



MTI

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TRANSPORTATION INSTITUTE

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World in Motion

AUTUMN 2009

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**Administrator
Spotlight:**
Peter Appel
Administrator, RITA

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The Mineta Transportation Institute welcomes new US DOT Research and Invocative Technology Administrator Peter Appel. MTI was proud that Administrator Appel shared the new strategic objectives of RITA with the MTI Board of Trustees during the full day of meeting on June 27 and with the Master of Science in Transportation Management (MSTM) graduates and guests at the annual graduation banquet that evening at San Jose State Universities. The Administrator's clear vision of RITA's future and thoughtful determination will motivate MTI and all of the nation's university transportation centers to even higher levels of excellence.

Peter was confirmed by the U.S. Senate for his current position on April 29, 2009. As RITA Administrator, he oversees the Department of Transportation's research programs and is charged with advancing the deployment of cross-cutting technologies to improve the country's transportation systems.

Before joining RITA, he was a principal with the global management consulting firm of A.T. Kearney, Inc. He has led business improvement initiatives for

clients in the private and public sectors, where he specialized in transportation and infrastructure. His deep knowledge of transportation and his skills in applying rigorous research and analysis to make effective business decisions were valuable to A.T. Kearney's global clients.

Peter brings more than 20 years of experience in transportation, and he has supported organizations in the railroad, trucking, airline, and ocean shipping industries with growth strategy, supply chain improvement, post-merger integration, public-private partnerships, and other key business and policy issues. Previously, he served as the Special Assistant to the Administrator of the Federal Aviation Administration, and as Assistant Director for Pricing and Yield Management at Amtrak.

The Administrator earned his bachelor's degree from Brandeis University in economics and computer science, garnering highest honors, and he received his Master of Science in Transportation from the Massachusetts Institute of Technology.



Education Update
by Dr. Peter Haas
Education Director

STI Is a Success - Again

For the seventh consecutive year, MTI sponsored a Summer Transportation Institute (STI) in July. This full-time four-week program was created for high school students and is held on the San Jose State University campus. The class this year included 34 students, 79% of which represented Hispanic, Black, and Asian ethnicities.

STI is structured in the style and format of a pre-college internship emphasizing civic leadership and public policy, with a balance between academic and field activities. These help to motivate high school students to consider transportation as a career. The curriculum also includes short talks by experts, a job skills component, and a college-level three-unit environmental education course with an emphasis on transportation issues. The entire STI program is supported by the California Department of Transportation and San Jose State University.

Students were excited to visit “behind the scenes” operations of major Bay Area transportation sites and agencies such as the San Francisco-Oakland Bay Bridge, BART, SamTrans, the San Jose traffic control center, and the Port of Oakland, including the airport. We are happy to note again that students gave the program high ratings.

Families and friends attended a graduation ceremony, during which the students received certificates of completion and mementos. Rod Diridon, MTI executive director, addressed the students, thanking them for their interest in taking an educational program during their summer vacations.

We Point with Pride

MTI is always proud of its Transportation Management graduate students and alumni who do well. Here is a quick profile of those who have done well in the past few months:

- Gezahegn Tizazu of Caltrans is a design team member who contributed to the successful and timely project delivery of a Wireless Magnetometer Vehicle Detection System installation. They won a Sustained Superior Accomplishment Award, which recognizes individual employees or teams whose exceptional performance makes a significant contribution to the Department..

- Stephanie Watts of Caltrans was promoted to Acting Branch Chief of the Transit Systems Analysis Branch in the Division of Mass Transportation. The four-month assignment includes leading a team through the evolution of their branch from focusing on Bus Rapid Transit policy implementation to transit data analysis. She said, “I believe management gave me favorable consideration for this position because I am a MSTM student. They have been very supportive even though this is just my first semester.”

- Bonny Nyaga, also of Caltrans, was selected to help the agency establish a mentor protegee program for construction. He said, “I have relied heavily on what I have learned from the MSTM classes to help steer this pilot program to its success.” Caltrans has now directed that all other Caltrans districts establish and model their programs on this one.



Research Update
by Dr. Karen Philbrick
Research Director

MTI Bus Rapid Transit Research Gains Speed

FTA Builds on Previously Funded MTI Research

The Federal Transit Administration is funding new research that builds upon an MTI project, “From Buses to BRT: Case Studies of Incremental BRT Projects in North America.” The new research will quantify the benefits of specific elements that make up a typical bus rapid transit (BRT) system, such as traffic signal priority and increased station spacing.

The MTI project was recently completed and is undergoing peer review. It examined four cities with different strategies for improving bus service, ranging from implementation of a full, “rail-like” BRT system to relatively modest upgrades to bus lines designed to improve travel times and the customer experience. The research found that in each case, significant benefits were achieved at a relatively modest cost. MTI Research Associate John Niles, principal investigator for this project, designed and executed the research, along with significant participation by Research Associates Bill Vincent, Lisa Callaghan Jerram, Richard Lee, and Charles Rivasplata, and assistance from San Jose State University students Eric Ganther and Ramses Madou.

The FTA project -- managed by Breakthrough Technologies Institute in Washington, DC -- will build upon this work by

quantifying the benefits of specific BRT elements in terms of travel time savings. The results will help bus operators better understand how bus system improvements can save money and improve service. Moreover, the research will help show how these improvements can be an important strategy to attract choice riders, improve air quality, and help reduce carbon emissions. A number of leading BRT and rapid bus projects have generously contributed data. The new research is conducted by MTI research associates Bill Vincent and John Niles and is expected to be completed by the end of this year.



MTI's National Transportation Finance Center Director Dr. Asha Weinstein Agrawal (left) moderated a panel on California's transportation finance crisis at the Commonwealth Club in San Francisco. Panelists included Caltrans Interim CFO Norma Ortega; Metropolitan Transportation Commission Executive Director Steve Heminger; and US FTA Deputy Administrator Therese McMillan.

BRT and Light-Rail Implemented on Dedicated Space

San Jose State University professors Jacob Tsao and Wenbin Wei completed a study on the feasibility of one-lane two-way BRT/light-rail systems and their expansion to two-lane systems requiring least right-of-way. The authors propose a BRT or light-rail system that effectively requires only one dedicated but reversible lane throughout the system to support two-way traffic in the median of a busy commute corridor with regular provision of left-turn lanes. Key to the design is the observation that the median space between the two left-turn lanes on two opposite ends of a roadway section is currently unused or underused for traffic purposes. But it could be used, together with one dedicated (but slanted) lane, for bus or train crossing. In selected sections, the left-turn lanes can be sacrificed and the vacated spaces can accommodate passenger platforms, resulting in a system with virtually only one dedicated lane.

Based on similar ideas, the authors next address how to implement a two-dedicated-lane BRT or light-rail system with minimum right-of-way width. In such systems, the currently unused median space can accommodate a passenger platform.

Then they propose ways to expand a one-dedicated-lane system to two dedicated lanes.

The report includes several conceptual design options and many geometric-configuration sketches for the bus stop and crossing space of a one-dedicated-lane system, and it discusses system performance in terms of travel speed, operations headway, distance between two neighboring crossing spaces, and the number of crossing spaces. To ensure practicality, the authors study how to implement such a system on an existing corridor. This type of system is also useful as an intermediate step toward a two-dedicated-lane system because of its potential for facilitating transit-oriented development.

Please visit our web site at www.transweb.sjsu.edu to review MTI research publications and currently funded projects.



Transportation Finance Update
by Dr. Asha Agrawal
Director, NTFC

California Respondents Support “Green” Transportation Taxes and Fees

Results from an MTI-funded public opinion poll show that Californians support the concept of “green” transportation taxes and fees. These are taxes and fees set at variable rates, with higher rates for more polluting vehicles and lower rates for those that pollute less.

Growing public attention to environmental problems like global warming, energy security concerns, and shrinking state transportation revenues all combine to make green transportation taxes and fees a particularly exciting new approach for funding transportation infrastructure and services in California. Although the gas tax will remain the centerpiece of state transportation revenues for the foreseeable future, lawmakers are interested in finding ways to supplement those revenues. Green transportation taxes and fees are an important option to explore because they achieve two benefits at one time – encouraging drivers to choose more sustainable transportation options while raising revenue for state transportation programs.

How was the research done?

The authors conducted a random telephone survey of 1500 California adults to test their support for the general concept of green transportation taxes and fees. The questionnaire asked respondents to indicate their level of support or opposition to five different transportation taxes or fees that would raise funds

to maintain and improve highways, mass transit, and local streets. Three of these were green options, while two were more traditional flat-rate versions of the green taxes tested. By having both flat-rate and green versions of the two taxes, the survey could identify how support levels might vary between the two options.

The survey results show that the concept of green transportation taxes and fees strongly appeals to Californians. Majorities of the respondents supported all three green taxes and fees tested. Even a green mileage fee, the least popular option among the three, had 50% support. By contrast, a green vehicle registration fee and a “feebate” policy both had support levels over 60%.

Californians preferred green to flat-rate taxes

Respondents greatly preferred green transportation taxes and fees to flat-rate versions. When asked if they would support increasing the vehicle registration fee from \$31 to a flat rate of \$62 for all vehicles, only 41% supported the increase. By contrast, 63% supported a green version of the fee that raised the cost to an average of \$62 per vehicle but which varied the rate according to the vehicle’s emissions. In other words, converting the fee increase from a flat-rate to a green version boosted support by 22 percentage points, from less-than-majority support to almost two-thirds support. Similarly, respondents preferred a green mileage fee to a flat-rate version, with 50% support for the former but only 28% for the latter.

Support for the green taxes and fees held at 50% or higher across most population subgroups. Also, when comparing support for the green and flat-rate vehicle registration fee and feebate proposals, in every subgroup more people supported the green than the flat version of the two taxes tested.

Policy implications

The survey results suggest that the concept of green transportation taxes and fees is a promising avenue of exploration, as well as strategies that might increase popular support for raising additional transportation revenues.



ITT Update
by Donna Maurillo
Communications & ITT Director

Kids Address Mobility Issues

How can we bring young people into transportation careers? What possibly could interest them in taking the math and

science necessary to become planners, engineers, and other transportation professionals?

One way is to invite them to participate in the annual Garrett Morgan Sustainable Transportation Symposium. Each year, dozens of middle-school students study workbooks that help them understand the concepts around sustainable energy, air pollution, transit systems, transportation history, and other topics. Then they create a sustainable transportation project based on what they learned.

In March, they attend a videoconference where they demonstrate their projects and compete for a \$1000 prize, a plaque, and a trip to the MTI awards banquet in San Jose CA. Last year’s winners came from The School of International Studies at Meadowbrook in Norfolk VA. Their sponsoring agency, Hampton Roads Transit, hopes to win again in 2010. But the other schools plan to give them some tough competition!

If you would like to know more about the Garrett Morgan competition, go to www.transweb.sjsu.edu. Click on “Education” and then on “Garrett Morgan.”

MTI Sets Transportation Finance Forum

With California’s population expected to double during the next few decades, the state must address serious mobility challenges. Other states are facing similar problems. Should they build more highways? Should they provide incentives for people to use alternative transportation? Should they put more effort into transit-oriented development?

Whatever the solutions, they will require plenty of funding. But what financial resources are available? Will people accept higher taxes? If so, then under what circumstances? If not, how else could the funds be raised – and sustained?

These and other issues will be addressed in MTI’s Transportation Finance Forum, set for 2:30-4:30 p.m. Thursday, October 29, at the Commonwealth Club of California in San Francisco. Panelists will include Therese McMillan, Deputy Director of the Federal Transit Administration; Randell Iwasaki, director of Caltrans; and Steve Heminger, executive director of the Metropolitan Transportation Commission. Dr. Asha Weinstein Agrawal, director of MTI’s National Transportation Finance Center, will moderate.

The meeting is open to anyone. However, it will be recorded for later broadcast on the NPR radio network. Consult local listings for the date and time.

Mineta Transportation Institute Photo Gallery



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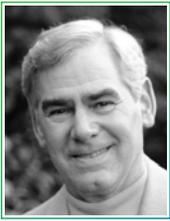


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1. Rod Diridon addresses the Summer Transportation Institute students **2.** APTA President Bill Millar, RITA Administrator Peter Appel, Congressman James Oberstar and Secretary Norman Mineta congratulate Garth Fernandez on his MSTM graduation **3.** Therese McMillan, Deputy Administrator of the FTA, gives her farewell as an MSTM faculty member **4.** Congressman James Oberstar gives advice to the newly-hooded graduates **5.** Secretary Norman Mineta addresses the graduation banquet guests **6.** Graduates Ray Salvano and David Dias enjoy social time with Judy Salvano before the ceremony



Directions:
Rod Diridon, Sr.
Executive Director

Board of Trustees Meeting and Scholarship Banquet:

A star-studded night of MTI Trustees, other national transportation leaders, researchers, professors, staff and students greeted MTI's 19 new grads who earned their Masters of Science in Transportation Management on June 27 at San Jose State University. House Transportation and Infrastructure Committee **Chair Jim Oberstar** delivered the keynote. Other speakers included retired **Secretary of Transportation Norm Mineta**, US DOT RITA **Administrator Peter Appel**, and Caltrans **Director Will Kempton**. The **School of International Studies at Meadowbrook**, sponsored by MTI Trustee and Hampton Roads (Va.) Transit Agency **General Manager Mike Townes**, was honored as winner of the annual Garrett

Morgan National Sustainable Transportation Competition among middle schools. More than 400 banquet attendees donated nearly \$100,000 to the MTI scholarship fund. Earlier that day, the MTI Board held its twice-yearly meeting.

MTI Research Thrives:

New MTI Research **Director Dr. Karen Philbrick** is shepherding 51 research projects with more than 100 MTI certified Research Associates. Research Support **Manager Meg Fitts** assists Dr. Philbrick and MTI Security Research **Director Brian Jenkins'** National Transportation Security Center of Excellence, serving both US DOT and US DHS. The MTI National Transportation Finance Center, directed by **Dr. Asha Agrawal**, is expanding with several projects and requests for presentations. Our procedures manual was updated with help from MTI **Administrator Jill Carter** and **Assistant Lynda Jones**. Indeed, MTI is on a roll!!!

Summits and Forums Break Records:

Special Projects **Director Donna Maurillo** is

organizing seven Norman Y. Mineta National Policy Summits and three regional forums this year on many issues, from transportation finance to workforce development. Well over 1,000 transportation leaders will attend, plus thousands more by way of broadcasts sponsored by AASHTO, APTA, the Commonwealth Club, and others.

Education Program is Growing:

Assisted by Education Support **Manager Vivianne Ferea**, Education **Director Dr. Peter Haas'** programs include more than 200 students taking classes at as many as 26 Caltrans and transit agency videoconference sites in California and beyond. These grad students pursue MTI's Master of Science in Transportation Management, or Certificates in Transportation Management or Transportation Security Management. The six-week MTI Summer Transportation Institute's 2009 session graduated more than 40 high school students with three college credits. This MTI program is a progression of education to create our next transportation executives.



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