Introduction

In September 1999, the National Center for Transit Research (NCTR) was approved for research funding by the U.S. Department of Transportation’s Research and Special Programs Administration. The NCTR program builds on the goals and philosophies of the National Urban Transit Institute, which was established at the Center for Urban Transportation Research by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

The theme of NCTR is “to enhance the performance and relevance of public transportation and alternative forms of transportation in urban areas.” NCTR is focusing on these modes to help promote USDOT’s strategic goals of safety, mobility, economic growth, and community sustainability. Virtually all of the projects undertaken at NCTR are, and will continue to be, dedicated to improving the ability of the operating agencies (transit authorities, commuter assistance programs, transportation management associations, etc.) to provide their services in a manner that is efficient, productive, and attractive to the traveling public, and in a manner that adds value to the communities they serve.

NCTR is housed within the Center for Urban Transportation Research (CUTR) in the College of Engineering at the University of South Florida in Tampa. Being housed at CUTR, NCTR has the enormous advantage of being part of a large and extremely active transportation research center. The faculty and students at the Center represent the largest concentration of public transportation researchers in a single university in the country. This concentration of talent and research provides opportunities for education and professional capacity-building within the Center. Extensive technology transfer activities will ensure that research results are available to potential users in a form that can be implemented, utilized, or otherwise applied.

Advisory Committee

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Chairman, NCTR at CUTR

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Donna Vlasak
Transportation Research Board

Joel Volinski
NCTR at CUTR
First-Year Accomplishments

Research

The first year of the NCTR program has supported 23 new research projects as approved by the NCTR Advisory Board. These research areas consist of “core programs” that will be conducted throughout the life of NCTR, as well as annual research projects that explore methods to accomplish the goals of the Center in enhancing the performance of public transportation.

“Core” research areas include development and maintenance of a National Transportation Demand Management and Telework Clearinghouse, provision of short-term technical assistance to transit systems, publication of the Journal of Public Transportation, and development of a national transit maintenance training program. In addition to projects that fall into core program areas, research topics were solicited from public transportation professionals throughout the United States and Canada. A total of 85 research ideas was received.

FY 2000 Projects

New research projects and principal investigators selected for FY 2000 are listed below. Detailed project descriptions are available on the NCTR website at www.nctr.usf.edu.

- Analysis of National Transit Database
- Analysis of the FDOT Transit Corridor Program
- Analysis of Florida Transit Bus Accidents
- Assessment of Operational Barriers and Impediments to Transit Use
- Bus Rapid Transit Technology—A Case Study of the LYNX Lymmo Project in Downtown Orlando, Florida
- Cops, Cameras and Enclosures: A Synthesis of the Effectiveness of Methods to Provide Enhanced Security for Bus Operators and Passengers
- Developing Interest in Public Transportation
- Enhancement of the Public Transportation Promotional Materials Clearinghouse
- Evaluation of the Economic Viability of Narrow-Gauge Local Rail Systems
- FDOT Statewide On-Site Technical Assistance Program
- FDOT Statewide Transit Training Program
- FSUTMS Mode Choice Modeling—Factors Affecting Transit Use and Access
- Graduate Research Program
Bus Rapid Transit

One area of research selected as a core program very early in the development of NCTR was Bus Rapid Transit (BRT). BRT uses the advancements in vehicle technology, simulation systems, traffic engineering and intelligent transportation systems to create an enhanced bus service with faster operating speeds and improvements to local mobility, economic growth, and environmental quality. Research being conducted by NCTR staff in the area of BRT has created a knowledge base such that they are serving as technical assistants to other BRT interests. These include making presentations at conferences and serving as members of BRT technical committees in cities advancing the service. In addition, NCTR is considering establishing a BRT Institute with the charge of creating a national program for training, technical assistance, research, innovation and evaluation of existing and proposed BRT projects. All of these advancements in research in the BRT field are attributable to the funding provided by the USDOT in establishing the NCTR program.

FY 2001 Program

NCTR recently completed the process to solicit and select research ideas for the FY 2001 program year which began on July 1, 2000. The process necessary for submitting research ideas was made available on the NCTR website along with a user-friendly web-based form. Letters requesting research ideas and proposals were sent to all of the Public Transportation directors, MPO directors, APTA committee chairs, and DOT Public Transit Managers in Florida. Idea requests also were sent to all of the public transportation-related committees of TRB, as well as national listservs. From the submission of 85 different research ideas, the NCTR Advisory Committee provided assistance in selecting 24 core program and research projects for funding in FY 2001.
• Journal of Public Transportation
• Public Transportation Educational Outreach Program
• Graduate Research Program
• GIS Conference
• Teleconference and Other Communication Technologies
• Where are Tomorrow's Transit Maintenance Technicians Coming From?
• National TDM/Telework Clearinghouse
• Transit Training Program
• Transit Technical Assistance Program
• Transit Marketing
• Weekend Institute of Transit for Secondary Students
• FSUTMS Mode Choice Modeling: Factors Affecting Transit Use and Access
• Pedestrian Mid-Block Crossing Difficulty
• Customer Surveying for Public Transit: A Design Manual
• Synthesis of Transit Non-User Surveys
• Land Developer Participation in Providing for Bus Transit Facilities/Operations
• Environmental Justice and Community Impact Assessment for Transit Agencies
• Telecommunications and Its Future Role in the Public Transportation Arena
• Quantifying the Business Benefits of TDM
• Effectiveness of Bus Signal Priority
• Preliminary Assessment of Paratransit Securement/Accident Tracking
• Per Capita Decisions, Trends and Impacts
• New Uses of Qualitative Methods for Transit Research Perceptions of Transit Safety
• National Outreach Initiative for the Florida Maintenance Training Program

Education

Education is a core program area of NCTR. Student involvement in project research has always been a high priority of CUTR and remains so in the newly-funded NCTR program. For many years, CUTR has been an active member of the Southeastern Transportation Center (STC), a program dedicated to training professionals to address the transportation needs of the region and nation.
During the first year of NCTR, many graduate and undergraduate students participated in public transportation research projects and were supported by funding from NCTR. The major areas of study of these students are multidisciplinary in nature, including engineering, economics, anthropology, business, geography, and public administration.

Through research and guidance, NCTR aids in developing well-informed, educated students to serve as future ambassadors in the public transportation industry. The following are summaries of specific core areas of the NCTR education program.

**Exploration of the Feasibility of a Transportation Degree**

The Transportation Degree Evaluation is an initiative designed to determine the feasibility of establishing a graduate degree program designed for persons with an interest in transportation careers. The transportation industry work force is increasingly composed of a diverse group of individuals with backgrounds in a number of different disciplines. This initiative may culminate in a proposal to establish a Master’s degree transportation program that would complement the Civil Engineering transportation-focused Master’s program and the Graduate Interdisciplinary Transportation Program coordinated by CUTR.

**Developing Interest in the Field of Public Transportation**

The purpose of this activity is to research and develop a public transportation education program that will attract young adults into the industry. There are many similar programs that exist; however, none of them is geared towards a public transportation discipline. If public transportation is to compete for a new generation of professional practitioners, it will be critical to recruit students. Involving them at a young age will help influence their choice of professional careers. In the new century, technology is influencing the public transportation planning process. Transportation education has moved from more formal, traditional means into new, innovative means. Many colleges and universities offer transportation disciplines as degree majors, and this advancement in technology can be used as a catalyst to draw young minds into the field of public transportation.

It is NCTR’s goal to create a public transportation educational program targeted to reach high school students. Based on many of the existing programs, several avenues are being investigated to accomplish this task. Both summer programs and regular course offerings are being identified as possible solutions.

**Technology Transfer**

Excellent research is of limited value if the results are not made available to as many parties as possible who might benefit from the findings. Extensive technology transfer is a key determinant of NCTR’s value. The following sections summarize specific accomplishments in the area of technology transfer by NCTR staff over the last year.
Professional Activities
NCTR staff have, and continue to have, significant involvement with partners in the public transportation industry, including the Transportation Research Board, the American Public Transportation Association, ITS America, and the Association for Commuter Transportation. This has created an opportunity to tout the NCTR program through solicitation of project ideas from organization members or in the transfer of research results.

NCTR Website
The NCTR website was developed with its own domain name (www.nctr.usf.edu) and has been registered with various search engines. The website was structured to point people to items of interest based on who they are—researchers, students, sponsors, conference attendees, transit staff, and media. Similar to a room with multiple doors, these user-based pages allow various groups to enter into the same informational area from various locations, while also simplifying the number of items each group would see. Among the features in the website are electronically-filed forms for submitting research ideas, getting added to NCTR’s mailing list, and providing feedback to NCTR. These forms are sent directly to the NCTR program administrator as an e-mail message.

NCTR sponsors two listservs through one of its projects: a telework listserv, which has 75 members, and a TDM listserv, which has more than 300 members. The website is identified on all NCTR materials and continually seeks reciprocal links with other websites.

Web-Based Training and Conferencing
Web-based training and conferencing is an innovative approach to distance learning in which computer-based training/conferencing is delivered via the World Wide Web, the Internet, and intranets. Web-based conferencing is an ideal, cost-effective vehicle for delivering and sharing information to geographically-distributed audiences, such as those in the public transportation community. Technological improvements in networks, hardware, software, and bandwidth technologies lend themselves to the design and delivery of web-conferencing. Through NCTR, CUTR is researching and investigating potential solutions for a distance learning virtual conferencing tool.
Conclusion

In its first year, the National Center for Transit Research has laid a solid foundation in terms of establishing process, engaging people, and starting programs. An excellent and prestigious Advisory Board has been formed. Core areas of research and technical assistance that will last throughout all the years of the program have been identified. More than 20 research projects have been started, with peer evaluation to help ensure high quality results. Efforts to attract a new generation of young professionals to the field are under way. NCTR is taking advantage of advances in electronic communication technology to better disseminate results of research and to provide inexpensive distance learning opportunities.

The matching financial commitment from the Florida Department of Transportation for the life of the program provides the stability that will allow NCTR’s researchers to focus on achieving the goals of the program. Few other institutions, public or private, have the concentrated resources to dedicate to the mission of research, teaching, and information dissemination in the field of public transportation. NCTR recognizes this unique opportunity and looks forward to enhancing the performance and relevance of public transportation agencies.

For further information on NCTR and its activities, contact NCTR Director Joel Volinski at (813) 974-9847, volinski@cutr.eng.usf.edu, or NCTR Administrator Dennis Hinebaugh at (813) 974-9833, hinebaugh@cutr.eng.usf.edu.