regional Transportation Authority

4:15 - 5:00 Questions and Answers

5:00 - 6:30 Reception

Wednesday, June 5

HOW ARE DEMAND RESPONSIVE SYSTEMS OPERATED?

Moderator, **STEPHEN MCCONAHEY/UMTA**
Office of Transit Management

8:30 - 9:15 **ANTHONY SIMPSON/DAVE** Systems, Inc. - **Haddonfield, N.J.**

9:15 - 10:00 **GERALD McADOO/Regina Transit System** - **Regina, Sas., Can.**

(10:00 - 10:15 coffee break)

10:15 - 11:00 **JAMES READING/City Lines Management** Corporation - **Rochester, N.Y.**

11:00 - 11:45 **ROBERT CHERRY/Royal Cab Company** of **Davenport - Davenport, Iowa**
(11:45 - 1:00 lunch)

WHAT ARE SYSTEM IMPLEMENTATION REQUIREMENTS?

Moderator, **JERRY WARD/U.S. DOT-Office of** R&D Policy

1:00 - 1:30 **PETER STOWELL/UMTA - Federal**

1:30 - 2:00 **JERALD GEILE /Michigan DOT - State**

2:00 - 2:30 **ROBERT AEX/Rochester Genesee Regional** Transportation Authority - **Regional**

(2:30 - 2:45 coffee break)

2:45 - 3:30 **KARL GUENTHER/Ann Arbor Transportation** Authority - **Local**

3:30 - 4:00 Questions and Answers

TECHNOLOGICAL OUTLOOK

4:00 - 4:30 **ELDON ZIEGLER/UMTA**

Thursday, June 6

WORKSHOPS ON THE STATE-OF-THE-ART DOCUMENT

8:30 - 11:00 Concurrent Sessions

11:00 - 11:30 Workshop Summary

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1:00 - 4:00 Optional tour of Haddonfield via **Lindenwold**

GOALS OF THE WORKSHOP

This Workshop is sponsored by the Urban Mass Transportation Administration (UMTA) and the Department of Transportation's Technology Sharing Program to impart technical and operational information about demand responsive transportation and to answer specifically the following questions:

- What is demand responsive transportation?
- Where is it applicable?
- Where is it in use?
- How are demand responsive systems operated?

- What are the implementation requirements?

A technology sharing document discussing demand responsive systems will be distributed and used as a guide throughout the session. At the end of the Workshop, all conference participants will be asked for their assessment of the effectiveness of this material for subsequent workshop sessions and general distribution.

Analysis of Workshop Proceedings Based On Extensive Telephone
Interviews Prior to and Following the Workshop

Contact was made with approximately 120 individuals during the entire process beginning with validating the lists received of potential invitees, contacting those invitees who had not responded to invitations; and finally, seeking out the opinions and suggestions of the workshop participants.

Initial contact was made with approximately 30 individuals to determine whether or not we were including all interested parties on our list of invitees. Interest in the subject was overwhelmingly positive, individuals contacted felt that DRT was an issue of concern and that a workshop devoted to exploring planning and operational issues was an excellent idea.

The second set of 40 calls was made to invitees whose responses had not been received. The purpose of the calls was to encourage attendance and find out why people were not planning to attend. (Please see attachment (1) for a list of agencies contacted).

Two inferences may be drawn as a result of the 40 telephone conversations placed to non-responding invitees:

- 1) The timing of the workshop so close to the end of the fiscal year was largely responsible for limiting the attendance of many agencies.
- 2) There is a significant number of state, local, or regional agencies that are only now beginning to recognize transportation as a viable issue for their constituent areas. In addition to focusing attention on the established transportation agencies, the Department should seek out and identify these newly emerging transportation groups and pay particular attention to their needs.

Please refer to attachment (2) for the breakdown of the 40 agencies' responses.

The final series of calls was placed to workshop participants in order to discover how the representatives of the various state/local agencies reacted to the process.

Our desire in organizing the proceedings was to use the workshop to validate state-of-the-art information. We were governed by the belief that the technology sharing process must work as a flow between the federal and state/local levels. Information

generated or compiled on the federal level should be communicated to the state/local levels as the first step in this sharing process. Reaction of recipients must then be sought and included in the final synthesized product. It is only through this continual flow of information between the federal and state/local levels that valid sharing can occur.

We wished to elicit participants' opinions on the effectiveness of the workshop methodology as a vehicle for validating state-of-the-art information. Participants were asked, as well, to comment on the sharing document, to offer suggestions on improving the workshop process to make it a more responsive information sharing mechanism, and finally, to comment on the overall workshop logistics.

Opinion was overwhelmingly favorable on the methodology. Participants felt that inclusion of a working copy document in the proceedings helped pull all the ends and issues together. (As a footnote: the majority of participants questioned felt that the document should have been distributed prior to proceedings to enable greater in-depth reading). Participants enjoyed the opportunity to contribute to the process by commenting on the document.

Several participants did feel, however, that the document should have been used more as a focal point for the speakers' presentations. Many felt that the process of validating state-of-the-art information was too peripheral to the workshop. In other words, opinion was overwhelmingly in favor of the process; the accomplishment of this process could have been smoother. Overall, they felt it was excellent for our first attempt at this type of workshop.

All participants were pleased with the document. Although comments broke down according to the participants' overall knowledge of DRT prior to attending the workshop, all felt it was a valuable addition to their libraries. Participants who were unfamiliar with DRT were generally more enthusiastic about the document as a primer; while those participants who had experience with DRT responded positively to the document as a compilation, particularly in reference to the compendium of sources found in the back.

Generally, suggestions on improving the methodology broke down according to participants' knowledge in the field. The participants who were familiar with DRT suggested that more speaker-participant interaction, as well as debates-discussions among speakers, would have been beneficial. These people who came to Philadelphia primarily to absorb information about DRT were very pleased with the format we utilized.

Participants felt that all the handouts were a positive addition to the proceedings and provide a valuable resource.

Comments were received on the tone of the workshop. Interestingly, most participants were relieved that the proceedings covered "nitty gritty" operational and implementation details, as opposed to academic discussions.

The major point to keep in mind in analyzing the results of this process is the role to be played by state/local agencies in this sharing process. The comments by the participants to the effect that considerable more time should have been spent on reviewing and discussing the document and making it the focal point in the process, indicates the desire of state/local agencies to become involved in the technology sharing process.

(See Attachment 3 for a detailed listing on comments by each participant).

ATTACHMENT 1

Agencies Contacted

Maryland

1. Maryland Mass Transit Administration
2. Columbia Transit Authority
3. Alleghany County Planning Commission
4. Anne Arundel County Planning Commission
5. Charles County Planning Commission
6. Dorchester County Planning Commission

Virginia

7. Accomack-Northampton Planning Commission
8. Bristol-Tennessee-Virginia Planning Commission
9. Thomas Jefferson Planning Commission
10. LENOWISCO Planning Commission
11. Piedmont Planning Commission
12. Peninsula Planning Commission
13. Rappahannock Development Commission
14. Fairfax County Planning Commission
15. Henrico Planning Commission
16. Cumberland Plateau Planning Commission
17. Central Virginia Planning District Commission
18. Mount Rogers Planning Commission
19. Southeast Virginia Planning Commission
20. New River Valley Planning Commission
21. Fifth Planning District

D.C.-Delaware

22. Washington Metropolitan Area Transit Commission
23. Washington Council of Governments
24. Wilmington Metropolitan Coordinating Council

Pennsylvania

25. Planning Commission, Lancaster
26. Southeast Pennsylvania Transportation Authority (SEPTA)
27. Erie Metropolitan Planning Commission
28. Bureau of Planning, Bethlehem
29. City Planning, Easton
30. City Planning, Harrisburg

West Virginia

31. Region VII Planning Council
32. Regional Intergovernmental Council
33. Region VI Planning Council
34. Eastern Panhandle Region Planning
35. Metropolitan Planning Commission
36. Bel-o-Mar Interstate Planning Commission
37. Tri-State Transit Authority
38. Wheeling-Ohio City Planning Commission
39. Wood County Planning Commission
40. Region I Planning and Development Council

ATTACHMENT 2

Of the 40 individuals contacted, only two were completely uninterested, and they were both representing very rural districts and did not believe DRT was applicable.

The following breakdown was found:

- 21 agencies were unable to attend for a variety of "end-of-the-fiscal-year" constraints. Generally, the work load was too heavy to spare a staff person: many agencies had deadlines for filing federal grants. Additionally, staff people were taking vacations and the agency was too short-handed. All were interested and expressed a desire for any published material.
- 5 agencies with rural constituencies:
 - 2 not interested,
 - 3 interested but only on the level of reading information on DRT; not willing to commit staff time and resources in active participation
- 1 planner had sent his staff people to several conferences during May and couldn't spare more time away from job.
- 7 agencies were just beginning involvement in transportation - were all new and didn't have a full-time transportation planner on staff. Two were in process of hiring and would be interested if timing were different. All expressed interest in proceedings. 3 felt issue of DRT was premature, although 2 stressed desire to receive proceedings.
- 1 had already attended conference where Roos was a speaker and didn't feel he needed to attend another.
- 1 was still undecided - interested - but unsure of the priority and the relevance of DRT to the district.
- 2 were experiencing severe budget constraints caused by city council cut-backs. Interested but unable to spare money.
- 2 were interested but had prior commitments - other conferences.

ATTACHMENT 3

Participant Reactions to Workshop

HOWARD COUNTY PLANNING (Some slight familiarity with DRT)

General Impressions:

Very informative program provided appropriate mix of experts so participants could judge type of system which would be right for particular needs.

Haddonfield tour was very beneficial; gave a feel for actual operation - good compliment to discussions.

Suggestions:

Problem absorbing so much detail; should spread out more.

Sharing Document:

Very informative - has better idea now how to implement system.

WILMINGTON METROPOLITAN AREA PLANNING COUNCIL (2 participants)

General Impressions:

Discussion and summary of workshops good.
Excellent, gained substantial amount of new information.

Sharing Document:

Useful, good overview.
Fine compilation, although somewhat simple.

MARYLAND MASS TRANSIT (2 participants) (not familiar with DRT)

General Impressions:

Overwhelmed; worthwhile information, format was the best for conveying a new concept - best method to get at substance.

Enjoyed; speakers well-informed; would have liked to see some speaker interaction; contacts made were extremely valuable.

MARYLAND MASS TRANSIT (continued)

Suggestions:

Speakers should have addressed problems in system implementation. Would have liked to hear discussion on how to alter an operational system.

Sharing Document:

Excellent, no gaps, well-presented to the average lay person.

Excellent compilation of information not otherwise available. Problem: didn't have adequate time to read and fully absorb - should distribute prior to conference.

PRINCETON UNIVERSITY (Engineering Quad.) (2 participants)
(researchers, familiar with DRT)

General Impressions:

Informative, good information; the numbers on costs, deficit, etc. were of particular value.

Sharing Document:

Good, comprehensive - helpful for work.

TRI-COUNTY COUNCIL OF MARYLAND (new to transportation) (rural)

General Impressions:

Very well done, great deal of information, speakers excellent but some speaker repetition. Worked well as a vehicle for participation, particularly in workshops - atmosphere was very open and responsive.

Sharing Document:

Excellent level zero, extremely well put-together.

NAVAL AIR DEVELOPMENT CENTER

Excellent, extremely enthusiastic.
Document was well put-together - excellent idea to use this approach of formal presentations plus workshops.

SOUTHEAST PENNSYLVANIA TRANSPORTATION AUTHORITY (SEPTA)
(4 participants - all familiar in varying degrees)

General Impressions:

Speakers were excellent - format fine for imparting new information .

Terrific! Workshops extremely valuable.

Had initial skepticism about DRT dissolved - format workable - enjoyed Haddonfield, was a good way to round out proceedings.

Gained insight and greater appreciation into DRT, particularly planning statistics - have additional tool to work with as a result of attendance.

Suggestions:

Interesting if there were a debate among some of the speakers.

More representations from state finding and guiding sources should have been in audience.

More discussion of economic questions - cost of operating system.

Eliminate speakers' redundancy.

Sharing Document:

Excellent compilation.

More information on how to put financing together would have been good.

Hasn't looked at it.

Excellent, great value.

Using workshops to validate information is a unique and good idea.

NORTH CENTRAL TRANSPORTATION DISTRICT (Operator of fixed route)

General Impressions:

Good, excellent! Great deal of new information - workshop was excellent - drew people together - format was acceptable.

Sharing Document:

Very complete.

EASTERN PANHANDLE REGION (Rural district)

General Impressions:

Very good, had knowledge of DRT greatly enhanced - format especially good for uninformed. Handouts of particular interest - workshop sessions were of great interest .

Sharing Document:

Excellent primer.

Suggestions:

More discussion on DRT applicability to rural areas.

COLUMBIA ASSOCIATION (operates DRT System)

General Impressions:

Thoroughly enjoyed - grateful that speakers did not engage in "academic philosophizing" - format provided enough time to make contacts, mingle with speakers workshops were a fine idea.

Suggestions:

Should have had some smaller operators represented by speakers. Felt there were many operators of small systems in audience and it is difficult to relate experience of the big systems to the smaller ones. Also, more discussion on political aspects in starting systems. Additionally, some frank discussion on why some systems have failed.

Sharing Document:

Excellent -helped pull everything together.

TIDEWATER TRANSPORTATION COMMISSION

General Impressions:

Speakers somewhat repetitious in case study presentations - felt audience was more technical than speakers realized - format was fine.

Sharing Document:

Too elementary - deeper detail would have been helpful.

JOINT PLANNING COMMISSION

General Impressions:

Handouts valuable - enjoyed workshops - format acceptable - visuals used by speakers excellent.

Suggestions:

More time for workshops - more time discussing how each system was started (political climates).

BALTIMORE DEPARTMENT OF TRAFFIC (no previous DRT knowledge)

General Impressions:

Superbly handled - one of the best conferences attended - informative - speakers excellent - format worked very well for the particular set of speakers - workshops excellent.

Suggestions:

Do away with repetition of day 2.

Sharing Document:

Very informative, particularly details on individual systems and the contacts.

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION (putting in
DRT System) (4 participants)

General Impressions:

Well organized, speakers well chosen, excellent.

Worthwhile- format satisfactory.

Impressed with discussions of implementation - good nuts and bolts discussion - came away with better idea of implementation - format preferable to panels.

Excellent, great deal of nitty/gritty - not as interested in theory presented first day - information should be of tremendous help.

Sharing Document:

Excellent compilation - brought together information not available to local groups.

Statistical information is very informative.

NORTHERN TIER REGIONAL PLANNING COMMISSION

General Impressions:

Pleased - format was fine, information beneficial.

Suggestions:

More discussion on political issues in communities with operational systems

Sharing Documents:

Of great value - valuable resource document.

OHIO DEPARTMENT ECONOMICS & COMMUNITY DEVELOPMENT
(not in transportation)

General Impressions:

Great deal of knowledge imparted.

Suggestions:

Speakers should have discussed the institutional and

legal issues; in particular, problems with local ordinances and shared-ride prohibitions.

Was troubled by fact that DRT was never really justified as a public expenditure - only one speaker (Guenther) alluded to problem.

WASHINGTON COUNCIL OF GOVERNMENTS (preparing for DRT implementation)

General Impressions:

Extremely worthwhile; particularly contacts - gained tremendous amount of insight - conference opened new vistas, especially in respect to drivers and dispatchers - workshops excellent.

Suggestions:

Workshops could have been longer - speakers should have been directed better to address planning information.

Sharing Document:

Valuable - slightly long on decision-making aspects and short on operational aspects.

CONNECTICUT DEPARTMENT OF TRANSPORTATION (some previous DRT knowledge, from research)

General Impressions:

Speakers effective. Most valuable - interaction with speakers - had knowledge of DRT somewhat expanded, particularly in operational aspects.

Format was good combination of formal/informal workshop approach - valid; process very workable.

Sharing Document:

Prior availability would have been helpful - valuable document.

DELAWARE VALLEY REGIONAL PLANNING (implementing DRT in Region)

General Impressions:

Good, beneficial.

Suggestions:

Separate the uninformed from the knowledgeable - would be better able to disseminate information.

Sharing Document:

Hasn't read.

CUMBERLAND-DAUPHIN TRANSIT AUTHORITY (familiar with several systems)

General Impressions:

Informative - provided excellent update. Enjoyed enthusiasm of speakers - felt well-rounded look at DRT was presented - make very valuable contacts with representatives from own state.

Suggestions:

Some panel discussions would be good.

Sharing Document:

Excellent - better to distribute in advance.

WEST HARTFORD PLANNING COMMISSION (not in transportation)

Found conference refreshing - real nuts and bolts discussion provided comprehensive introduction to a new subject - got a great deal from proceedings. Particularly, enjoyed informality - opportunity to make contacts, mingle (coffee breaks, luncheon, reception). Knowledge gained will be applicable to situation at home.

Sharing Document:

Problem in absorbing all information. Document should have been distributed prior to conference. The end product should be valuable - useful as a primer on DRT - should be useful to operational systems.

NEIGHBORHOOD ELDERLY TRANSPORTATION PROJECT, OHIO

General Impressions:

Received a lot of useful information - thoroughly enjoyed Haddonfield - came away with a tremendous amount of information.

Suggestions:

Expand on workshops - they were valuable but wasn't enough nitty gritty discussion of operational problems; too conceptual - wanted daily operational questions addressed.

Two days of large sessions too much.

Should have scheduled Haddonfield first.

The difference between marketing and promotion should have been expanded, with emphasis on market development.

Sharing Document:

Has not had chance to read.

DELAWARE RIVER PORT AUTHORITY (unfamiliar)

General Impressions:

Speakers were excellent.
New information of great value.
Gained broader view of issues.

Sharing Document:

No chance to read.

TRI-STATE REGIONAL PLANNING (NY)

General Impressions:

Outstanding! Still skeptical of DRT, but now considerably better informed. Very instructive - intend to make presentation on DRT to agency staff as a result to what was learned - agency should benefit greatly from injection of new information. Workshops were very good. Logistics fine. Feels audience lack of responsiveness during conference was indicative, not of lack of interest, but of low level of knowledge on DRT. Participants were there primarily to learn and absorb. Didn't know enough to really participate.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 311

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DEPARTMENT OF TRANSPORTATION

NEWS

URBAN MASS TRANSPORTATION ADMINISTRATION

WASHINGTON, D.C. 20590

FOR IMMEDIATE RELEASE
September 12, 1974

UMTA 129-74
Phone: (202) 426-4043

The U.S. Department of Transportation's Urban Mass Transportation Administration (UMTA) today announced the availability of a technology sharing document, "State-of-the Art Overview--Demand-Responsive Transportation."

The document was prepared by the Transportation Systems Center, in Cambridge, Massachusetts, under the sponsorship of the U.S. Department of Transportation. It is one in a series of technology sharing publications based on research and development efforts sponsored by the Department. The series is designed to contribute to a better base of knowledge and understanding throughout the industry and thereby contribute to the decision-making process within the community.

"Demand-Responsive Transportation" describes the innovative system, sometimes called "Dial-A-Ride, or Dial-A-Bus", which has been developed in response to the increasing need to provide adequate transportation for the "transportation-deprived"--the elderly, the very young, and the handicapped.

The Document provides an overview of demand-responsive transportation, explains the characteristics of the system, and offers detailed statistics on demand-responsive service. It further lists persons, documents, and organizations as sources for those interested in considering or planning for demand-responsive transportation.

The document is available without cost from Mr. Bud Giangrande, Technology Sharing Program Office (TSC-151), Transportation Systems Center, 55 Broadway, Cambridge, Massachusetts 02142.

For further information contact the UMTA Office of Public Affairs at (202) 426-4043.

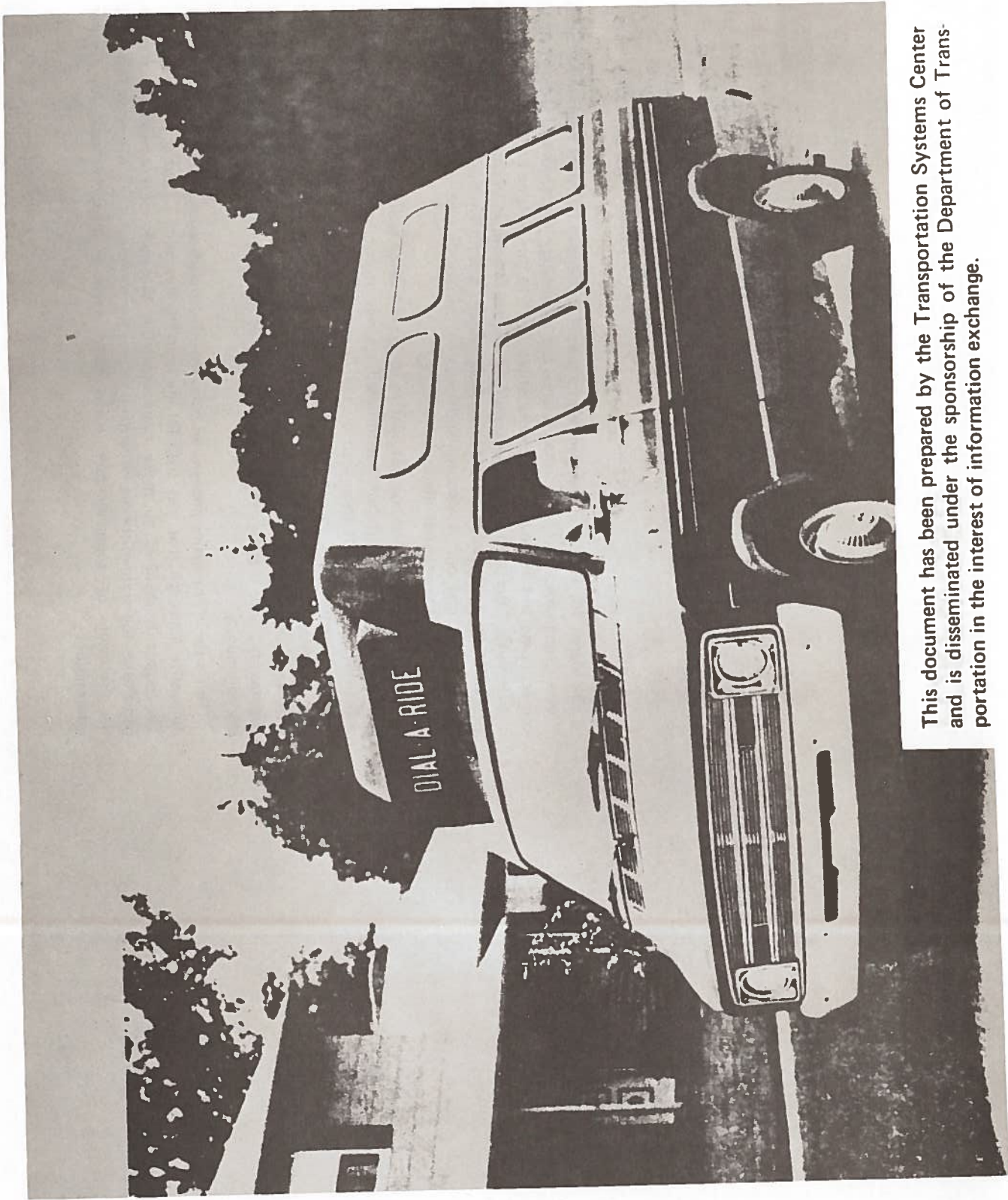


U.S. DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY
AND
URBAN MASS TRANSPORTATION ADMINISTRATION



**STATE-OF-THE-ART
 OVERVIEW**

demand-responsive
TRANSPORTATION



This document has been prepared by the Transportation Systems Center and is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange.

FOREWORD

On March 16, 1972, the President sent a special message to Congress wherein he called "for a strong new effort to marshal science and technology in the work of strengthening our economy and improving the quality of our life." In this message he stated that in the final analysis, "the progress we seek requires a new partnership in science and technology--one which brings together the Federal Government, private enterprise, State and local governments, and our universities and research centers in a coordinated, cooperative effort to serve the national interest."

As part of its ongoing commitment to this principle of technology-sharing, the U.S. Department of Transportation has initiated a series of publications based on research and development efforts sponsored by the Department. The series comprises technical reports, state-of-the-art documents, newsletters and bulletins, manuals and handbooks, bibliographies, and other special publications. All share a primary objective: to contribute to a better base of knowledge and understanding throughout the transportation community, and, thereby, to an improvement in the basis for decision-making within the community.

This title in the series presents an overview of demand responsive transportation, an innovative approach that may help fill the need for flexibility in public transportation. The report is designed to make more accessible the body of knowledge that now constitutes the state-of-the-art in demand responsive transportation. A special feature is the inclusion of supplementary material to serve as a sourcebook for further information.

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APPENDIX E: Directory of Governmental Units, Operating Agencies, and Transit Authorities

APPENDIX F: Directory of Vehicle Manufacturers

APPENDIX G: Urban Mass Transportation Act of 1964 Section 13(c)

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REPORT OF INVENTIONS

A diligent review of the work performed under this contract has revealed no innovation, discovery, improvement, or invention.

