

FLOW

Moving People and Ideas



Center for Urban
Transportation Research
University of South Florida

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NCTR hosts National GIS in Transit conference

More than 100 participants from 13 states (including Alaska) and three countries participated in the 4th National GIS in Transit Conference in November 2007. The conference, developed and hosted by NCTR, highlighted many of the exciting new developments and practices in the GIS and transit world.

A topic that generated significant excitement among the participants was the presentation from Google Transit's Naomi Bilodeau, which featured highlights of Google's free on-line transit planner. Bilodeau demonstrated the power of Google's mapping applications with a hypothetical illustration of a trip using Google Transit.

In the demonstration, a transit trip from the airport to a hotel in Portland was planned, and results included transfer information, fare costs and an estimate of the gasoline saved. Nearby restaurants were searched, and a list and map were generated, and from the list, reviews of the restaurants and their hours of operation, menus, and websites could be accessed. The integration of geo-spatial information with transit and local searches highlighted opportunities to capitalize on the web resources of Google. The presentation was both entertaining and informative and left the participants excited about the many developments coming from Google's efforts to

make transit schedule information more accessible to the public.

The Google Transit presentation typified the rapid developments in the area of geo-spatial technologies that underscore the importance of the conference and why it continues to be important to the transit and GIS communities. Presentations included sessions designed for varying user experience and included service planning and data management, data models, and open source transit applications. Technical and cutting-edge applications were welcome additions to the presentation. Most noteworthy were sessions on transit data models, web-based "mash-ups,"

and open source applications. The session on transit data models addressed the need for a uniform data format to share transit data across software applications and computer platforms. The "mash-up" sessions illustrated the power of combining data sources and applications to produce a new product such as tracking bus locations on web applications that called on Google maps and Microsoft's Live applications. The Open Source session introduced participants to the idea of open source applications and the power of the TimeTable Publisher application being presented. The TimeTable Publisher application used the

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NCTR is located at the University of South Florida's Center for Urban Transportation Research and is a federally-designated University Transportation Center, receiving annual grant funding from the Research and Innovative Technology Administration of USDOT, with matching funds from the Florida Department of Transportation.



Director's message

NCTR is probably best known for the research it conducts in furtherance of its theme, "To enhance the performance and relevance of public transportation and alternative forms of transportation in urban areas." Since its inception in 1999, NCTR research faculty have completed more than 90 reports, which are available at our website, www.nctr.usf.edu. NCTR researchers completed a number of projects in the latter half of 2007 that provide information that can be directly applied by operating transit agencies and commuter assistance programs. A few of those projects are highlighted and summarized in this newsletter.

In addition to the extensive research conducted by faculty and students, NCTR also promotes technology transfer in a number of different ways. In November, we hosted the fourth GIS in Transit conference, with 100 attendees from as far away as Alaska and Europe participating in presentations, information sharing, and networking. Special training in transit leadership was provided to 25 managers from Veolia Transportation in a week-long session held on campus in Tampa. NCTR's Teletwork and TDM program also sponsored a netcast on climate

change and the various ways we can help minimize the impact of the transportation system on global warming, with more than 200 people participating. In addition, NCTR published a special edition of the *Journal of Public Transportation* dedicated to the issues associated with advancing the goals of transportation demand management.



NCTR is particularly proud of two of our students who have contributed so meaningfully to many research projects and the transportation profession through their activities in the USF student chapter of ITE. Both Sara Hall and Monique Ellis were awarded \$5,000 scholarships by the American Public Transportation Foundation Transit Hall of Fame Scholarship program, and Monique was selected as the NCTR Student of the Year. We hope you find the articles in this newsletter interesting and helpful, and as always, we invite you to visit our website, which is ranked as the most visited website on the Internet by those who are searching for transit research results.

Joel Volinski, NCTR Director

GIS in Transit—from page 1

Google data format known as the Google Transit Feed Specification (GTFS) to create print- and web-based time tables. A feature of OpenSource applications is the ability of future users to expand or improve on the existing application for future users. Perhaps the most exciting feature of the TimeTable publisher application was its cost – free!

The conference closing session produced many ideas for future conferences, including pre- or post-conference training, a poster session, and the creation of a GIS and Transit Clearinghouse. NCTR has created the transitgis.org website, which will become a repository of information for the transit and GIS community. For more information on the conference, visit www.transitgis.org.

Veolia Transportation and NCTR team up to train transit managers

Veolia Transportation and NCTR at CUTR jointly developed a professional development program for the company's transit managers from around the United States through the initiative of Bill McCloud, who serves on NCTR's Advisory Committee. This six-day program in Leadership Training was conducted at the end of November 2007.

The program was jointly developed by Cheryl de Hoog, Veolia's Director of Organization Development and Training, and faculty of NCTR including Lisa Staes, Amber Reep, Joel Volinski, Steve Polzin, and Rob Gregg. Topics included Veolia-specific sessions such as client relationships and management systems, as well as an all-day session on presentation skills. NCTR faculty presented information gathered from their research on creativity in transit management, trends and conditions in public transportation across the country, and whole-brain utilization techniques to enhance team building. Evaluations submitted by the 25 transit managers that participated, who came from locations as far away as California, Arizona, Virginia, and Florida, were enthusiastic. Among the comments offered were the following:

- "This was by far the training class that provided me with the most useful tools ever! It must be shared."
- "The presenters as well as the participants all provided valuable information which I will utilize back at my home location."
- "This is an excellent program for our managers. It is very diverse training covering so many important topics."

- "This was an excellent program! All of the topics were relevant and insightful. I expect to go back to the office motivated to make changes."
- "Good opportunity to network with my peers and stimulate my learning."
- "We were challenged, encouraged, cajoled, and tired. This was meaningful, effective training."
- "The best training module I ever attended. Very memorable and helped to develop a great network of peers."

"We were challenged, encouraged, cajoled, and tired. This was meaningful, effective training."



Faculty at NCTR were grateful for the opportunity to network with different transit managers and learn what the issues are in their part of the country. Veolia Transportation and NCTR faculty look forward to developing and conducting future transit leadership training sessions.

For more information, contact Joel Volinski, volinski@cutr.usf.edu.





From left: Paul Skoutelas, Senior VP, Parsons Brinckerhoff; Sara Hall; Joel Volinski, Director, NCTR



From left: Tom Furmaniak, PE, VP Southeast Region, LTK Engineering Services; Monique Ellis; Joel Volinski, Director, NCTR

NCTR students receive APTA Foundation scholarships

Two distinguished students completing their master's degrees in Engineering at the University of South Florida have been recognized by the American Public Transportation Foundation. Sara Hall and Monique Ellis were awarded \$5,000 scholarships for their excellence in academic achievements, contributions to the profession through their leadership in student chapters of ITE, and outstanding work on NCTR research projects. Hall received the Parsons Brinckerhoff-Jim Lammie Scholarship awarded to an applicant dedicated to a public transportation engi-

neering career. Ellis received the Louis T. Klauder Scholarship awarded to an applicant dedicated to a career in the rail transit industry as an electrical or mechanical engineer.

The scholarships were formally presented to the recipients at the APTA Annual Meeting in Charlotte in October 2007. Hall and Ellis were able to meet many leaders within the public transportation industry while in attendance in addition to attending professional development sessions. Both will complete their degrees in May 2008.

Journal of Public Transportation issues special TDM edition

In late 2007, NCTR published a special edition of the *Journal of Public Transportation* dedicated to Transportation Demand Management (TDM). TDM strategies seek to foster increased efficiency of the transportation system by influencing travel behavior by mode (how), time (when and how fast), location (where and whether), cost (how much), or route (which way). The diversity of these articles, both geographically and topically, portrays the state of knowledge and innovation in the areas of TDM institutional arrangements, planning, marketing, and evaluation.

In "Transportation Management Associations: A Reappraisal," Ferguson reviews the results of eight national transportation management association surveys

conducted between 1989 and 2003 using meta-analytical techniques.

Gebeyehu and Takano report on their efforts to develop an ordered logit model to examine citizens' perceptions of the bus condition as a determining factor for their choice of bus transportation, and to develop a binary logit model to analyze traveler choice behavior in "Diagnostic Evaluation of Public Transportation Mode Choice in Addis Ababa."

In "Measuring the Impacts of Employer-Based Transportation Demand Management Programs on an Interstate Corridor," Georggi, Winters, Rai, and Zhou summarize an analysis of the impacts of employer-based TDM on transportation systems. They found that comprehensive

TDM strategies seek to foster increased efficiency of the transportation system.

TDM programs did and could have a significant impact on the operation of a major Interstate corridor.

Hendricks and Georggi examine the internal and external conditions of a work site that influence the success of its TDM program. “Documented Impact of Transportation Demand Management Programs Through the Case Study Method” shares the results of two case studies that used a more rigorous method for discerning the relative influence of conditions within and outside of the work site, aside from the trip-reducing services and incentives themselves.

In “User Perceptions of Private Paratransit Operation in Indonesia,” Joewono and Kubota explore user perceptions of paratransit (jitney) regarding quality of service, frequency of negative experience, and loyalty.

Kelley, in “Casual Carpooling—Enhanced,” introduces a technology approach to allow casual (or instant) carpooling to function in areas without high occupancy vehicle (HOV) lanes. The administrative system would record actual carpooling behavior so that incentives other than access to an HOV lane can be made available.

Menczer examines one of the most common and least expensive support programs to increase the use of carpools, vanpools, and transit in “Guaranteed Ride Home Programs: A Study of Program Characteristics, Utilization, and Cost.” His research includes an examination of 55 guaranteed ride home programs that serve the top 150 transit agencies in the U.S.

“Examining Incentives and Preferential Treatment of Carpools on Managed Lane Facilities” by Ungemah, Goodin, Dusza, and Burris highlights the existing body of

knowledge regarding carpooling, facilities, and incentives designed to encourage carpooling and carpooling’s contributions to society. They also report on interviews with entities either planning or operating managed lane facilities to determine the rationale for setting their carpool policies.

Zuehlke and Guensler share the results of two surveys conducted in the Atlanta metropolitan area of implementation of employer-based trip reduction strategies and employer perceptions of associated costs and benefits in “Employer Perceptions and Implementation of Commute Alternatives Strategies.”

The articles show the increasing understanding of—and innovation in—TDM and demonstrate the escalating need for applied research in the TDM area to support goals of minimizing traffic congestion, maximizing mobility options, promoting safety and security, improving the environment, and enhancing community sustainability.

“TDM is a major component of NCTR,” said Joel Volinski, NCTR Director. “Our center’s theme is to make public transportation and alternative forms of transportation, including managed lanes, safe, effective, efficient, desirable, and secure.”

For free copies of articles published in the *Journal of Public Transportation*, go to <http://www.nctr.usf.edu/jpt/jptv10n4.htm>.

Submission requirements for the *Journal of Public Transportation* can be found at <http://www.nctr.usf.edu/jpt/journalsubmission.htm>.

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NCTR's Strategic Theme

"To enhance the performance and relevance of public transportation and alternative forms of transportation in urban areas."

NCTR 2007 Student of the Year Monique Ellis

Monique Ellis, a graduate research assistant at the Center for Urban Transportation Research at the University of South Florida, has been named NCTR's 2007 Student of the Year. She is pursuing both a master's degree in civil engineering and a graduate certificate in interdisciplinary transportation studies and received a bachelor's degree in electrical engineering from the Rochester Institute of Technology. The current secretary of the USF student chapter of the Institute of Transportation Engineers, she is also the recipient of APTA's Louis T. Klauder Scholarship Award and a Southeastern Transportation Center Student Fellowship.

Ellis provided assistance on the NCTR project "Incorporating Transit and Other Multimodal Strategies into the Florida Department of Transportation Development of Regional Impact Review Process," on which she conducted literature summaries, documented relevant performance measures, and researched potential interview questions to aid researchers in improving the Florida DOT's abilities to encourage multimodal mitigation strategies for developments of regional impact. She also assisted with other public transportation projects, including providing research support for assessing various financial or in-kind contributions from land developers and documenting improved mobility techniques for state roadway facilities.

Upon graduating from USF in May 2008, Ellis will pursue a career in public transportation planning or management.



*From left:
Rod Diridon, Mineta Transportation Institute at San Jose State University; Paul Brubaker, Administrator of the Research and Innovative Technology Administration of the U.S. Department of Transportation; Monique Ellis; Norman Mineta, former U.S. Congressman and former Secretary of the U.S. Department of Transportation.*



Toolbox for transit event investigation developed

The Florida Department of Transportation, along with a limited number of other states, requires transit agencies to investigate events that affect bus safety to determine their causes and recommend corrective actions. In addition, the Federal Transit Administration Model Transit Bus Safety and Security Program provides some guidance for investigating and tracking bus transit accidents or incidents. Although transit agencies are responsible for establishing their own investigation and reporting procedures, the investigative methods and data gathered have been inconsistent across agencies. In small, rural transit agencies, investigations of security and safety incidents are either conducted informally or on a limited basis, whereas larger transit agencies may require a more comprehensive investigation.

NCTR researchers developed the Bus Transit Incident Investigation Toolbox to assist agencies with transit incident investigations. The toolbox provides an overview of what to do when an incident occurs and outlines the transit system's role in conducting an investigation. In addition, the toolbox provides guidance to incident investigators to conduct and support an incident investigation. Topics covered by the toolbox include evidence documentation, interviewing, drug and alcohol testing, and reporting procedures.

The toolbox contains a 42-minute video and a pocket guide that provide transit systems with an overview of the responsibilities, procedures, and guidelines

for conducting transit incident investigations. The Transportation Safety Institute Guidelines for Recordability assist transit agencies in determining recordability or preventability of collisions and incidents including samples of policies, procedures, and forms that can be used in incident investigation. The toolbox does not replace existing federally-offered training courses, but rather is intended to help transit systems implement and comply with state requirements and best practices for bus transit incident investigation. A copy of the Florida Bus Incident Reporting, Tracking, and Analysis System database includes samples of policies, procedures, and forms that can be used in incident investigation.

The video and the toolbox are available for download through the Transit Bus Safety Resource Guide website at www.cutr.usf.edu/bussafety/investigation3.html.

For more information contact, CUTR Senior Research Associate Deborah Sapper, sapper@cutr.usf.edu