



# UPWARDLY MOBILE

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## Fifteen UTCM Projects Awarded for FY10

UTCM's Request for Preliminary Proposals in Fall 2009 yielded 65 submissions by the September 16th deadline, a 66 percent increase over last year. The collection of proposals was reviewed and ranked by the UTCM Executive Committee and Advisory Board. Based on these rankings and other criteria, Formal Proposals were invited in late October by the UTCM Executive Committee and Director.

Fifteen projects were selected for funding for FY10 by the UTCM Executive Committee in December 2009. These projects total over \$1.25 million, span all of UTCM's focus areas and include projects addressing research, education and technology transfer. The projects include collaborative efforts of researchers and students in TTI (including four of TTI's urban offices throughout Texas), seven academic departments in the Texas A&M University System, the Texas A&M Library, other universities, TxDOT and public and private partnerships.

The listing of all FY10 projects can be found on the back cover of this issue of *Upwardly Mobile*. For additional information on these and other UTCM research projects, visit the UTCM web site at <http://utcm.tamu.edu>.

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*Texas A&M University Masters student John Lowery, UTCM's 2009 Student of the Year.*

## SPOTLIGHT ON EDUCATION

### John Lowery Named UTCM Student of the Year for 2009

Last fall, the UTCM selected its 2009 Student of the Year, Mr. John Lowery. John received his BS in Civil Engineering from the University of Texas. As a full time Master's student in Civil Engineering at Texas A&M University, he has maintained a perfect 4.0 GPA. John has participated in two UTCM projects and an FHWA project researching managed lanes near San Antonio, TX. He served as treasurer of the Texas A&M Institute of Transportation Engineers student chapter for one year and has participated in several professional activities including the Texas ITE summer meeting in San Antonio, the TRB annual meeting, and meetings of the local chapter of ITE. Last year, John was recognized by the Southwest Region University Transportation Center (SWUTC) as the best overall transportation student at Texas A&M University.

The story of John's experiences as UTCM's Student of the Year at TRB and the CUTC Awards Banquet can be found on page 4.

## UTCM, SWUTC and TTI to Host CUTC Summer Meeting

### June 7-9, 2010 • College Station, TX

We are pleased to announce that the UTCM, the Southwest Region University Transportation Center (SWUTC) and the Texas Transportation Institute will co-sponsor the Council of University Transportation Centers (CUTC) Summer meeting on the campus of Texas A&M University.

Information and registration will be available soon through the CUTC web site at:

<http://cutc.tamu.edu/>

Join us for a Texas good time, y'all!



"Improving the Quality of Life by Enhancing Mobility"





(top to bottom)  
 UTCM Researchers  
 Mark Benden,  
 Rainer Fink and  
 Russell Henk

## SPOTLIGHT ON RESEARCH

### New Technology Being Developed to Reduce Teen Distracted Driving

*Project Title: Teen Driver Cell Phone Blocker*

*Principal Investigators: Mark Benden, PhD, CPE (Assistant Professor, Department of Environmental and Occupational Health, School of Rural Public Health, Texas A&M Health Science Center)*

*Rainer Fink, PhD, PE (Associate Professor, Department of Engineering Technology and Industrial Distribution, Texas A&M University)*

*Russell Henk, PE (Division Head, Program Manager & Senior Research Engineer, Research and Implementation Division - San Antonio and El Paso, TTI)*

According to the National Highway Traffic Safety Administration, distracted driving is a factor in up to 80% of all car accidents. A recent Pew study found that a third of teens ages 16 and 17 admit to texting while driving and nearly half of teens ages 12 to 17 say they have been in a car when the driver was texting. The danger created when young, inexperienced drivers use distracting devices while driving is easy to see, but much harder to control.

Legislation and public awareness are essential to curbing distracted driving, "but texting is a core part of teen communications these days. They think it's safe to do so behind the wheel, because they are so accustomed to texting, they feel they are

good drivers, and invincible to boot," says UTCM researcher Russell Henk, a TTI Senior Research Engineer and expert on factors influencing teen driving success.

That's why UTCM researcher Mark Benden has developed a device (with patent pending) to install on a cell phone that renders the phone inoperable while it's in a moving vehicle. And this month a research team including Benden, Henk and Dr. Rainer Fink of Texas A&M's Department of Engineering Technology and Industrial Distribution began a research study to install the inhibitor device on phones belonging to 100 newly licensed teen drivers and compare results of their driving habits and incidents with 100 of their peers who do not have the device installed. "We'll analyze vehicle, crash and moving violation data, as well as social and behavioral aspects of the teens' driving habits," says Benden.

The project will also analyze the quality, feasibility and marketability of the device and the impact of parental involvement on teen driving habits. A report on results of the study is expected in the summer of 2011.



*A new UTCM research project is studying the effectiveness of a device that prevents cell phones from being used in a moving vehicle.*

## UTCM Completed Projects (since 06.01.09)

### RESEARCH

**"Mileage-Based User Fees – Defining a Path toward Implementation (Phase 2)"**  
 Ginger Goodin • 03.01.09 - 07.31.09

**"Transit Leadership Initiative"**  
 Linda Cherrington • 01.01.09 - 08.31.09

**"Valuation of Buyout Options in Comprehensive Development Agreements"**  
 G. Power, M. Burris, S. Vadali and D. Vedenov • 09.01.08 - 10.31/09

**"Methodology and Guidelines for Regulating Traffic Flows Under Air Quality Constraints in Metropolitan Areas"**  
 Yunlong Zhang and Qi Ying • 01.01.08 - 12.31.09

**"Improving Mobility Information with Better Data and Estimation Procedures"**  
 Tim Lomax • 01.01.09 - 12.31.09

**"Investigating the Effect of Freeway Congestion Thresholds on Decision-Making Inputs"** • Teresa Qu • 01.01.09 - 12.31.09

### EDUCATION

**"Making Mobility Improvements a Community Asset"**  
 Brian Bochner • 01.01.08 - 11.30.09

### TECHNOLOGY TRANSFER

**"A Guide to Transportation Funding Options: Phase 2"**  
 Tina Geiselbrecht • 01.01.09 - 08.31.09

**"Development of an Enhanced Toll Project Screening Model"**  
 Curtis Beaty • 01.01.09 - 09.30.09

**"Freeway Bottleneck Removals: Workshop Enhancement and Technology Transfer"**  
 Carol Walters, Poonam Wiles and Scott Cooner • 09.01.08 - 10.31.09

*More information and final reports on all completed projects can be found on the UTCM web site under Projects: Completed Projects.*





## SPOTLIGHT ON TECHNOLOGY TRANSFER Teen Advisory Board is Helping to Reduce Car Accidents Among Their Peers

*Project Title: Activating Teens to Prevent Traffic Crashes, the Leading Cause of Death and Injury for America's Youth*

*Principal Investigator: Russell Henk, PE (Division Head, Program Manager & Senior Research Engineer, Research and Implementation Division - San Antonio and El Paso, TTI)*

Car crashes kill more young people than any other cause, accounting for nearly half of all teen deaths in America each year. About 5,000 U.S. teens die each year in car accidents; that's the equivalent of a commercial jet loaded with teenagers crashing once a week for an entire year. And for every American teen killed in a car crash, about 100 more are injured. Clearly, our teens need help in becoming safer drivers.

Programs aimed at improving driving safety for this age group over the years have suffered from two notable shortcomings. First, they have tended to focus exclusively on drunk driving, largely overlooking dangers that are actually more common to teenage drivers, such as nighttime driving and distracted driving from cell phones/texting and other teen passengers. Second, the programs have typically been developed by adults with little or no involvement by the teens they are intended to help.



Teens in the Driver Seat® (TDS) is a growing program that addresses each of these prior shortfalls by focusing more thoroughly on common dangers and by involving teens in both the development and delivery of safety messages. Since the launch of TDS in Texas in 2003, the frequency and rate of teen drivers involved in fatal crashes has fallen faster and more steadily in Texas than in any other state, a distinction due in part to how TDS supports and augments Texas' graduated driver license law.



UTCM  
Researcher  
Russell Henk

A critical component of the program is the TDS Teen Advisory Board. "The Board is a group of 12 teens from across Texas who offer ongoing guidance and feedback to enhance the TDS program," says Russell Henk, UTCM researcher and developer of the TDS program.

In this unique UTCM technology transfer activity, TDS board members will meet quarterly for extensive group work on the TDS program. At the same time, Board members will receive leadership development training, introduction to the higher education benefits of Texas A&M, TTI facilities tours and exposure to professional opportunities in the transportation and health industries. "The meetings funded by UTCM will continue to cultivate meaningful and skilled target audience input for TDS, while enhancing workforce development opportunities," noted Henk.



Melissa S. Tooley,  
Center Director

### Director's Message

The next time you are stopped at a traffic light, look at the drivers of the cars around you – I have found that most of the time one or more will be either talking on a cell phone or texting. NHTSA research shows that the worst offenders are the youngest drivers: men and women under 20 years of age. As the parent of a college student, I have observed that the primary means of communication for young adults is cell phones, specifically texting. Unfortunately, many take advantage of this technology wherever they happen to be, including behind the wheel of a car.

DOT is taking action to address the problem, hosting the first-ever Distracted Driving Summit in Washington, DC this past fall. Experts from around the country, including UTCM researcher Russell Henk, were invited for sessions on topics including the extent and impact of distracted driving, current research, regulations and best practices.

However, Secretary of Transportation Ray LaHood blogged after the Summit that the progress made during the discussions will "prove meaningless unless we follow up with action."

It is important for the UTCs to do their part in addressing the crisis of distracted driving. This issue of *Upwardly Mobile* highlights two UTCM projects that are addressing distracted driving among teens: **Teen Driver Cell Phone Blocker**, a research project that is testing a device that prevents a cell phone from being used while it's in a moving vehicle, and **Activating Teens to Prevent Traffic Crashes, the Leading Cause of Death and Injury for America's Youth**, which supports the development of a teen advisory board to provide guidance for TTI's award-winning Teens in the Driver Seat® Program.

We are optimistic that UTCM's efforts will aid in addressing the epidemic of distracted driving, and grateful that as a part of the UTC program we have the resources to make a difference.

Resourcefully Yours, *Melissa S Tooley*



**TRB: A SOY's-Eye View**  
 by *UTCM SOY John Lowery*

Receiving the UTCM Student of the Year award was memorable both for the professional opportunities it afforded me and the personal ones. Not only was I fully sponsored to attend the TRB annual meeting, but I was also invited to the banquet hosted by the Council of University Transportation Centers (CUTC), where leaders from around the country were recognized for their contributions to transportation research. For me the experience was particularly unique as I was just finishing school and about to start my career, so the SOY award provided a bittersweet opportunity to say farewell to friends and colleagues and to network with new people with whom I will soon be working.

At the CUTC banquet I spoke with distinguished students, educators, and professionals,

reinforcing just how vibrant the transportation field really is. The keynote address by Congressman Rick Nahall from West Virginia was particularly interesting; he spoke of the current legislative climate for future federal transportation funding. I was honored to be included among such a distinguished group.



*John Lowery with some of his fellow students at the CUTC Banquet*

Next came the TRB meeting. This was my second time to attend TRB so I knew how to make the most of my trip. For students, the annual meeting is exciting in two ways: we get to put faces with all the names we encounter in our studies and we get to visit one of the greatest cities in the country. I spent my days attending sessions and poster presentations and participating in com-

mittee meetings related to managed lanes and congestion pricing. Meeting pioneers in the field and shaking hands with researchers whose work I have cited made me feel starstruck at times.

Attending TRB also allowed me to see our nation's capital. The highlight of my free time came when I observed a live session of the

Supreme Court. What a thrill it was to be in a room with the nine justices responsible for interpreting the U.S. Constitution.

Needless to say, receiving the Student of the Year award was an incredible experience. Thank you, UTCM, for taking the time to recognize students like me. The honor is greatly appreciated!

**New UTCM Projects** *(cont. from p. 1)*

More information on these projects is available at <http://utcm.tamu.edu> under "Projects".

**RESEARCH**

**"Impacts of Rural Funding and Allocation Changes on Rural Transit"** • J. Arndt and S. Edrington • 01.01.10 - 12.31.10 • \$65,000

**"Best Practices and Outreach for Active Traffic Management"** • B. Kuhn • 01.01.10 - 12.31.10 • \$122,000

**"Real-Timing the 2010 Urban Mobility Report"** • T. Lomax • 01.01.10 - 12.31.10 • \$170,000

**"Development of a Short-Term Prediction Model for Commercial Vehicle Crossing**

**Times"** • R. Rajbhandari and D. Kang  
 01.01.10 - 12.31.10 • \$53,530

**"Texas Urban Triangle: Pilot Study to Implement a Spatial Decision Support System (SDSS) for Sustainable Mobility"**  
 M. Neuman, D. Wunneberger and C. Morgan  
 01.01.10 - 01.31.11 • \$109,785

**"Teen Driver Cell Phone Blocker"** • M. Benden and R. Fink • 01.01.10 - 05.31.11 • \$105,500

**"Use of Performance Measurement to Include Air Quality and Energy into Mileage-Based User Fees"** • M. Farzaneh, R. T. Baker and G. Goodin • 01.01.10 - 05.31.11 • \$100,000

**"Evaluating the Use of Transfers for Improving Rural Public Transportation Systems"**  
 L. Quadrifoglio and S. Edrington  
 01.01.10 - 05.31.11 • \$80,000

**"Effect of Climate Change Transportation Flows and Inland Waterways Due to Climate-Induced Shifts in Crop Production Patterns"**  
 D. Vedenov, S. Fuller, G. Power and B. McCarl  
 02.01.10 - 05.31.11 • \$95,000

**"Examining Long-Distance Express Bus as an Extension of and Feeder to Passenger**

**Rail Systems"** • L. Higgins and C. Morgan  
 04.01.10 - 01.31.11 • \$82,000

**EDUCATION**

**"A New Graduate Course in Transportation Infrastructure Finance in the Civil Engineering Department at Texas A&M University"** • I. Damjanovic, S. Vadali and E. McTigue • 01.01.10 - 12.31.10 • \$60,000

**"Transit Management Certificate Program"** • L. Cherrington and B. Welch  
 01.01.10 - 05.31.11 • \$75,000

**TECHNOLOGY TRANSFER**

**"Transportation Plan Repository and Archive"** • J. Overman and S. Tucker  
 01.01.10 - 12.31.10 • \$45,000

**"Activating Teens to Prevent Traffic Crashes, the Leading Cause of Death and Injury for America's Youth"**  
 R. Henk • 01.01.10 - 05.31.11 • \$38,500

**"Graduate Certificate Program in Transportation Planning: Phase 2"**  
 F. Ndubisi and E. Dumbaugh  
 04.01.10 - 01.31.11 • \$58,000

**University Transportation Center for Mobility™**

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