For the second time in four years, CUTR’s National Center for Transit Research (NCTR) at the University of South Florida prevailed in a nationwide competition to retain its status as one of 10 Tier I federally-funded University Transportation Centers (UTC).

When SAFETEA-LU, the federal surface transportation act, was finally authorized in 2006, Congress designated 28 new UTCs that did not need to go through a competitive process. However, the act called for an open competition among universities that wished to host a Tier I University Transportation Center. The Tier I category of UTCs was initially designated in 1998 with the passage of TEA-21. At that time, NCTR was one of the 17 centers designated by Congress to receive up to $1 million annually from the U.S. DOT to conduct transportation research, provide education and training, and conduct extensive information sharing of its research results.

As called for in TEA-21, the 17 centers were required to compete among themselves if they wished to remain one of only 10 Tier I UTCs to continue to receive federal funding. Based on a strong strategic plan and a record of solid accomplishments, NCTR was one of the 10 existing Tier I UTCs to retain their status for an additional two years.

In 2006, SAFETEA-LU called for an open competition from all universities that wished to compete to host a Tier I UTC. A total of 36 universities from around the country entered the competition for the 10 Tier I positions. NCTR decided to continue to compete as a UTC that would focus on public transportation and alternative forms of transportation to further the goals of the U.S. DOT of reducing congestion and reliance on foreign oil, improving safety and security, and enhancing economic development and community sustainability.

According to the administrators of the Research and Innovative Technology Administration, the competition was quite
“Clean, Sober and Safe” video debuts at FPTA Conference

A unique and engaging Employee Drug Awareness video entitled “Clean, Sober and Safe” was recently produced and released by CUTR. The training video will be a valuable aid to Florida’s public transportation agencies in meeting the Federal Transit Administration’s regulatory requirement of providing a minimum of 60 minutes of training to all safety-sensitive employees on the effects and consequences of prohibited drug use on personal health, safety, and the work environment.

Diana Byrnes, CUTR’s Substance Abuse Management Specialist, developed and scripted the 20-minute video that begins by giving viewers insight into the events leading to the establishment of drug and alcohol testing regulations. The video also identifies the five prohibited drugs, as defined in 49 CFR Part 40, and educates viewers of the effects of drugs and alcohol on the body and mind.

Keith Thomas, CUTR’s Technology Services Coordinator, worked closely with Byrnes on this project. In addition to videotaping and editing, Thomas skillfully created graphics and animation, adding visual appeal to the video.

During the video’s premiere at the 32nd FPTA Annual Conference in November 2006, Mike Johnson, Administrator of Transit Operations for FDOT, noted that “FDOT is proud to have provided the funding to produce such an important training tool. The video and accompanying handbook will be beneficial to transit agencies in the state of Florida as well as nationally.”

“Clean, Sober and Safe” is the first in a series of training videos CUTR will produce in 2007. The video and handbook will soon be available for download at http://www.cutr.usf.edu/byrnessamsite. For further information, contact Diana Byrnes at (813) 426-6980, byrnes@cutr.usf.edu.

New faculty joins CUTR

CUTR is pleased to welcome back Ed Bart as Manager of the Florida Maintenance Training Program. Bart was General Manager of Vehicle and Facility Maintenance for Hillsborough Area Regional Transit (HART) from 2004-2006 and also served as Director of Maintenance for Volusia Country Transit (VOTRAN) in Daytona Beach and as Senior Fleet Maintenance Director for the U.S. Army. He holds a bachelor’s degree in Business from McKendry Business College in Illinois and will soon complete a master’s degree in Public Administration from USF. Welcome back, Ed!
CUTR researchers among key contributors to annual transit conference

The 32nd annual conference of the Florida Public Transportation Association (FPTA), held in early November 2006 in West Palm Beach, attracted more than 300 transit professionals. Attendees represented all of Florida’s public transit agencies, FDOT staff, representatives from the Federal Transit Administration and the American Public Transportation Association, and more than 50 transit product representatives and transit consultants. The three-day meeting included product exhibits, keynote addresses, and a substantive and diverse program.

CUTR was well represented at the conference, with 15 CUTR researchers taking key leadership roles in making presentations and moderating technical sessions. Four recent projects of CUTR’s National Center for Transit Research were presented by their principal investigators, and several transit networks met and presented topical programs on marketing, planning, operations, and maintenance. Other technical sessions involving CUTR researchers included safety and security, transit’s role in growth management, and human resource approaches.

The FPTA 32nd Annual Conference is an example of CUTR’s ongoing and strong partnerships with FPTA, FDOT and the state’s public transit agencies. Working with these partners, CUTR has contributed to strengthening Florida’s public transportation industry. FPTA Executive Director Wes Watson complimented CUTR’s involvement: “CUTR brings forward substantial resources in developing the program and works closely with FPTA and FDOT to make our annual conferences and professional development workshops among the most successful offered at the state level.”

For more information on the FPTA conference, contact CUTR Senior Research Associate Jay Goodwill at (813) 974-8755, jaygoodwill@cutr.usf.edu.

Kourtellis awarded 2006 CUTR Scholarship

CUTR Graduate Research Assistant Achilleas Kourtellis was awarded the 2006 Georgia Brosch Memorial Transportation Scholarship at the CUTR Transportation Achievement Award Dinner on October 24.

Kourtellis is pursuing a Ph.D in Civil and Environmental Engineering under Dr. Xuehao Chu, with anticipated completion in 2008. He holds a Civil Engineering Technician Diploma from the Higher Technical Institute in Nicosia, Cyprus, and a bachelor’s degree in Civil Engineering from USF. He works with Dr. Chu as a Graduate Research Assistant, participating in projects on pedestrian crossing safety and alternative measures of transit share and has co-authored two papers.

A member of the Florida Board of Professional Engineers (EI) and the Cyprus Scientific and Technical Chamber, Kourtellis serves as president of the USF Student Chapter of the Institute of Transportation Engineers (ITE).

The $1,000 scholarship is awarded based on academic achievement, professional activities, and career goals.
robust. Following the established practices of previous UTC competitions, each proposal underwent a rigorous screening process by a multi-modal, interdisciplinary evaluation team from across U.S. DOT prior to final selection by the RITA Administrator. The evaluation team reviewed proposals based on a defined set of criteria, taking steps to ensure that the competition was fair and open to all qualified institutions of higher learning.

As a result of the competition, the following institutions were selected to host Tier I UTCs:

- Georgia Institute of Technology (Georgia Tech)
- Iowa State University
- Rutgers, the State University of New Jersey
- San José State University
- University of Florida
- University of Idaho
- University of Maryland
- University of Michigan
- University of South Florida
- University of Southern California

NCTR’s application was liberally sprinkled with quotes of support from public transportation professionals from around the country who have directly benefited from the work done at NCTR. Strong and sincere endorsements were received from transit agency directors, commuter assistance transportation program managers, consultants, DOT representatives, students who had graduated from USF and gone on to prominent positions within public and private transportation entities, and state, national, and international transit association directors.

The UTC Program was established in 1987 with the mission “to advance U.S. technology and expertise in the many disciplines comprising transportation through the mechanisms of education, research, and technology transfer at university-based centers of excellence.” Tier I UTCs are expected to work collaboratively with the U.S. DOT and state and local transportation stakeholders, and provide leadership in making national and regional contributions to solving immediate and long-range transportation challenges.

Federal UTC grants must be matched on a dollar-for-dollar basis with non-federal funding, except as provided by SAFETEA-LU. NCTR is fortunate to have the Florida Department of Transportation as a reliable and supportive partner. Each year since 1998, FDOT has provided a cash match to the federal UTC grant, providing NCTR with a total of almost $2 million annually.

The National Center for Transit Research focuses on improving the nation’s transportation system by conducting research, providing training, teaching, and sharing information with an emphasis on public transportation and alternative forms of transportation that help to minimize traffic congestion and offer alternatives to travelers. Since 1998, NCTR has completed over 90 research projects and made over 500 presentations of its findings at state and national transportation conferences. It has also created networks of communication among thousands of transportation professionals through the listservs it administers and the netcasts that it jointly sponsors.

The research faculty of NCTR will continue to assist the transportation community through its research and information sharing. It will also continue to publish the Journal of Public Transportation, foster even more communication among professionals through conferences and netcasts, and assist students and practicing professionals through the creation of a national faculty and curriculum dedicated to providing graduate courses accessible through the Internet that focus on public transportation.

For more information on NCTR, contact NCTR Director Joel Volinski at (813) 974-9847, volinski@cutr.usf.edu, or visit the NCTR website at www.nctr.usf.edu.
Message from the NCTR Director

The theme of the National Center for Transit Research is “to enhance the performance and relevance of public transportation and alternative forms of transportation in urban areas.” I sometimes say that since ridership on public transit systems in the United States has gone up by over 20% since the time NCTR was created, we must be doing a great job! While many factors influence transit use, I firmly believe that NCTR’s contributions have helped transit agencies and transportation management associations improve their performance and attract more people to the alternatives they offer travelers. And when they do, they help the U.S. DOT in reaching the national goals of providing a transportation system that promotes safety, global connectivity, environmental stewardship, and security.

NCTR’s researchers have been discovering new information through disciplined research; providing valuable assistance and information to transportation agencies and professionals through reports, papers and presentations, training, and electronic communication networks; and helping students prepare for transportation careers. Our researchers completed 12 research reports in the past year, all of which are available at our website at www.nctr.usf.edu.

NCTR researchers made over 50 presentations at state and national conferences last year. NCTR is unique in its efforts to share information through listservs that have more than 2,000 members. Transportation professionals and students from around the world express their appreciation for this service that allows flexible and frequent trading of information in a skillfully managed environment.

One of the most noticeable benefits provided by NCTR last year was the production of multiple netcasts for transportation demand managers. Those in attendance (up to 150 in each one) were able to do so from the convenience of their office computer watching PowerPoint presentations while being able to listen and interact through their phones at no charge. These netcasts have been a major benefit for those who can not attend national conferences.

NCTR continues to provide one of the richest experiences for students desiring a career in transportation. Not only do they have access to more than a dozen courses to solidify transportation theory, but they also have the opportunity to work on projects with NCTR researchers who have substantial experience in operating transportation agencies. Students who have worked with NCTR now hold significant transportation positions such as transit agency general manager, DOT District program manager, and FTA program manager. USF continues to develop certificate and degree programs that attract students and professionals at every level.

There is an emphasis on distance learning opportunities that give people the flexibility to enhance their credentials and contribute more to the transportation community.

We are excited about the opportunities to continue to add value to transportation agencies, professionals, and students. While we are proud of what we do, we know it is not about us; it is about how we are helping others in the transportation community perform at their highest level. We look forward to continuing this UTC mission.

Joel Volinski, NCTR Director
Program Overview

Funding
NCTR recently completed its seventh 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 18 years. Federal funds for the program are matched with a greater than 100 percent cash match from the Florida Department of Transportation (FDOT), creating a doubling of total program funding.

Advisory Committee
The NCTR Advisory Committee consists of 13 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:

Joe Calabrese  
General Manager  
Greater Cleveland Regional Transit Authority

Roy Chen  
Engineer, Research Office  
Federal Transit Administration

Ed Coven  
State Transit Office Manager  
Florida Department of Transportation

Dr. Wendell Joice  
Director, International Telework Assoc. & Council

Dr. Minnie Fells-Johnson  
Public Transportation Consultant

Ysela Llort  
Asst. Secy., Intermodal Systems Development, Florida Department of Transportation

Richard Long  
Director, Office of Research  
Florida Department of Transportation

Bill McCloud  
Senior Vice President & C.O.O.  
Veolia Transportation

Jose-Luis Mesa  
Director, Miami-Dade MPO

Louis Sanders  
Director of Research and Technology, APTA

Eric Schreffler  
Director of Research, TDM Institute  
Association for Commuter Transportation

Donna Vlasak  
Senior Program Officer  
Transportation Research Board

Joel Volinski  
Director, NCTR

Year 7 Accomplishments

Research
The seventh year of the NCTR program has supported 18 projects approved by the NCTR Advisory Committee. These projects consist of 6 core programs that will be conducted throughout the life of NCTR and 12 newly-selected research projects that explore methods to accomplish the goals of the U.S. DOT, and 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
Projects completed during FY 2006 and sample summaries of three of these projects are listed below. Final reports for these projects are available in HTML and PDF formats on the NCTR website at http://www.nctr.usf.edu/.

**NCTR FY 2006 Completed Research Projects**

- Assessing the Hierarchy of Needs in Levels of Service
- Public Transit in America: Evidence from the 2001 National Household Travel Survey
- Guidebook for Startup Transit Agencies
- A Return on Investment Analysis of Bikes-on-Buses Programs
- Strategies for an Intra-Urban Circulator System
- Special Event Transportation Service Planning & Operations Strategies for Transit
- Impacts on Transit Oriented Development on Public Transportation Ridership
- Incorporating TDM into the Land Development Process
- Case Studies in Environmental Justice and Public Transit Title VI Reporting
- Update Methodology for ADA Demand Estimates: Lessons Learned
- Teenage Attitudes and Perceptions Regarding Transit Use
- Transit Use Viability among Older Drivers Losing Driving Privileges

**2005 NCTR Student of the Year: Jennifer Flynn**

Jennifer Flynn was named NCTR Student of the Year award for 2005. She earned a bachelor’s degree in Urban Geography from USF in June 2002 and began a master’s program in geography with an emphasis in urban and transportation planning. She was appointed as a graduate research assistant at CUTR and worked on a variety of projects for NCTR, FDOT, and county-funded research. She is skilled in spatial data analysis using Geographic Information Systems (GIS), thematic map design, database development and management, research and promotional writing, and surveying and served as liaison for several outreach and educational initiatives at CUTR. Her research interests include GIS, transit market analysis, women’s transportation issues, and the community impacts of planning policy. She recently was hired as a full-time faculty member for the CUTR Transit Program to continue her NCTR research efforts.

**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 priority of CUTR and the NCTR program. During the 2005-2006 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, many of whom have gone on to work on public transportation planning, management, and analysis, while others will carry out their career activities with a far richer understanding and appreciation of public transportation.

In the 2005-2006 academic year, the academic program at USF continued to evolve. The shift of focus to advanced degrees continues with more PhD students and fewer master’s degree students. There is an increasing emphasis on the “five-year program,” designed to let undergraduates commit to a master’s degree while intermixing their undergraduate and graduate courses such that they can complete degree requirements in five years and begin taking master’s
degree courses earlier in their overall tenure at the university. In addition, the university is exploring a 12-month master's program designed to enable an individual to complete his or her master studies within a one-year time period. This would appeal to individuals who are eager to complete their studies and willing to spend a year highly focused on taking courses as opposed to working. Job placement has remained very strong. 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.

Transportation Certificate Program
CUTR’s new certificate program, the Transportation Systems Analysis 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. To date, a number of students enrolled in the program are taking advantage of the fact that they can complete the certificate via distance learning. All of the courses for this certificate are offered via distance learning.

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 anticipates moving forward with this initiative.

Developing Interest in the Field of Public Transportation—STEP 2006
For the sixth year, the Summer Transportation Education Program (STEP) was held at CUTR during the summer. STEP is a four-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. Field trips included the Tampa International Airport, the Tampa Port Authority, the Florida Department of Transportation I-4 widening project office, and the Hillsborough Area Regional Transit (HART) streetcar maintenance facility, where they observed technicians and supervisors at work, participated in a transit trip planning session, and traveled by streetcar and bus between the Port Authority and USF. Hands-on activities included an introduction to Geographic Information Systems (GIS) and the use of mapping software to accomplish transportation-related activities. Students also were introduced to transit by means of USF’s shuttle service, the Bull Runner. Information sessions included transportation and the environment, bus rapid transit, and bicycle and pedestrian safety.
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 researchers over the last year.

NCTR researchers continue to have significant involvement with partners in the public transportation industry, including serving on 10 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. NCTR researchers also give presentations and publish papers throughout the year.

During FY 2006, NCTR researchers were active in either providing or arranging for the following training sessions:

- MPO Long Range Planning Process
- Long Range TDM Planning
- Incorporating TDM into the Land Development Process
- Introduction to BRT
- Crash Course in Measurable Marketing
  - Trends Affecting Transportation Systems & Policies
  - Quantifying the Business Benefits of TDM and Transit
  - Introduction to Basic Marketing Strategy and Campaigns
  - Creative Thinking for Transportation Professionals
  - Institutional Arrangements
  - Establishing Program Goals and Objectives
  - Measuring Results and Performance
  - National Transit Institute’s Commuter Benefits Program
  - Statewide Survey on Bicycle/Pedestrian Facilities
  - TDM Advocacy
  - Rideshare Options
  - Transit Service Options
  - Parking Management
  - Telework and Compressed Work Weeks
  - Commuter Choice Tax Benefits
  - Commuter Choice Support Programs/Smart Commute Strategies
  - Carsharing Programs
  - TDM Program Monitoring/Evaluation
- Government Relations
- Presentations/Public Speaking
- Social Marketing
- TSI Instructor’s Course in Bus Operator Training
- Transit Threat and Vulnerability Assessment
- Fundamentals of Bus Collision Investigation
- NTI Harassment Prevention Workshop
• TSI Transit System Safety
• TSI Intermediate Problems in Bus Collision Investigation
• Increasing Human Effectiveness

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. Produced on a quarterly basis, the Journal has nearly 2,200 subscribers from all around the world and boasts a distinguished editorial board.

Net Conferences: Learn More—Travel Less

In addition to the diverse range of publications, NCTR uses various means and formats for disseminating information and sharing insights. NCTR continues to provide opportunities to collaborate online individually or with large groups of transportation professionals in real time, with only a telephone, computer, and an Internet connection. This netconferencing approach provides a cost-effective means of bringing together public transportation professionals with peers and other experts from around the country to disseminate research results and share experiences. NCTR’s use of Microsoft’s Live Meeting™ enables us to quickly and more effectively communicate with transportation professionals while reducing travel time and expenses. Netconferences are held in real-time but are also available for on-demand viewing after the live presentation. No special equipment is necessary. “Attendees” view the presentation via the Internet while listening via the telephone.

In 2005-2006, NCTR sponsored four 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. Based on the topic, from 15 to 25 locations participated in the netconferences live and attracted up to 150 “conference attendees” each.

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 on demand by the public transportation professional and others. This provides a quick and convenient means to hear a researcher discuss a project without the cost to travel to a conference or the time to read the full report. In addition to the netconferences and on-demand streaming presentations, NCTR provides links to 86 completed research reports in HTML and PDF formats.

Discussion Forums and Listservs

NCTR continues to see increases in the number of subscribers to its public transportation-related listservs. These discussion forums have attracted more than 2,100 subscribers. The listservs provide quick access to information and facilitate peer-to-peer assistance from across the country. The e-newsletter listservs account for more than 1,200 additional subscribers. These e-newsletters provide information on what is new at NCTR and include 350 electronic subscriptions to the Journal of Public Transportation.
Beginning in FY06, all NCTR abstracts, announcements and listserv postings are published as RSS feeds. This method allows NCTR to deliver information to the desktop of transportation professionals and others (e.g., customized Google or Yahoo home page) without cluttering up email inboxes.

Also, in the past year, NCTR has initiated a blog to foster discussion of transportation issues, TDM Talk (www.tdmtalk.blogspot.com/), to complement the listserv it runs for TDM professionals.

**Help Desk for the National TDM and Telework Clearinghouse**

In 2004, NCTR unveiled a customer relationship management software solution to provide the enhanced communications and continual feedback loops that are central to understanding and addressing the needs of the transportation community. The Help Desk’s role is to provide more intelligent self-service options. With 523 questions and answers, including 100 case studies, this approach provides a means to reduce the total number of basic inquiries or repeat requests that require personal attention by the NCTR staff. The Help Desk also tracks and reports to the staff which topics are receiving the most questions and responses. Such monitoring can help NCTR staff identify research needs, possible subjects or topics for net conferences, or training workshops based on the level of interest or need.

**Year 7 Research Program**

NCTR recently completed the process to solicit and select research ideas for the FY 2007 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 9 research projects for funding in FY 2007.

**Conclusion**

At the completion of its seventh 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.
Parking plays an important role in our traffic system since all vehicles require a storage location when they are not being used to transport passengers. Most major cities continually struggle with parking limitations, violations, and cost. Parking availability influences where people travel and how they commute, impacting issues such as air pollution, driver frustration, traffic safety, and especially congestion, which continues to be one of the most critical problems faced by urban America.

In the U.S., parking represents a $20 billion industry, and research shows that a car is parked, on average, 90 percent of the time.

Recently, Dr. Grisselle Centeno and Graduate Research Assistant Daniel Rojas of the USF Department of Industrial and Management Systems Engineering completed a study of the potential for parking reservations systems in Tampa. During the last few years, parking reservations systems have become popular, especially in large metropolitan areas such as San Francisco, Chicago, Los Angeles, and Philadelphia. These systems provide drivers with real-time information on the availability of parking spaces for facilities that provide the service, and drivers can reserve a parking space in advance via the internet or a cell-phone. While these systems can be expensive, they also can be extremely useful for controlling parking demand. Tampa presents unique opportunities for parking research since most citizens use private vehicles for transportation and the city is currently undergoing a large-scale planning and expansion phase.

The primary component of a parking reservation system is a well-designed information system that allows the holding of a parking space in advance. This study focused primarily on revenue management techniques for a parking reservation system, including segmentation of the market, predicting demand, and determining pricing structure.

The goals of market segmentation are to understand how customers are buying, what they value, and how much are they willing to pay. In this research, market segmentation was determined by means of a parking behavior/choice survey, conducted to determine if drivers are willing to pay higher fares for parking based on a variety of factors such as arrival time, time to destination, and price.

**Stated preference survey**

Since revenue management theory indicates that a parking space could be sold at different rates, price differences that would influence drivers to change their parking choice were established. A stated preference survey was conducted to identify how drivers react to changes in prices and to determine which parking facility would be selected for various sets of scenarios and circumstances. Subjects were presented with 12 parking scenarios arranged in random order. Each of the parking scenarios consisted of two parking facilities (Lot A and Lot B) and a final destination. Each also indicated the time to reach the destination from the parking lot selected, the price for the space, and how early/late subjects could be for their activity. Drivers could choose either Lot A or Lot B, taking into account arrival time, price, and time to destination. Arrival time and price were the only factors that changed among scenarios.

Of the 12 parking scenarios, 6 presented the constraint that choosing the cheapest lot represented being late to their destination. This was to determine if drivers were willing to pay more to prevent them from being late. The remaining six parking scenarios presented drivers the option of choosing either alternative without a time constraint—that is, regardless of the lot selected, they would be on time to destination. The objective of these scenarios was to measure if drivers were more concerned about time to destination or cost and to measure the price difference that induces drivers to change their parking behavior.

**Stated preference survey results**

In the first six scenarios (arrival on-time), 29 percent of respondents chose the lot that would minimize their time to destination (Lot B), while 71 percent chose the lot with the minimum cost (Lot A). On the other six scenarios (late), 84 percent preferred the parking lot that would minimize their time to destination and therefore allow them arrive on time. The remaining 16 percent preferred to pay less.
Six scenarios included arriving at the destination on time regardless of lot selection. Scenarios 1, 2, and 3 represented price differences of 100, 80, and 60 percent. For these percentages, most drivers selected the parking facility with the minimum cost (MC). However, in Scenario 4, which represents a 40 percent difference in price between the two facilities, 55 percent of the subjects selected the facility with the minimum cost, while 45 percent preferred the facility closest to their destination (higher cost). The same results can be seen on Scenario 5, which represents a 20 percent price difference. In this scenario, drivers indicated a willingness to pay for the closest parking facility and, as a result, a slightly higher cost. For this scenario, 31 percent choose the facility with the minimum cost while 70 percent selected the facility closest to the destination (highest cost).

Six scenarios included lower cost but arriving late. In all time-constrained scenarios, most respondents chose the facility with the minimum time to destination (MTTD) and only a few choose the facility with the minimum cost (MC), indicating that drivers are willing to pay higher fares when they are under a time constraint.

The overall results of the survey indicate that drivers are willing to pay higher fares if they are under a time constraint situation. This demonstrates that a parking space can be sold at different price rates. The survey results also showed that a 20 percent difference in price can induce drivers to change their parking choice from long walking distances to shorter walking distances.

This study provided the opportunity for researchers to explore the creation of dynamic programming revenue management to identify optimal parking pricing strategies with real-time information, which could lead to the creation of more sophisticated parking systems for drivers, thus providing a better balance of parking supply and demand.

For more information on this study, contact Dr. Grisselle Centeno of the USF Department of Industrial and Management Systems Engineering at gcenteno@eng.usf.edu, (813) 974-5587.
To aid Florida’s public transit agencies in keeping abreast of the latest information on safety and security, technology, and management techniques, CUTR’s Transit Training & Technical Assistance Program provides training opportunities to public transportation professionals through a series of courses scheduled throughout the year. These courses cover a variety of topics and are provided free of cost. The following are scheduled for 2007:

**Threat Management & Emergency Response to Bus Hijackings Seminar**
*March 14, 2007*

Participants learn how to respond to acts of terrorism, including workplace violence, and how to develop and implement plans and procedures for responding to bus hijackings.

**Instructor’s Course in Paratransit Operator Training**
*May 7-11, 2007*

This course is a standardized program that can be used by any paratransit provider to train qualified, professional paratransit bus operators.

**Land Transportation Anti-Terrorism Training Program**
*June 11-15, 2007*

This course provides information on protecting land transportation infrastructure, including rail, mass transit and bus operations. Major emphasis is placed on anti-terrorism planning and risk prevention.

**Transit Supervisor Certification Course**
*July 9-13, 2007*

Designed to assist new and veteran front-line supervisors, this course provides training on how to effectively implement human resource and regulatory responsibilities and conduct day-to-day operations.

**Effectively Managing Transit Emergencies**
*September 10-13, 2007*

This course provides information on the importance and purpose of establishing emergency management programs and demonstrates how to develop and implement those programs. The relationship of emergency management programs to other safety functions of a transit system is also addressed.

For more information on these courses or to register, visit the “Upcoming Training & Events” section of the CUTR web site, www.cutr.usf.edu, or contact Molly Buffington, (813) 974-3120, buffington@cutr.usf.edu.
Award dinner honors Earl Durden

Nearly 275 transportation professionals, legislators, and others affiliated with the Florida transportation industry attended the CUTR Transportation Achievement Award Dinner on October 24, 2006, at the Museum of Science & Industry in Tampa. The 2006 honoree was Earl Durden, recognized for his outstanding leadership in transportation.

Durden is Chairman, CEO, and a Director of Rail Management Corporation and Durden Enterprises. He has more than 30 years of experience in the start-up and operation of short line railroads as an officer, director, and consultant. As a member of the Florida Transportation Commission since 1999, he served as chair for two years and is currently a Commission member.

The keynote address for the dinner was made by FDOT Secretary Denver Stutler. Attendees included legislators, transportation agency staff, and consultants from around Florida.

The 2007 CUTR Transportation Achievement Award Dinner will be held on Tuesday, October 23, 2007, at MOSI. The recipient of the 2007 award will be announced in the summer.