

# National Center for

## National Center for Transit Research



Annual Report  
October 2005

# Transit Reso

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Transit Research

National Center

## Message from the Director

The National Center for Transit Research (NCTR) at the University of South Florida has been fulfilling its mission to “enhance the performance and relevance of public transportation and alternative forms of transportation” since 1999. NCTR is the only University Transportation Center that focuses exclusively on public transportation issues in urban areas. Over 60 research projects have been completed that have provided information and solutions for operating agencies that provide public transit and promote alternatives such as ride sharing, car and van pooling, telecommuting, flex schedules, bicycling, and walking. This past year has been particularly productive, with 15 research projects being completed. The results of this research have been shared through published articles and presentations made at state and national conferences and through our website at [www.nctr.usf.edu](http://www.nctr.usf.edu). It has been most gratifying to receive feedback from around the country on how our reports have been put to use in a variety of local settings. Several projects that have received special attention around the country are highlighted in this report.

NCTR faculty represent a mix of tenured professors who teach and do research and those who are dedicated solely to research, many of whom have worked within public transportation agencies in prominent positions. This provides a rich learning environment for students each year who not only receive theory and hone skills in the classroom, but also gain practical lessons from those who have served in the public transportation industry. Students contribute to the completion of research in a variety of meaningful ways. This educational and practical experience helps prepare the next generation of transportation professionals that the industry so sorely needs as the baby boom generation professionals near retirement.

While NCTR’s federal funding supports a wide variety of informational and technical assistance activities, including the *Journal of Public Transportation*, the TDM and Telework Clearinghouse, and the National BRT Institute, NCTR’s research activities are funded primarily through dollars provided by the Florida Department of Transportation, which has matched NCTR’s federal funds since 1999. FDOT is one of the finest departments in the U.S. for its dedication to multimodal solutions to urban transportation issues. The collaboration that exists among the NCTR faculty and the Public Transportation Office and the Office of Research at FDOT helps us develop projects that have practical value and immediate application, not only in Florida but throughout the country.

NCTR is continually expanding its methods of information-sharing through the use of new software applications that make our research more accessible to those who might not be able to travel to conferences or meetings. We have hosted a number of net meetings where all participants can view the same information from their desktops and participate fully over phone lines. Streamed videos of faculty presenting their research findings are also readily available on our website, for those who might not have time to read an entire report. Listservs with over 2,000 members are administered by NCTR faculty, allowing the flexible exchange of information among transportation experts around the country and the world. We are honored to be playing our role in helping improve transportation services and systems, and we hope you will feel free to contact us whenever you have an issue we can help solve.



Joel Volinski, NCTR Director



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## Introduction

In September 1999, the National Center for Transit Research (NCTR) was approved for 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 (CUTR) at the University of South Florida in Tampa by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

## Theme of NCTR

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 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.

## Organizational Structure of NCTR

NCTR is housed within the Center for Urban Transportation Research in the College of Engineering at the University of South Florida (USF). Following are key personnel of NCTR.

Chair	Gary L. Brosch
Director	Joel Volinski
Administrative Director	Dennis Hinebaugh
Communications Director	Patricia Ball
TDM Program Director	Philip Winters
Education Director	Steve Polzin
Transit Training Program Director	Lisa Staes
Transit Management and Innovation Director	Rob Gregg
NCTR Program Assistant	Lisa Maitland



Being housed at CUTR gives NCTR the enormous advantage of being part of a large and extremely active transportation research center. The faculty and students at CUTR 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 ensure that research results are available to potential users in a form that can be implemented, utilized, or otherwise applied.

## Program Overview

### Funding

NCTR has now completed its sixth year, having been approved for funding in September 1999. The federal funding for this program helps to significantly expand the area of public transportation research already conducted by CUTR staff over the last 17 years. Federal funds for the program are matched with a 100 percent cash match from the Florida Department of Transportation (FDOT), creating a doubling of total program funding.

The FDOT funding used to match the USDOT funds is made available at a 5 percent indirect rate, compared to the federal indirect rate of 45 percent, resulting in an almost 250 percent increase in direct funds available for public transportation research. FDOT's commitment to match this grant was secured before July 1999, and it is important to note that the relationship remains strong, with FDOT remaining committed to providing this match for the duration of the program. FDOT also has designated three senior members of its management staff to serve on the NCTR Advisory Board to help select future projects and guide the program.

### Advisory Committee

The NCTR Advisory Committee was created during the first six months of the program and consists of 15 experts in the public transportation community with knowledge in the areas of public transportation research and transit planning and operations. The members and their affiliations are as follows:

Gary L. Brosch <i>Chair, NCTR</i>	Perry Maull <i>Past President Florida Public Transportation Assoc.</i>
Dr. Lewis Clopton <i>Director of Research Management Federal Transit Administration</i>	Bill McCloud <i>Senior Vice President &amp; C.O.O. ATC</i>
Ed Coven <i>State Transit Office Manager Florida Department of Transportation</i>	Jose-Luis Mesa <i>Director Miami-Dade MPO</i>
Dr. Wendell Joice <i>Director International Telework Assoc. &amp; Council</i>	Louis Sanders <i>Director of Research and Technology APTA</i>
Dr. Minnie Fells-Johnson <i>General Manager (Retired) Miami Valley Regional Transit Authority</i>	Eric Schreffler <i>Director of Research TDM Institute, Association for Commuter Transportation</i>
Ysela Llort <i>Asst. Secy., Intermodal Systems Development Florida Department of Transportation</i>	Donna Vlasak <i>Senior Program Officer Transportation Research Board</i>
Richard Long <i>Director, Office of Research Florida Department of Transportation</i>	Joel Volinski <i>Director, NCTR</i>
Cal Marsella <i>General Manager Denver Regional Transit District</i>	



## Year 6 Accomplishments

### Research

The sixth year of the NCTR program has supported 16 projects approved by the NCTR Advisory Committee. These projects consist of 6 core programs that will be conducted throughout the life of NCTR and 10 newly-selected research projects that explore methods to accomplish the goals of the Center in enhancing the performance of public transportation.

Core program areas include continued development and maintenance of:

- National Transportation Demand Management (TDM) and Telework Clearinghouse
- National Bus Rapid Transit Institute (NBRTI)
- STEP (Student Transportation Education Program)
- ongoing production of teleconferences and webcasting
- graduate student professional development
- *Journal of Public Transportation*

In FY 2005, in addition to projects that fall into these core program areas, research topics were solicited from public transportation professionals throughout the U.S. and Canada; more than 100 research ideas were received, and 10 were selected for funding.

### Project Status

New, ongoing, and completed research projects and their principal investigators for FY 2005 are listed below.

#### Summary of Year 6 (FY2005) Newly-Designated NCTR Projects

- Transit Use Viability Among Older Drivers Losing Driving Privileges (*Xuehao Chu, CUTR, 7006-01*)
- Finding Ways to Reduce Insurance and Bonding Costs for Major Transit Projects (*Gary Brosch, CUTR, 7006-02*)
- Validating T-Best Models with 100% APC Counts (*Xuehao Chu, CUTR, 7006-03*)
- Repair Time Standards for Transit Vehicles, Phase III (*Grisselle Centeno, CUTR/USF, scope not finalized*)
- Transit Ridership, Reliability, and Retention (*Victoria Perk, CUTR, scope not finalized*)
- Creative Ways to Manage Paratransit Costs (*Jay Goodwill, CUTR, scope not finalized*)
- The National Smart Transportation Archive Researcher (NSTAR) Program (*Sara Hendricks, CUTR, scope not finalized*)
- Traveling Smart: Increasing Transit Ridership by Automatic Collection (TRAC) of Individual Travel Behavior Data and Personalized Feedback, Phase II: Testing the Impact of Personalized Feedback on Household Travel Behavior (*Phil Winters, CUTR, scope not finalized*)



- Impact of Employer-Based Programs on Transit System Ridership and Transportation System Performance (*Nevine Georggi, CUTR, scope not finalized*)
- Benchmark Rankings for U.S. Transit Systems, Phase II (*Victoria Perk, CUTR, scope not finalized*)

#### Summary of Ongoing NCTR Projects

- Safe Operation of Low Speed Vehicles and Golf Carts (*Jennifer Hardin, CUTR, 415-14*)
- Assessing the Hierarchy of Needs in Levels of Service (*Jennifer Perone, CUTR, 527-08*)
- Public Transit in America: Evidence from the 2001 National Household Travel Survey (*Steve Polzin, CUTR, 527-09*)
- Best Practices in Transit Communications Between Transit Management and Rank and File Employees (*Joel Volinski, CUTR, 575-09*)
- Florida Journey to Work Fact Book and Web-Site (*Martin Catalá, CUTR, 575-16*)
- Public Transit in America: Evidence from the 2001 National Household Travel Survey, Phase II, Analysis of Density and Geocoded Data (*Steve Polzin, CUTR, 576-02*)
- Web-Based Bus Accident Reporting, Tracking and Analysis System (*Debbie Sapper, CUTR, 576-03*)
- A Guidebook for Start-up Transit Agencies (*Jay Goodwill, CUTR, 576-04*)
- A Return on Investment Analysis of Bikes-on-Bus Program (*Chris Hagelin, CUTR, 576-05*)
- Standardized On-Board Surveys and Archived On-Board Survey Data (*Xuehao Chu, CUTR, 576-07*)
- Strategies for an Inter-Urban Circulatory System (*Victoria Perk, CUTR, 576-08*)
- Special Event Transportation Service Planning & Operations Strategies for Transit (*Joel Volinski, CUTR, 576-09*)
- Impacts of Transit Oriented Development on Public Transportation Ridership—Phase One (*Sara Hendricks, CUTR, 576-10*)



- Incorporating TDM into the Land Development Process (*Sara Hendricks, CUTR, 576-11*)
- Case Studies in Environmental Justice and Public Transit Title VI Reporting (*Beverly Ward, CUTR, 576-12*)
- Update Methodology for ADA Demand Estimates: Lessons Learned (*Cheryl Thole, CUTR, 576-13*)
- Teenage Attitudes and Perceptions Regarding Transit Use (*Jennifer Perone, CUTR, 576-14*)
- Enhancing the Rider Experience: The Impact of Real-Time Information on Transit Ridership (*Phil Winters, CUTR, 576-15*)
- Traveling Smart—Increasing Transit Ridership by Automatic Collection (TRAC) of Individual Travel Behavior Data and Personalized Feedback (*Phil Winters, CUTR, 576-16*)

## Summary of Completed Projects

- Lessons Learned in Transit Efficiency—Second Edition (Joel Volinski, CUTR, 350-07, 392-06)
- Ridership Trends of New Start Rail Projects (Steven Polzin, CUTR, 350-11)
- Bus Rapid Transit—Phase I, Evaluation of the South Miami-Dade Busway (Michael Baltes, CUTR, 350-13)
- Analysis of the FDOT Transit Corridor Program (Lisa Staes, CUTR, 392-01)
- FDOT Statewide On-Site Technical Assistance Program (Lisa Staes, CUTR, 392-02)
- FDOT Statewide Transit Training Program (Lisa Staes, CUTR, 392-03)
- Inventory and Analysis of Advanced Public Transportation Systems in Florida (Joel Rey, CUTR, 392-04)
- Analysis of Florida Transit Bus Accidents (Joel Rey, CUTR, 392-05)
- FSUTMS Mode Choice Modeling—Factors Affecting Transit Use and Access (Fang Zhao, FIU, 392-07, 416-03)
- Enhancement of the Public Transportation Promotional Materials Clearinghouse (William Mustard, FSU, 392-08, 416-10)
- Evaluation of the Economic Viability of Narrow-Gauge Local Rail Systems (Laurel Land, CUTR, 392-09)
- Transit Customer Satisfaction Index (Francis Cleland, CUTR, 392-10)
- Assessment of Operational Barriers and Impediments to Transit Use (Jennifer Hardin, CUTR, 392-11)
- Cops, Cameras, and Enclosures: A Synthesis of the Effectiveness of Methods to provide Enhanced Security for Bus Operators and Passengers (Darin Allan and Joel Volinski, CUTR, 392-12)
- State Park-n-Ride Lot Program Manual (Laurel Land, CUTR, 392-13)
- Pedestrian Mid-Block Crossing Difficulty (Xuehao Chu, CUTR, 392-14, 416-02)
- Bus Rapid Transit Technology—A Case Study of the Lynx Lymmo Project in Downtown Orlando, Florida (Michael Baltes, CUTR, 392-15)
- Neighborhood Intermodal Transfer Facilities (Laurel Land, CUTR, 392-16)
- Where Are Tomorrow's Maintenance Technicians Coming From? (Amber Reep, CUTR, 415-09)
- Telecommunication and Its Future Role in the Public Transportation Arena (Sara Hendricks, CUTR, 416-01)
- Effectiveness of Bus Signal Priority (Shireen Chada, CUTR, 416-04)
- Environmental Justice and Community Impact Assessment for Transit Agencies (Beverly Ward, CUTR, 416-05)





- Land Developer Participation in Providing for Bus Transit Facilities/Operations (*Sara Hendricks, CUTR, 416-06*)
- Synthesis of Securement Device Options and Strategies/Accident Tracking (*Jennifer Hardin, CUTR, 416-07*)
- An Exploration of Triangulation of Methodologies: Quantitative and Qualitative Methodology Fusion in an Investigation of Perceptions of Transit Safety (*Jennifer Perone, CUTR, 416-08.1 and 416-08.2*)
- Customer Surveying for Public Transit: A Design Manual (*Michael Baltes, CUTR, 416-08.3*)
- Synthesis of Transit Non-User Surveys (*Jennifer Perone, CUTR, 416-08.4*)

- Florida Transit Training Program (*Lisa Staes, CUTR, 416-09.1*)
- Florida Transit Technical Assistance Program (*Lisa Staes, CUTR, 416-09.2*)
- Quantifying the Business Benefits of TDM (*Phil Winters, CUTR, 416-11*)
- Public Transit Investment Decisions: Per Capita Decisions, Trends and Impacts (*Rob Gregg, CUTR, 416-12*)
- National Transit Bus Accident Data (*Chris DeAnnuntis, CUTR, 416-13*)
- An Investigation of the Structure/Performance Relationships of Public Transit Agencies (*Keith Simmonds, FAMU, 416-14*)
- Florida Transportation Almanac (*Michael Baltes, CUTR, 473-01*)
- Evaluation of First-Year Florida MPO Transit Capacity and Quality of Service Reports (*Victoria Perk, CUTR, 473-02*)
- Ridership Models at the Stop Level (*Xuehao Chu, CUTR, 473-04*)
- Repair Time Standards for Transit Vehicles (*Lisa Staes, CUTR, 473-05*)
- Why People Cross Where They Do (*Xuehao Chu, CUTR, 473-06*)
- Expanding Commuter Choice Tax Benefit Options (*Christopher Hagelin, CUTR, 473-08*)
- Senior Transportation Alternatives: Why are They Important and What Makes Them Work? (*Jennifer Hardin, CUTR, 473-09*)
- FDOT Statewide GIS for Transit Technical Assistance Program (*Martin Catalá, CUTR, 473-10*)
- National Transit Database Automated Data Collection Procedures (*Victoria Perk, CUTR, 473-11*)
- Assessment of Transit Information Materials and Development of Selection Criteria for Prototype Design Elements (*Jennifer Hardin, CUTR, 473-12*)
- Public Transportation Syntheses Series (*Joel Volinski, CUTR, 473-13*)
- Worksite Trip Reduction Model and Manual (*Phil Winters, CUTR, 473-14*)
- Public Transportation Synthesis Series (Part 2) (*Joel Volinski, CUTR, 527-01*)
- State Bus Transit Safety Guide (*Holly Carapella, CUTR, 527-02*)
- Benchmark Rankings for Transit Systems in the United States (*Victoria Perk, CUTR, 527-03*)

- Impacts of Transfer Fares on Transit Ridership and Revenue (*Victoria Perk, CUTR, 527-04*)
- Customized Sampling Plans: A Guide to Alternative Sampling Techniques for National Transit Database Reporting (*Xuehao Chu, CUTR, 527-05*)
- Commuter Choice Program Case Study Development and Analysis (*Sara Hendricks, CUTR, 527-06*)
- Model Regulations and Plan Amendments for Multimodal Transportation Districts (*Kristine Williams, CUTR, 527-07*)
- Evaluation of Shared Use Park & Ride Impact on Properties (*Francis Wambalaba, CUTR, 527-10*)
- Analysis of Florida Transit Bus Accidents (*Holly Carapella, CUTR, 527-11*)
- Design Elements of Effective Transit Information Materials (*Alasdair Cain, CUTR, 527-12*)
- Developing Bus Transfer Facilities for Maximum Transit Agency and Community Benefit (*Joel Volinski, CUTR, 527-13*)
- Price Elasticity of Rideshare: Commuter Fringe Benefits for Vanpools (*Francis Wambalaba, CUTR, 527-14*)
- Public Transportation Synthesis Series (Part 3) (*Joel Volinski, CUTR, 576-01*)
- Innovative Approaches to Using Passenger Miles Data for Transit (*Xuehao Chu, CUTR, 576-06*)

## Summaries of Selected Completed Projects in NCTR's 6<sup>th</sup> Year

### *Bus Rapid Transit (Dennis Hinebaugh)*

Bus Rapid Transit (BRT) was selected as a core research program very early in the development of NCTR. 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, resulting in 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 able to provide technical assistance to other BRT interests throughout the country by making presentations at conferences and serving as members of BRT technical committees in cities advancing the service.

In January 2001, through the efforts of the work developed through NCTR, the National BRT Institute was created at CUTR with the charge of creating a national program for training, technical assistance, research, innovation, and evaluation of existing and proposed BRT projects. In the recently-passed TEA-LU legislation, the research and technical assistance efforts of NBRTI staff have paid off through a congressional earmark of \$7,000,000 (\$1,750,000 per year from FY06-09) to continue the efforts of the program, which was initially funded and started by the NCTR program.

NCTR Administrator and Director of the National Bus Rapid Transit Institute Dennis Hinebaugh serves as Chair of the TRB Bus Rapid Transit Subcommit-



tee, which developed the 2004 TRB National BRT Conference in conjunction with the APTA Bus and Paratransit Conference and attracted more than 350 attendees and 25 presentations. The PowerPoint presentations from the conference are available for viewing on the NBRTI website at [www.NBRTI.org](http://www.NBRTI.org).

Among the activities of the National BRT Institute:

- Coordinating BRT activities among APTA, FTA, and TRB
- Assisting in the development of the FTA document entitled “Characteristics of BRT” released in August 2004
- Assisting ITE and ASCE in developing and holding four one-day BRT workshops throughout the U.S.
- Developing a BRT Peer-2-Peer Technical Assistance Program
- Performing an evaluation of the Oakland (California) BRT service
- Conducting TCRP Project D-11, which will analyze grade crossing measures along busways
- Serving as a member of TCRP A-23A Panel “Cost Effectiveness of Selected Bus Rapid Transit Components”
- Presenting on BRT at APTA’s Intermodal Operation Planning Workshop
- Conducting communications activities such as publishing *BRT Quarterly* and maintaining the NBRTI website

#### *Impact of Bikes-on-Bus Programs (Chris Hagelin)*

Since their development in the mid-1980s, bikes-on-bus (BOB) programs have become a valuable service provided by transit agencies. By integrating transit with bicycles, agencies can expand their service area, attract new patrons, and stimulate more frequent use of transit services with relatively small investment and minimal administration. The central feature of BOB programs is a rack to carry bicycles mounted to the front of buses. Nearly 40,000 buses at more than 300 transit agencies in the U.S. are equipped with bike racks, and an estimated 670,000 bikes-on-

transit trips are provided each month. NCTR recently examined this issue to help transit agencies by suggesting actions that can be implemented to maintain and improve the benefits of investments in BOB programs. Eighteen agencies were invited to participate in a survey to collect data on the history and characteristics of each BOB program, program costs, policies and key issues, and program benefits. In addition, a random sample of BOB users was drawn from permit-holder databases provided by three Florida transit agencies. The 220 respondents provided data on the use of BOB, travel behavior, and demographics. These combined methodologies produced a number of important findings.

The primary investment that transit agencies make implementing BOB programs is the purchase of bicycle racks that are mounted on the front of buses at a cost of approximately \$500 per rack. Transit agencies also must repair and replace damaged and worn racks, and small investments in administering and marketing BOB programs also must be made. Transit agencies have received good returns on their investments in integrating bicycling and transit.

Survey results indicated that BOB programs provide a long-term and sustainable form of transportation for patrons, particularly patrons with low incomes



and limited access to automobiles. BOB users are regular users of transit, with 65 percent using it four days or more and 40 percent making more than 10 trips per week on average. Nearly 75 percent of survey respondents use BOB to commute to work, and 60 percent of these commuters bicycle more than 1 mile to access transit, providing a clear validation of how BOB programs can expand the transit service area. Nearly 22 percent of BOB users revealed that they would be willing to park their bicycles at bus stops if the bus racks were full. Transfer centers, major bus stations, and park-in-ride lots should be equipped with bike racks and lockers to encourage bikes-to-transit trips. Transit agencies that invest in bicycle parking and provide a large supply of quality racks and lockers that are placed in the right locations could see bike-to-transit trips eclipse bikes-on-bus boardings. Overall, the investment by transit agencies in their BOB programs is very small compared to the returns they receive. The report on this phase of the study is available at <http://www.nctr.usf.edu/projects/Year5/576-05.html>.

*Design Elements of Effective Transit Information Materials (Alasdair Cain)*

This NCTR study was designed to assess the general public’s ability to plan a typical bus transit trip using printed transit information materials, investigate the impact of different design options on trip planning ability to determine which design options maximized trip planning ability, and explore the relationship between transit trip planning ability and transit use. A total of 180 people were asked to conduct two transit trip planning assignments, each requiring the use of a system map, two route maps, and two schedules. Results indicated that, although printed information materials were the most popular method of transit trip planning, over half of the respondents used other methods to plan their trips, such as calling the local transit helpline or asking the driver or fellow passengers for information. Around 65 percent stated that their participation in the study had increased their level of confidence in using transit information materials, and nearly 18 percent stated that they would use transit more frequently as a result. Nearly 21 percent of non-transit users stated that they would use transit in future. Although these figures do not represent actual ridership gains, they do suggest that increasing the general public’s transit trip planning ability may be an effective way to increase ridership.

The study also identified a wide range of design problems and potential solutions at each trip planning stage. The study findings were well received when presented at state and national conferences, and FDOT is funding an additional phase of research. The next phase of the project will capitalize on previous research efforts to develop a design manual that can assist transit agencies. The manual should be available in early 2007. The report on this phase of the study is available at <http://www.nctr.usf.edu/pdf/527-12.pdf>.

**Transit Trip Planning Assignment Results**

<b>Planning Stage</b>	<b>Description</b>	<b>Printed Information Materials Used</b>	<b>Successfully Completed</b>
1	Locating origin/destination on system map	System map	93.6%
2	Selecting bus routes/transfer point	System map	
3	Locating closest time points/transfer time point	System map/ Route map	73.2%
4	Identifying correct section of schedule	Route map/Schedule	55.6%
5	Using schedule to get bus times	Schedule	
All		System map/ Route map/Schedule	52.5%



### *Building a Better Transit Transfer Center (Joel Volinski)*

Many transit agencies throughout the U.S. are in the process of planning for or building new transit transfer centers, some as they modify their once-radial transit system to a service pattern that is more grid-like to provide better service in the sprawling suburbs, others in recognition that their current passengers should have better amenities and to attract new passengers. Many agencies have used existing streets as transit malls to accommodate bus transfer activities, but have found that such transfer activities are no longer welcome--transit buses are large, loud, and exhaust-spewing vehicles that take spaces on the street that could be used for general parking and add to traffic congestion on streets used as transit malls. Many shopping centers have requested that transit agencies remove their bus transfer activities from in front of their malls.

NCTR recently completed a study aimed at sharing the best practices used at four different transit agencies in the U.S. that were successful in building transit transfer centers that have contributed to positive community development in their immediate surroundings. Several factors emerged as contributing to the success of these transfer centers:

- Transit managers need to expand their self-image beyond being mobility managers to include possibilities to serve as facilitators of community development. They have access to grants that can help pay for improvements and spur new development.
- A new bus transfer facility should serve more than just the needs of transit passengers; it should be consistent with a comprehensive plan and help the surrounding community accomplish its broader development goals.
- Transit centers can be more beneficial to surrounding communities when done in partnership with a broad array of public and private partners who are concerned with positive community development. Additional partners can bring more resources to bear and help generate support for the facility.
- The transit center can accommodate many non-traditional, non-transit purposes and should strongly consider including them if they help gain community acceptance and if they help the prosperity of the surrounding area.
- Thoughtful architectural design that incorporates local cultural characteristics can not only greatly enhance the acceptance of the transfer facility, but can also create the center as a gateway to the community that people will feel proud of.

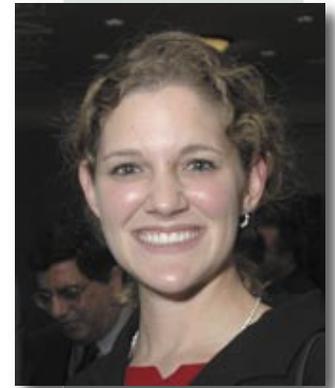
- There needs to be a no-tolerance stance taken when it comes to crime and vandalism if the center is to be regarded as a community asset. The transit center will not be a community asset unless it invests whatever is necessary to provide top-flight security and maintenance at the facility.
- The transit agency should take steps as quickly as possible to address the issues of bus noise and exhaust. Minimizing these irritants will help gain community acceptance.

The report on this phase of the study is available at <http://www.nctr.usf.edu/projects/Year4/527-13.html>.



## **NCTR Student of the Year: Melissa Salzler**

Melissa Salzler was named NCTR Student of the Year for 2004. She earned a bachelor's degree in Advertising from the University of South Florida in May 2004 and entered USF's rigorous MBA program. Melissa began her work as an undergraduate research assistant at CUTR in her freshman year, working on various NCTR, FDOT and other sponsor research projects. Her skills in the creation of training manuals, National Transit Database reports, database development and maintenance, surveying, and Transportation Development Plan (TDP) inventories were vital to many projects, and she also managed research surveys for the university shuttle system. In July 2004, because of her outstanding skills and excellent knowledge base after years of working on transportation projects, Melissa was hired by CUTR as the Outreach Coordinator for the New North Transportation Alliance (NNTA). In that position, her goal has been to strengthen the relationship between alternative transportation and the working community in the north Tampa region.



*Melissa Salzler*

## **Education**

Education continues as a core program area of NCTR and includes a variety of activities and initiatives to meet the diverse needs of various students and professionals. Student involvement in project research continues as a high priority of CUTR and the NCTR program. During the 2004-2005 program year of NCTR, graduate and undergraduate students were involved in ongoing 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 professional experiences, NCTR helps develop well-informed, educated individuals, some of whom have gone on to work on public transportation planning and analysis, while others will carry out their career activities with a far richer understanding and appreciation of public transportation.

In the 2004-2005 academic year, a number of changes occurred in the academic programs at USF. The shift of focus to advanced degrees continues with more PhD students and fewer master's degree students. This has had an impact on graduation rates, as a similar number of students in the program produces fewer graduates due to the longer tenure of studies. Graduate student support packages have been reevaluated to remain competitive, and the university's tuition waiver policy has changed, providing greater university support for out-of-state students.

Job placement has remained very strong in spite of uncertainty on reauthorization of federal transportation legislation. The program continues to be proud of its placement record, with numerous students finding increasingly prestigious employment opportunities.

The following are summaries of specific core areas of the NCTR education program.

### **Enhanced Degree Offerings**

NCTR has supported initiatives to explore additional transportation degree offerings at USF. This has included a specific program to pursue an additional master's degree program as well as initiatives to enhance course offerings and explore additional teaching strategies. As reported in prior years, a comprehensive assessment of offering an interdisciplinary degree was carried out, and NCTR and USF continue to explore that prospect. Changes in university policy structure and chronic budget shortfalls have precluded implementation to date. However, the anticipation of continuing budget challenges has resulted in strategy changes to enable continued progress.

## Transportation Certificate Program

CUTR has succeeded in establishing a new certificate program, the Transportation Systems Analysis Certificate. This certificate is designed to provide an opportunity for a transportation credential for persons who have an engineering or similar technical undergraduate degree and want to enhance their skills and credentials through additional study. The certificate, offered beginning in Fall 2005, requires that the student complete 4 courses of a set of 11 courses that provide a strong transportation background. In addition, this certificate is unique in that all the courses are offered via the Florida Engineering Education Delivery System, (FEEDS); thus, students can complete the full certificate without having to appear for classes on campus. This enables both a broader audience and complements the schedules of professionals who want to pursue additional academic educations but need to work it in around a busy work and personal life. The course offerings are noted below.

- Traffic Systems Engineering
- Transportation Safety
- Intelligent Transportation
- Transportation Planning and Economics
- Travel Demand Modeling
- Public Transportation
- Transportation Network Analysis
- Pavement Design
- Principles of Engineering Management
- Supply Chain/Logistics
- Project Management



## Exploration of Additional Public Transportation Graduate Courses

During 2003, informal discussions began with the Federal Transit Administration and leading academicians in public transportation on the prospect of collaboration on curriculum development. As public transportation is only one of a broad range of modal interests for students of advanced transportation education, and the number of students in any given program is limited, few, if any, programs are able to offer more than a single graduate course in public transportation. Both student interest and faculty time and expertise preclude multiple course offerings. In light of this, a small group of individuals throughout the U.S. have discussed collaboration on curriculum development in public transportation. While funding for such an initiative has not yet been secured, CUTR has reiterated its interest in collaborating and other parties continue to pursue funding. The situation will continue to be monitored, and efforts will be reinitiated if opportunities arise.

## Research Experience for Undergraduates Program (REU)

As an outgrowth of a successful NSF program, USF has implemented a Research Experience for Undergraduates program. This program is intended to expose undergraduates to research experiences earlier in their education to motivate them to remain interested in the respective topic. CUTR continues to participate in this program and graduates of this program have joined CUTR as graduate research assistants.

## Developing Interest in the Field of Public Transportation—STEP 2005

For the fourth year, the Summer Transportation Education Program (STEP) was held at CUTR. STEP is a three-day program designed to provide students with the opportunity to learn more about careers in the field of public transportation through discussions with practicing professionals, hands-on activities, and field trips. The 2005 STEP class consisted of primarily freshmen and sophomore students in high schools from Hillsborough County. The students were introduced to public transportation career opportunities related to engineering, safety, operations, and planning, as well as many others. They visited Tampa International Airport, the Tampa Port Authority, and Hillsborough Area Regional Transit (HART). The program also placed additional emphasis on hands-on activities. For example, the students were introduced to Geographic Information Systems (GIS) and were able to use the mapping software to accomplish transportation-related activities. The students also were able to visit the HART streetcar maintenance facility to observe the technicians and supervisors at work, participate in a transit trip planning session, and travel by streetcar and bus between the Port Authority and USF. For many of the students, it was their first time using public transportation. Students also were introduced to transit on a university campus by completing an activity about USF's shuttle service, the Bull Runner, and then riding on the shuttle as well. Informative sessions were also part of the agenda, which provided students with information regarding transportation and the environment, bus rapid transit, and bicycle and pedestrian safety.

### Other Education Initiatives

Several other initiatives continue to receive attention. The undergraduate course Transportation and Society, designed to introduce undergraduates from various disciplines to transportation, is offered twice annually with good participation. In January 2005, a new academic transportation faculty member whose research specialty is network modeling and analytic methods joined the USF Civil & Environmental Engineering Department. With the transitioning of the College of Engineering's distance learning network to web-based delivery, course offerings are being marketed more aggressively to a broader audience of potential attendees.

### Technology Transfer

Excellent research is of limited value if the results are not made available to as many parties as possible that 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 continue to have significant involvement with partners in the public transportation industry, including serving on nine Transportation Research Board (TRB) committees and holding leadership positions in the American Public Transportation Association (APTA), the Association for Commuter Transportation (ACT), and the Institute of Transportation Engineers. This has created an opportunity to tout the NCTR program through solicitation of project ideas from organization members and in the transfer of research results. Following is a summary of the participation by NCTR staff as members of industry associations.

### *Professional Involvement of Key NCTR Personnel*

#### **Michael Baltes**

Member, Bicycling Committee, TRB

#### **Gary Brosch**

Executive Committee, International Road Federation  
Executive Committee, RETRC

#### **Alasdair Cain**

Road Pricing Subcommittee, TRB  
Managed Lanes Joint Subcommittee, TRB

#### **Xuehao Chu**

Editorial Board, Transp Research Part A

#### **Sara Hendricks**

Member, Telework Council, ACT  
Associate Editor, TDM Review, ACT

#### **Dennis Hinebaugh**

Chair, BRT Subcommittee, TRB  
Member, Bus Transit Systems, TRB  
Panel A-23: Cost Effectiveness of Selected BRT Components, TRB  
Member, BRT Task Force, APTA  
Member, Public Transportation Marketing & Fare Policy, TRB

#### **Ed Mierzejewski**

National Board of Directors, ITE  
Board of Directors, Florida District 10, ITE  
Planning & Systems Evaluation Committee ADA50, TCRP  
Project 8-44: Incorporating Safety into Long-Range Planning, NCHRP

#### **Victoria Perk**

Member, Social/Economics Factors A1C06, TRB  
Member, Intermodal Passenger Facilities A1E03, TRB

Chair, Intermodal Operations Tech Forum, APTA  
Member, Social/Economics Factors AIC06, TRB  
Member, Intermodal Passenger Facilities AIE03, TRB

**Steve Polzin**

Board of Directors, HARTline, Tampa  
Member, Policy & Planning, APTA  
Member, Transit Board Members, APTA  
Member, Public Transportation Planning & Development, TRB  
Planning Team, NHTS Data Users Conference, TRB  
Education Committee, SE Transportation Center  
Member, Conference on Census Data for Transportation Planning, TRB  
Project 20-24(34): Commuting in American III, NCHRP  
Editorial Board, *Journal of Public Transportation*  
Project J-7: Synthesis on Topic 05, TRB  
Panel, Colloquy on Coming Transformation of Travel, FHWA

**Amber Reep**

Associate Staff, Federal Transportation Safety Institute

**Deborah Sapper**

Member, Committee on Public Transp Safety & Security Task Force, AASHTO

**Joel Volinski**

Board, Florida Public Transportation Association  
Transit Ambassador Emeritus, TCRP  
Member, Research & Technology Committee, APTA  
Member, Human Resources Committee, APTA  
Member, Transit Management and Performance Committee, TRB  
Member, Research Proposal Screening Committee, TCRP  
President, Leadership Alumni Association, APTA  
Co-Chair, FPTA Annual Conference

**Beverly Ward**

Co-Chair, Mobility Subcommittee A5019, TRB  
Member, Transportation Equity Advisory Board, Harvard Civil Rights Project  
Member, Joint Subcmte on Community Impact Assessment, TRB  
Member, 3rd National Conference on Women's Travel Issues Planning Committee,  
National Research Council  
Co-Chair, Mobility Subcommittee ABE70, TRB  
Advisory Board, FAMU Transportation Safety Center

**Phil Winters**

Chair, T3 Reauthorization Legislative Subcommittee, ACT  
Transportation Planning Council Web Liaison, ITE  
Information Director, TDM Institute, ACT  
Member, TDM Committee, TRB  
Executive Committee, Transp Planning Council, ITE

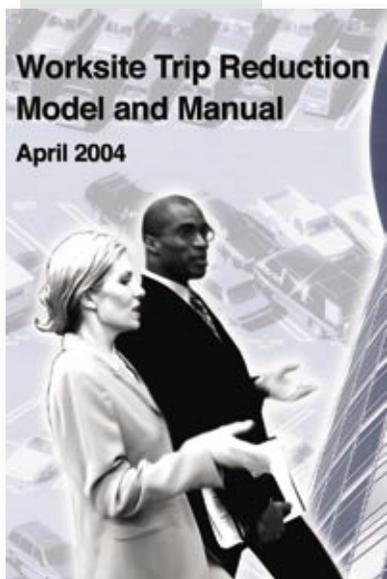


## Publications and Presentations

During FY 2005, NCTR researchers were active in publishing and presenting at state and national conferences and meetings, as follows:

### Publications

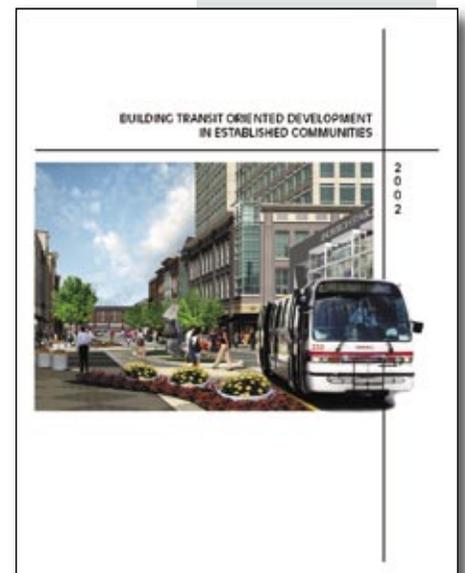
- Cain, "Design Elements of Effective Transit Information Materials," *APTA Bus Conference Compendium*
- Chu/Ubaka, "A Guide to Customized Sampling Plans for NTD Reporting," *Journal of Public Transportation*
- Concas/Winters/Wambalaba, "Fare Pricing Elasticity, Subsidies, Demand for Vanpool Services," *TRB 84th Meeting Compendium*
- Hendricks, "Results of the 2003 TMA Survey," *Transportation Research Record 1864*
- Reep/Staes, "An Innovative Approach to Operator Training for State/Federal Certifications," *APTA Bus Conference Compendium*
- Sobush, "Beyond Graphic Design: 10 Tips for Creating Effective TMA Newsletters," *2005 TMA Summit Proceedings*
- Volinski, "Designing Bus Transfer Facilities for Maximum Transit Agency/Community Benefits", *APTA Bus Conference Compendium*
- Ward, "Public Health/Travel Behavior of People in Low-Income Households," *TDM Review*
- Winters/Perez/Joshi/Perone, "Worksite Trip Reduction Model and Manual," *TRB 84th Meeting Compendium*



### Presentations

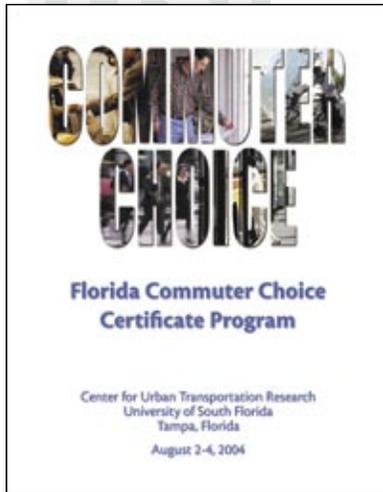
- Brosch, "Redefining Public Transportation through BRT," US Senate Hearing
- Cain, "Design Elements of Effective Transit Information Materials," APTA; "Design of Effective Transit Information Materials," FFTA Meeting; "Achieving Majority Support for Urban Road Pricing," TRB 84th Meeting; "Design Elements of Effective Transit Information Materials," APTA Marketing Workshop; "Increasing Efficiency/Fairness of Urban Transport Systems," TRUMP Training Programme; "Design Elements of Effective Transit Information Materials," APTA Bus Conference; "Congestion Pricing in the UK," Transplex Conference
- Chu, "A Time-Based Comparative Approach to Understanding Danger of Walking," National Household Travel Survey Conference; "Measuring the Injury Risk of Walking," Who Must Pay for Transit Services?; "Another Look at FTA-Approved Sampling Plans for Fixed-Route Bus," TRB 84th Meeting; "Guide to Customized Sampling Plans for NTD Reporting," TRB 84th Meeting; "Ridership Accuracy and Transit Formula Grants," TRB 84th Meeting; "Ridership Accuracy and Transit Formula Grants," Transportation Research Forum 2005; "Assessing Intrastate Equity in Transportation Funding," Transportation Research Forum 2005; "Why People Cross Where They Do," Who Must Pay for Transit Services?

- Goodwill/Reep, "Hurricane Lessons Learned System Report," FPTA Meeting; "Hurricane Season 2004: Florida's Emergency Response," Lessons Learned, APTA Bus Conference
- Hagelin, "Bicycle Parking Innovations/Security," ACT International Conference; "Expanding Commuter Benefits/Creating Commuter Choice Equity," ACT International Conference
- Hendricks, "Influencing Trip Reduction Program Success," ACT International Conference; "Commuter Choice Program Case Study Development/Analysis," CUTR web site; "Applying TOD Concepts to the Suburbs," CUTR web site; "Results of the 2003 International Survey of TMAs," CUTR web site
- Perk, "Quality of Service Concepts/Case Studies," APTA Workshop on Transit Capacity; "Arterial Bus Lane Capacity," APTA Workshop on Transit Capacity; "Quality of Service Concepts and Case Studies," TRB 84th Meeting;
- Perk/Catala/Flynn, "Strategies for Successful Intra-Urban Circulator Systems," APTA Bus Conference
- Polzin, "Security Considerations and Public Transportation," National Transportation Safety/Security Conference; "Case for Moderate Growth in VMT," US DOT; "Observations about Public Transportation Based on NHTS Analysis," National Household Travel Survey Conference; "The Case for Moderate Growth in VMT," Tampa Bay Applications Group; "The Case for Moderate Growth in VMT," Tampa Bay Applications Group; "Key Points Regarding Census Data for Transportation Planning," TRB Conference on Census Data; "Keeping the Rapid in Bus Rapid Transit," FSITE Summer Meeting
- Polzin/Pendyala/Toole, "Exploration of Growth in Travel Time Expenditures," TRB 84th Meeting
- Reep, "Innovative Technologies to Facilitate Meetings, Training, Info Outreach," 16th Annual Research Conference
- Reep/Staes, "An Innovative Approach to Operator Training for State/Federal Certifications," APTA Bus Conference
- Sobush, "TDM Welcome Toolkit," ACT International Conference; "Beyond Graphic Design: 10 Tips for Creating Effective TMA Newsletters," 2005 TMA Summit
- Staes, "Rural Transit Planning and Marketing Assessment Initiative," TRB Rural Conference
- Thole, "BRT Stations and Shelters," APA National Conference; "BRT and Development," University of Minnesota Public Affairs Roundtable
- Volinski, "Designing Bus Transfer Facilities for Max Transit Agency/Community Benefits," APTA Bus Conference
- Winters, "Price Elasticity of Rideshare," ACT International Conference; "Observations on CTR and TDM," Washington DOT Commute Task Force; "TDM and Transportation Systems Performance," TRB 84th Meeting; "Worksite Trip Reduction Model and Manual," TRB 84th Meeting



## Training

During FY 2005, NCTR researchers were active in either providing or arranging for the following training sessions:



### **Commuter Choice**

- Access Management (*Williams*)
  - Bike/Pedestrian Programs (*Hagelin*)
  - Business to Business Sales and Promotions
  - Support Programs/Smart Commute Strategies (*Winters*)
  - Tax Benefits (*Winters*)
  - Creative Thinking for Transportation Professionals
  - Establishing Program Goals/Objectives
  - Institutional Arrangements
  - Intro to Basic Marketing
  - Intro to Commuter Choice Program (*Winters*)
  - ITS and Traffic Management (*Hagen*)
  - Marketing Campaigns & Strategies
  - Measuring Performance/Creative Thinking for TDM Professionals
- Measuring Results & Performance
  - Modeling Commuter Choice Impacts
  - Parking Management (*Winters*)
  - Public Relations/Advertising (*Audino*)
  - Public Speaking (*Dwyer*)
  - Rideshare Options (*Winters*)
  - Social Marketing
  - Support Programs & Smart Commute Strategies
  - Telework and Compressed Workweek (*Hendricks*)
  - Transit Options (*Goodwill*)
  - Transit Service Operations
  - Transportation Planning Process

### **CUTR**

- NTD Data Collection & Reporting Seminar
- Senior Leadership for Transit Managers

### **FPTA**

- Basics of Policy Development for Public Transit Agencies (*Cyra*)
- Complying w/FTA's Policy on ITS Architecture Consistency (*Schweiger*)
- Demonstration of GIS in Transit (*Catala*)
- Emergency Planning & Hurricane Preparedness (*Reep/Goodwill*)

- FTPN General Session (*Gregg/Mistretta/Ubaka*)
- Fundamental Concepts of Fixed Route Scheduling
- Improving Your Presentation Skills for Maintenance Trainers (*Reep*)
- Integrating Bicycles and Transit (*Hagelin*)
- Managing Negativity in the Workplace (*Pine*)
- Relationships Among Business & Public Transportation (*Goodwill et al.*)
- Resource for Advanced Public Transportation Systems (*Gregg*)
- Strategies for Managing Paratransit Services & Costs (*Goodwill et al.*)
- Transit Marketing Workshop (*Gregg et al.*)
- Transit Trip Planning & Its Impact on Transit Usage (*Cain*)

### **Transit Training**

- TSI Transit Bus System Safety
- Fundamentals of Public Transportation
- GIS for the Transit Professional (*Catalal/Zandbergen*)
- GIS for Transit Managers
- NTI Market-based Ridership Strategies (*Gleason*)
- NTI Senior Leadership Course
- RTAP Train-the-Trainer Paratransit Driver's Qualifications
- Stress Management, Driver Wellness, and Conflict Avoidance
- Threat & Vulnerability Analysis
- TSI Fatigue Awareness Seminar
- TSI Instructors Course in Bus Operator Training



### **Journal of Public Transportation**

The *Journal of Public Transportation* is a respected international journal containing refereed papers on current, original research and case studies associated with public transportation and related policy issues. Topics are approached from disciplines including economics, engineering, planning, BRT, GIS, finance, and safety, and include methodological, technological, and financial perspectives, with emphasis on the identification of innovative solutions to public transportation problems. The Journal has nearly 2,100 subscribers from all around the world, and boasts a distinguished editorial board.

As NCTR strives to maintain excellence in reaching both academicians and practitioners, it also attempts to keep abreast of technology in the journal's distribution. Every issue of the Journal is now available electronically at [www.nctr.usf.edu/jpt/journalfulltext.htm](http://www.nctr.usf.edu/jpt/journalfulltext.htm) and can be downloaded in its entirety or by article.



### **Net Conferences: Learn More—Travel Less**

The cost, downtime, and hassle associated with long-distance traveling create a barrier to any university transportation research center seeking to transfer the knowledge to those who can most benefit. To supplement its publications, NCTR continues to rise to the challenge by using various means and formats for disseminating information and sharing insights. The use of netconferences or webinars provides a cost-effective means of engaging public transportation professionals and experts from around the country. Netconferences are held in real-time but are also available for on-demand viewing after the live presentation. No special equipment needs are necessary. “Attendees” view the presentation via the Internet while listening via the telephone.

In 2005-2006, NCTR sponsored the following three netconferences in partnership with the Association for Commuter Transportation. To leverage NCTR’s resources, ACT chapters were enlisted to host these netconferences in their cities and invite members and non-members alike. Based on the topic, from 15 to 25 locations participated in the netconference live and attracted up to 150 “conference attendees” each.

#### *“New Approaches to Reduced Car Use for Campus Communities”*

Campuses across the country face difficult challenges balancing institutional growth, transportation access, quality of life, and relationships with community neighbors, all within constrained budgets. This session explored national and international examples of successful techniques campuses are using to manage transportation while building sustainable communities. Attendees heard what’s working in a variety of campus settings, from small towns to large cities. The panelists, Spenser Havlick and Will Toor, co-authors of *Transportation & Sustainable Campus Communities: Issues, Examples, & Solutions*, discussed how campuses large and small are expanding transit access, enhancing bicycle and pedestrian facilities, and designing incentives that encourage less driving.

#### *“The Effects of Commuter Benefit Programs on Transit Systems”*

The federal tax code allows employers to provide tax-free qualified transportation fringe benefits also commonly referred to as “commuter benefits.” This session discussed the results of a recent report for the Transit Cooperative Research Program (TCRP) that was conducted to help employers, transit agencies, policy makers, and organizations that promote transit benefits to better understand what effects they might expect from a commuter benefits program and how to quantify these effects. Michael Grant of ICF Consulting (lead author of TCRP report) summarized the key findings from a review of 21 surveys conducted by transit agencies and other organizations in 12 metropolitan areas, analysis of worksite trip reduction records from three regions with mandatory employer trip reduction programs, and interviews with 7 transit agencies. Lorraine Taylor summarized how the Washington Metropolitan Area Transportation Authority (WMATA) has successfully marketed its Metrochek program to 4,000+ employees.

#### *“Paying for Performance: Cash for Commuters”*

Brian Lagerberg of the Washington State Department of Transportation (WSDOT) discussed how the agency developed a program to entice and reward organizations that reduce commute trips through Commute Trip Reduction (CTR) performance grants, which were created to en-

courage and test innovation in reducing drive-alone commute trips. Any Washington business or public agency willing to provide a financial benefit to employees for reducing drive-alone commuting may compete for the grants. Examples of financial benefits include cash incentives, free transit passes, membership fees for a car-sharing program, or parking charges for those who drive alone. Approximately, \$1,500,000 in funding was awarded to 33 projects under the state's first year of the grants. The winning projects collectively will reduce more than 4,400 drive-alone commute trips per day and 120,000 commuting miles per day. Grantees are paid for the total number of daily vehicle trips they reduce during the year. Ellen Macht of the Clean Air Campaign and Jennifer Gregory of the Center for Transportation and the Environment discussed how to successfully market and operate incentives that get people into alternative modes and keep them there.

## On-Demand Streaming Presentations

On-demand streaming presentations continue to provide another means for facilitating the sharing of research results. More final reports are being turned into short, streaming presentations that can be viewed 24/7 by the public transportation professional and others. This provides a quick and convenient means for someone to hear the researcher discuss the project without the cost to travel to a conference or the time to read the full report.

The current list of streaming presentation includes a range of topics related to all forms of public transportation.

- Bicycle Parking Innovations and Security View
- Commuter Choice Program Case Study Development and Analysis
- Developing Title VI Profile Maps for Community Impact Assessment
- Evaluation of Shared Use Park & Ride Impact on Properties
- Expanding Commuter Choice Tax Benefits
- Future Technicians
- Land Developer Participation in Providing for Bus Transit Facilities and Operations
- Synthesis of Securement Device Options and Strategies
- Telecommunications and Its Future Role in the Public Transportation Arena
- Universities and TDM: Carpool Programs
- USF Cart Safety Training Program

## Website

In addition to the netconferences and on-demand streaming presentations, NCTR provides links to 63 completed research projects in HTML and pdf formats. Basic web statistics were designed so systems administrators could determine how efficient the system was in processing requests. The statistics were not intended to count every user. However, such web statistically reports enable NCTR to track basic trends. From July 1, 2004, to June 30, 2005, the NCTR website had the following usage:



	FY04	FY05	% Change
Successful requests(a)	1,660,924	1,546,890	-6.9
Average successful requests/day	4,538	4,238	-6.6
Successful requests for pages(b)	204,348	250,684	22.7
Avg successful request for pages/day	558	686	22.9
Distinct files requested	13,275	15,159	14.2
Distinct hosts served(c)	38,775	48,860	26.0

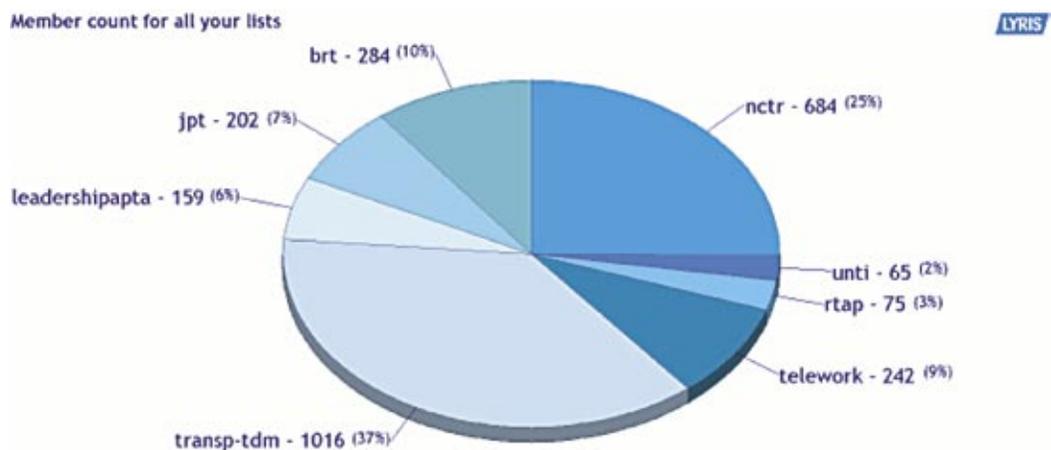
(a) Total number of files downloaded, including images and other types of files.

(b) Number of requests made for various page(s) on a site, regardless of who made them

(c) Number of different computers (IP addresses) that have requested pages—counted only once regardless of how many times a client visits the site. ISPs that use Dynamic Host Configuration Protocol (DHCP) assigns a different IP address for every page requested so it is not necessarily an indication of a unique visitor.

### Discussion Forums and Listservs

NCTR continues to see increases in the number of subscribers across the board from its public transportation-related listservs. These peer-to-peer discussion forums have attracted more than 2,700 subscribers. The listservs provide quick access to information and facilitate peer-to-peer assistance from across the country.



#### KEY

brt = discussion forum for bus rapid transit

jpt = subscribers who received electronic version of NCTR's Journal of Public Transportation

telework = discussion forum for telework

transp-tdm = discussion forum for transportation demand management

nctr = e-newsletter for the National Center for Transit Research

unti = e-newsletter for New North Transportation Alliance

leadershipapta = discussion forum for "Leadership APTA" graduates

rtap = discussion forum for rural transit assistance program

## Help Desk for the National TDM and Telework Clearinghouse

The listserv archives contain a wealth of information that CUTR is now making more accessible via an online Help Desk. This customer relationship management application provides the enhanced communications and continual feedback loops that are central to understanding and addressing the needs of the TDM community. The purpose of initiating the Help Desk is to reduce the inquiry burden on Clearinghouse staff by providing intelligent self-service options. This approach provides a means to reduce the total number of basic inquiries or repeat requests that require personal attention. NCTR's objective is to be more cost-effective as we seek to handle more interactions by providing lower cost transactions with the Help Desk's self-service feature.

At NCTR's end, the tool has substantial tracking and reporting mechanisms that will help NCTR identify which topics are receiving the most questions. This information can help NCTR prioritize products and services as well as identify research needs. The Help Desk knowledge base has been built with nearly 330 questions and answers received by the listserv or by the Clearinghouse. For many of the responses to those questions, NCTR has combined the answers contributed by the members of the listserv (with appropriate attribution to the source(s) of those answers). The Help Desk provides multiple views in this self-service and targeted technical assistance support site. It has extensive search and browse capabilities that offer different views of the same information in the "knowledge base" to accommodate the different comfort levels Clearinghouse customers may have with technology. To visit the Help Desk, please go to <http://www.nctr.usf.edu/clearinghouse/>.

## Year 7 Research Program

NCTR recently completed the process to solicit and select research ideas for the FY 2006 (Year 7) program year. Requests for research ideas and proposals were sent to all Florida transit agency directors, MPO directors, and FDOT public transit managers. Idea requests also were sent to all public transportation-related committees of TRB, APTA committee chairs, and national listservs. From the submission of more than 100 different research ideas, the NCTR Advisory Committee provided assistance in selecting 6 core program and 11 research projects for funding in FY 2006.

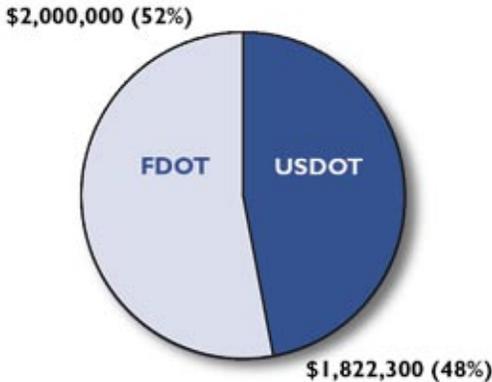
## Conclusion

At the completion of its sixth year, CUTR's National Center for Transit Research continues to produce a large volume of high-quality research of practical value to public transportation agencies throughout the country. The results of the research are being effectively distributed through a variety of means, including new electronic techniques that allow fast and flexible access to the information NCTR is producing. The program is helping to cultivate the next generation of transportation professionals by providing opportunities for students who assist in the research being conducted. The vast majority of them are joining public and private sector transportation agencies upon graduation. NCTR continues to be excited about the possibilities of establishing an interdisciplinary transportation degree program that will attract even more students to the profession.

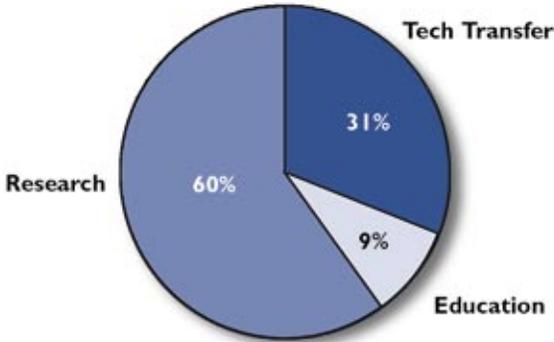


NCTR always has enjoyed a strong relationship with the Florida Department of Transportation and is leveraging UTC program funds through partnerships and contracts with non-profit foundations and the Federal Transit Administration. The research faculty and students of NCTR look forward to contributing to the rising success of public transportation agencies throughout the nation.

### Financial Summary



**FIGURE 1:**  
NCTR Funding Sources



**FIGURE 2:**  
NCTR Expenditures

Figure 1 presents the funding sources for the 6th year (combined 5th and 6th years in one grant) of the NCTR program. Figure 2 shows the split of expenditures for the fiscal year based on the key program areas of the NCTR Program. These expenditures are for the core program and research projects only and do not include administrative expenses of the NCTR Program. Expenditures are shown in three areas—education, research and technology transfer.



Center for Urban Transportation Research