1. Chancellor McKinney Tours TTI

“Through the Texas Transportation Institute, we are doing great work in developing materials and safety devices for the transportation industry. This work is more far-reaching than most of the general public knows,” said newly appointed Texas A&M University System Chancellor Michael McKinney following a tour of the Institute March 6.

The visit lasted through noon, focusing on key points which served as an introduction for McKinney who took over the helm of the System Nov. 22. Director Dennis Christiansen welcomed the chancellor and kicked off the meeting with an overview presentation, which was followed by summaries of TTI’s work in areas including ground-penetrating radar, teen driving safety and congestion research.

TTI presenters included Tom Scullion, Russell Henk, Dallas Little, Tim Lomax and Dean Alberson. Kevin Balke and Bob Brydia acted as tour guides to introduce the chancellor to TTI’s traffic operations laboratory, Translink®.

McKinney heard about the Institute’s reputation and working
relationships during presentations from Civil Engineering Department Head David Rosowsky, TxDOT Research Engineer Rick Collins and TTI Council Chair David Cain.

McKinney’s visit concluded with a full-scale crash test at TTI’s Riverside Campus facility, where researchers are developing a new guardrail system.

“TTI’s contribution to the state’s economy through improving the transport of goods and materials across our roads and through our pipelines is tremendous,” McKinney said.

Read more about Chancellor McKinney: [http://tamusystem.tamu.edu/offices/chancellor/about/index.html](http://tamusystem.tamu.edu/offices/chancellor/about/index.html)

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2. High-Speed Emissions Testing Conducted at Pecos

TTI’s Pecos Research and Testing Center was used the first week of March to determine vehicle emissions from light-duty passenger vehicles and 18-wheelers traveling upwards of 80 miles per hour.

A research team from the Air Quality Studies program equipped the vehicles with its recently acquired Portable Emissions Measurement System (PEMS) device to gather data in real-life situations.

“Current modeling provides emissions estimates for vehicles representing travel at only up to 65 miles per hour,” said Associate Research Engineer Joe Zietsman. Because of the trend of higher speed limits on interstates in rural areas and the anticipated higher speed limits for proposed highways like the Trans Texas Corridor, there is a need to better understand emissions at higher speeds.”

The main sponsor of the project is the Houston Advanced Research Center with funds from the Environmental Protection Agency. Other sponsors include TxDOT, for TTI’s El Paso initiatives, and Virginia Tech University, which provided some instrumentation and matching funds. Results of the testing should be available this summer.

“The PEMS device has allowed us to conduct cutting edge research by testing emissions during real driving conditions at higher speeds.
The PEMS device has been used on six projects to date. One of our next projects will be to examine the impact of using hydrogen enrichment technologies,” Zietsman said.

Other TTI employees working on the high-speed emissions testing included Mohamadreza Farzaneh, Doh-Won Lee and Ed Brackin.

Visit the Pecos Research and Testing Center website:
http://www.pecosrtc.org/

3. TTI Researchers Have HEART

The HEART Crash Cushion is much easier to say than the Hybrid Energy Absorbing Reusable Terminal. But that’s what it is. The crash cushion, developed by researchers Dean Alberson and Lance Bullard, is designed to be reusable after most crashes and therefore, a money-saving product for taxpayers.

Alberson and Bullard were honored Feb. 23 by the Texas A&M University System Office of Technology Commercialization during its 2007 Patent and Innovation Awards Luncheon. In all, 21 Texas A&M researchers were recognized for their ideas.

“It was a five-year project to get the HEART Crash Cushion developed, tested and patented,” Alberson said. “We came up with the idea on a notion that we could improve what was on the road at the time.”

Alberson says the Federal Highway Administration has given its acceptance to the crash cushion.
4. Pedestrian Safety Focus of TTI Team Project

TTI researchers have developed suggested procedures for agencies interested in improving pedestrian safety. The TTI team consisting of Kay Fitzpatrick, Shawn Turner, Marcus Brewer and numerous others has developed guidelines for pedestrian crossing treatments as part of a National Transit Cooperative Research Program/National Cooperative Highway Research Program (TCRP/NCHRP) project.

In 2004, 4,641 pedestrians died in the U.S. and another 68,000 were injured according to the National Highway Traffic Safety Administration. The majority, 72 percent, were killed or injured in urban areas.

“The focus of this team’s effort is to improve the conditions for pedestrians,” said Research Engineer Fitzpatrick, who is team leader of the project. Guidelines for pedestrian crossing treatments will help move us in the right direction.”

The publication examines selected engineering treatments to improve safety for pedestrians crossing high-volume and high-speed roadways at unsignalized locations.

View the publication:  

5. CTS Advisory Council Outlines Objectives

Members of the Center for Transportation Safety (CTS) Advisory Council held their annual meeting Feb. 22 for a broad overview of the Center’s accomplishments and discussed its goals for the coming year.

Council members were presented information about the Safe Routes to School Program, Teens in the Driver Seat and Texas legislative proposals concerning safety.

CTS was created in 2001 with the overall goal of reducing the number of accidents and fatalities on Texas roadways.

Read more about the Center for Transportation Safety  
http://tti.tamu.edu/groups/program.htm?p_org_code=TSC
6. TTI Anniversaries

20 Years

Lance Bullard, Research Engineer (CEF)
Gary Sinton, Senior Lead Network Analyst (NET)
Carol Walters, Senior Research Engineer (HSO)

35 Years

Jim Benson, Senior Research Engineer (HTF)

7. Managed Lanes Open House

With several managed lanes proposed in the Austin region in coming years, TTI helped the Austin District of TxDOT organize an open house Feb. 20 at The University Of Texas Thompson Conference Center to explain how this relatively new concept offers options for commuters.

“We answered a lot of questions,” says Research Engineer Ginger Goodin. “The open house was well attended and it prompted plenty of media attention.”

Managed lanes are a cousin to the high-occupancy vehicle (HOV) lanes that have been in operation for decades around the county. The most common type is one where lower-occupant vehicles are allowed into HOV lanes by paying a toll, providing the driver with the option of a less-congested trip on a one-time or regular basis. These vehicles are charged a varying toll based on traffic conditions in the lanes in order to keep the lanes flowing.

Currently, managed lanes with this kind of variable pricing are in operation in Denver; San Diego; Orange County, California; and Minneapolis, with a new facility under construction in Houston on the Katy Freeway.

During the open house, displays representing several projects were on
hand for public viewing, experts were available for one-on-one Q&A, and a brief presentation was provided to the public every 30 minutes explaining how managed lanes operate.

Other TTI employees helping with the project included **David Ungemah, Tina Collier, Casey Dusza, Trey Baker** and **Heather Ford**.

**View managed lanes open house media coverage:**
http://news8austin.com/content/your_news/?SecID=278&ArID=1795

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**8. Nova Award Goes to Lytton**

Robert Lytton, TTI research engineer and Benson Chair Professor in the Zachry Department of Civil Engineering at Texas A&M University, has received the 2006 NOVA Award from the Construction Innovation Forum for his pavement composition analysis (PCA) research.

Lytton’s award-winning research uses an air-launched, ground-penetrating radar to aid highway construction quality control. The radar is swept over a completed section of pavement to analyze its properties, including its composition, number of layers and the thickness of each layer.

Engineers can then plot lane-width maps with contours of each composition element, helping them pinpoint flaws in the construction process and ultimately resulting in safer, longer-lasting roadways. This method is equivalent to analyzing 18,000 core samples in a given lane-mile of a project, while only two cores every four lane-miles is required for calibration with Lytton’s PCA method, saving both time and money.

The NOVA Award was instituted by the Construction Innovation Forum in 1989 to recognize innovations that have proven to be significant advances and had positive, important effects on construction to improve quality and reduce cost.

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NOVA Award recipient Robert Lytton.
9. Hueste Honored with Snead Professorship

Assistant Research Engineer Mary Beth D. Hueste has been named holder of the E.B. Snead II Development Professorship in Civil Engineering by Vice Chancellor and Dean of Engineering G. Kemble Bennett.

Hueste is an associate professor and assistant head of the Construction, Geotechnical and Structures Division in the Zachry Department of Civil Engineering at Texas A&M, and the manager of the Structures Program for the Constructed Facilities Division of TTI.

Read more: http://engineeringnews.tamu.edu/portal/page?_pageid=37,3428&_dad=portal&_schema=PORTAL&p_news_id=1430

Mary Beth Hueste is honored with Snead Professorship.

10. SPP&E Day Combines Business with Pleasure

TTI’s System Planning, Policy and Environment Research Group—also known as SPP&E—held its All SPP&E Meeting on Feb 21. The day provided the opportunity for SPP&E staff from College Station, Austin, Arlington, Houston, and Galveston with the opportunity to gather in the same place at the same time.

“SPP&E is made up of professionals who are spread out across our offices,” said Associate Research Engineer Jason Crawford, who was chair of this year’s SPP&E Day. “Although there is a lot of fun to be had by all, the day really serves a very useful purpose.”

This year, the event was held at Waco’s Carleen Bright Arboretum on Feb. 21. Because of the proximity to President’s Day, SPP&E Day had a patriotic theme, with Crawford dressing as Honest Abe. The agenda included presentations on the SPP&E Programs, an update from TTI Director Dennis Christiansen, tips on stress reduction techniques from representatives from Hillcrest Health Systems, an update on NIS from Gary Sinton and Matt Thomas, and closing comments by Associate Director Katie Turnbull.

Members of the group donated items in support of U.S. troops and the Waco Mission.
11. TTI in the News

There have been numerous mentions of TTI and our experts in recent articles. Here are links to some of the stories.

Travel survey (Bryan-College Station Eagle) March 8

Teens in the Driver Seat (Star Community Newspapers) March 8

Teens in the Driver Seat (CBS11-TV) March 7
http://cbs11tv.com/topstories/local_story_066170858.html

Wrong-way drivers (Houston Chronicle) March 5

Deadly bus crash (Toledo Blade) March 3
http://toledoblade.com/apps/pbcs.dll/article?AID=/20070303/NEWS01/703030418/-1/NEWS

Big highways to ease congestion (USA Today) Feb. 28

Teen driving (KXAN-TV) Feb. 27

Researchers honored (Bryan-College Station Eagle) Feb. 24
http://www.theeagle.com/stories/022407/am_20070224007.php

Teens in the Driver Seat (KFOX-TV) Feb. 23

Freeway markings (KFOX-TV El Paso) Feb. 16

Child safety seat program (The Eagle) Feb. 15
Managed Lanes Open House (Austin Business Journal) Feb. 14

Driver behavior (Christian Science Monitor) Feb. 14

Wrong way driver (New Haven Register) Feb. 13

Hurricane evacuation survey (The Examiner) Feb. 6

Congestion book (Heartland Institute) March Issue
http://www.heartland.org/Article.cfm?artId=20588

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12. Editor’s Corner: Documenting Deliverable Equipment

Most researchers are familiar with reports and other documents required for Texas Department of Transportation (TxDOT) Research Management Committee (RMC) projects. Many of those projects, however, list contract deliverables that don’t come in written form. Sometimes, for example, a deliverable is equipment or an installation.

If you purchase manufactured equipment, build original equipment, or install equipment that is listed as a deliverable on an RMC project, it’s not enough to hand off the equipment to your TxDOT technical contact. Regardless of type, each deliverable needs to be documented through regular channels at TTI Communications – and that can be tricky for equipment and installations. Here are some examples of documentation you can send TTI COM for forwarding to TxDOT.

Send an email message to TTI Reports indicating the date and place of transfer and who accepted the equipment. Attach as many as
possible of the following items:

- signed transfer paperwork;
- purchase order showing equipment description;
- specification sheet showing manufacturer, model, and serial number;
- warranty material and/or user manual;
- specification sheets or design drawings (for original equipment), and
- photos of equipment from all sides, during development and/or before and after installation if applicable.

For more information regarding how to document equipment deliverables, contact Dolores Hott for deliverables under RMC 1 or 5, or Michelle Jones for projects under RMC 2, 3, or 4.

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**13. Calendar/Reminders**

**March 14-16**—Spring Break holidays

**April 13**—Performance evaluation forms to be submitted to Human Resources
   For more information: [http://ttinet.tamu.edu/benefits_employment/memos/HR07-04.pdf](http://ttinet.tamu.edu/benefits_employment/memos/HR07-04.pdf)

**April 17-18**—18th Biennial Transportation Research Board Visibility Symposium

**April 30**—Application deadline for Keese-Wootan Transportation Fellowship

**May 2**—TTI Day

**May 15**—Deadline for TTI employee nomination for Regents Service Award

**May 28**—Memorial Day holiday

**June 4-7**—RMC Meetings, San Antonio