1. TxDOT Funding, Other Issues Addressed by Christiansen

In his quarterly meeting February 11, Director Dennis Christiansen updated employees on numerous Institute issues during the question and answer session, including Texas Department of Transportation funding, the leadership development program entitled “Developing Leaders for Today and Tomorrow” (DELTA-T), the employee recognition program and research diversification. He also answered numerous questions from employees.

The quarterly meeting was well attended, with Polycom® broadcasts to all urban offices.

For a summary of the meeting, visit TTINet.
2. Texas Perpetual Pavements: TTI Testing Reveals Good News

In 2000, the Texas Department of Transportation (TxDOT) began constructing sections of eight heavily traveled roadways (mainly on I-35 between Laredo and Dallas) with thick, 15- to 20-inch asphalt layers. The hope was that the extra cost of so-called “perpetual pavements” would be recouped over their estimated 50-year lifespan since reconstruction would not be necessary. The only maintenance necessary would be the occasional need to provide a new riding surface.

With a TTI evaluation of all eight perpetual pavement projects in Texas well underway, Flexible Pavements Program Manager Tom Scullion presented the preliminary research findings to the senior design engineers of TxDOT during a workshop February 1. TTI research indicates that perpetual pavements in Texas are holding up well. The other good news: TxDOT can save even more money in construction costs by following the study recommendations.

Scullion’s team began analyzing data in 2004, testing core samples and evaluating readings taken from nondestructive techniques using ground penetrating radar and falling weight deflectometers. The nondestructive testing and lab work determine the structural capacity of the current perpetual pavements.

“Our research indicates that the perpetual pavement concept is viable. We did find some permeability problems with one of the mix designs used, but a simple gradation change in the asphalt mixture should take care of those problems,” Scullion said. “Our findings also show that the pavement’s thickness can be significantly reduced, with no change in durability.” Scullion says the study conclusions will hopefully be incorporated into the Texas standard design procedures.

As part of this effort, Scullion and TTI Assistant Research Scientist Wenting Liu developed a software program (FPS 21) that will be used to determine optimal structural design for future perpetual pavements in Texas. Scullion and other TTI Materials and Pavements Division researchers will conduct classes addressing how TxDOT engineers can incorporate the findings into future structural designs. Assistant Transportation Researcher Lubinda Walubita conducted the lab testing for the project and was essential in the development of the workshop.
3. One Year on the Road: TTI’s Instrumented Vehicle

In March 2007, TTI researchers began monitoring drivers who volunteered for a variety of projects designed to study human behavior with the help of a $100,000 “smart car.”

TTI’s Instrumented Vehicle is a 2006 Toyota Highlander equipped with numerous video cameras, a global positioning system (GPS), radar and an onboard computer that is able to collect data from 128 high-speed sensor channels. For example, when the driver turns the steering wheel or presses the accelerator or brake pedal, the computer records the information, letting researchers know how the driver responded in specific situations.

“The potential research applications for the Instrumented Vehicle are limitless,” says Susan Chrysler, manager of the Human Factors Group and senior research scientist with the Center for Transportation Safety (CTS). “Each study will help us make driving safer by knowing how motorists react during certain situations. It will also let us know which roadside safety and warning devices are the most helpful in terms of either visibility or effectiveness.”

During its first year of operation, the Instrumented Vehicle was used in major research projects, and numerous others are in the planning stages. “We’ve completed four major studies and have five more planned over the next few months. The Instrumented Vehicle is in huge demand,” according to Chrysler. So popular is the Instrumented Vehicle, researchers sometimes have to work their projects around the vehicle’s availability.

That research has included projects with the Harris County Toll Road Authority, the Federal Highway Administration, the National Cooperative Highway Research Program, the Texas Department of Transportation and the Southwest University Transportation Center. Those projects evaluated things like distractions of in-vehicle entertainment devices, road sign legibility, driver behaviors on curves on rural highways and driver eye movements when entering freeway on-ramps. Over 100 volunteer research participants have driven the car to date.

The Instrumented Vehicle was made possible with funding from CTS, TTI Administration, and TTI’s Transportation
4. TTI Anniversaries

5 Years

Penelope Weinberger, Associate Research Specialist (XPD)

10 Years

Judi Rush, Lead Office Assistant (ADM)

5. UTCM Colloquium Message: Diversification Top Priority

In honor of Black History Month, the University Transportation Center for Mobility (UTCM) and the Texas Transportation Institute’s Diversity Council co-sponsored the UTCM Mobility Colloquium on the diversification of Texas A&M University. Dr. Karan Watson, the dean of faculties, associate provost and Regents Professor of electrical engineering, was the guest speaker for the noontime event held at the Gilchrist Building.

Watson noted the slow progress of Texas A&M’s efforts in diversifying its students and faculty by citing low percentages of minorities at Texas A&M compared to the percent of college-ready high school graduates in Texas.

“For the state we live in, if Texas A&M does not change its behavior, by 2030 we will be a minority-serving university instead of having a well-represented segment of the population,” said Watson, referring to the projected year in which Caucasians will become the minority in Texas.

Watson also encouraged everyone to look within themselves and ask what they are doing to improve diversity efforts. “It would be better for us to be seen as the Institution that
welcomes everyone and get past our schema and our own history,” said Watson.

“I thought her comments were excellent,” said TTI Chief Information Officer and Director of Information Systems Kassandra Agee-Letton, who chairs TTI’s Diversity Council. “Her talk focused on all the things we need to consider as an agency, and she gave the statistics to support her position, as well as the anecdotal evidence to bring this home to the audience.”

Melissa Tooley, director of UTCM, stated that “it was a pleasure to co-sponsor this special Mobility Colloquium to honor Black History Month and bring the topic of diversity to TTI. Dr. Watson’s presentation was thought provoking and stimulated some interesting discussion both at the colloquium itself and in the hallways afterward. This kind of dialogue will help TTI and Texas A&M prepare for the workforce of the future.”

6. Motorcycle Safety Forum Addresses Disturbing Fatality Rate

At a time when automobile deaths are on the decline in the United States, the number of motorcycle fatalities is skyrocketing. That sobering information has placed even greater emphasis on this year’s Motorcycle Safety Forum held in Austin February 13.

In his opening remarks to the 100 attendees, Center for Transportation Safety (CTS) Director John Mounce said motorcycle fatalities have increased for nine straight years and, for the first time, have outnumbered pedestrian deaths. “Rider fatalities now account for 11 percent of total fatalities (up from 5 percent in 1997) and dramatically affect the nation’s overall highway fatality rate,” Mounce said. “This trend is perhaps the greatest highway safety challenge our nation faces today.”

Over 100 people from all over Texas attended the meeting, which included safety advocates representing riders, trainers, law enforcement, engineers, educators, military, health professionals, and federal and state motorcycle safety organizations. This is the third CTS-sponsored Motorcycle
Safety Forum in as many years, which was organized in response to the ever-increasing fatality rate. This year’s forum was co-sponsored by TTI with the Texas Department of Transportation, Texas Department of Public Safety and Brown Distributing Company as participating agencies.

The day-long forum included presentations on crash trends, rider training, share the road programs, funding and strategic planning. Associate Research Scientist Patricia Turner discussed the new TxDOT motorcycle safety public awareness campaign entitled “Look. Learn. Live,” developed by TTI.

“This forum was the best attended and most successful Motorcycle Safety Forum we’ve had,” Turner said. “We are all working together, seeking ways to reverse the growing number of motorcycle fatalities.” Senior Research Scientist Quinn Brackett also spoke at the forum, presenting “Countermeasures to Reduce Motorcycle Crashes in Texas.”

As a result of the increase in fatalities, a Motorcycle Safety Coalition is being formed to come up with strategies to reduce motorcycle crashes. The volunteer members are planning their first meeting.

7. TTI in the News

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

Chicago potholes (Medill Reports) Feb. 28

Dallas-Fort Worth managed lanes (Dallas Morning News) Feb. 25

Street cars made tough (Business Week) Feb. 22

Travel issues and politics (MSNBC) Feb. 19

Pavement design and materials guide (Business Wire) Feb. 19

San Diego’s worst traffic spots (Union Tribune) Feb. 17

Arizona toll roads (The Arizona Republic) Feb. 17
8. Internal Survey Results, TTI Building Celebration Announced

According to a survey taken by employees last fall, internal services received a 90 percent approval rating by respondents, Director Dennis Christiansen announced Feb. 11 during his quarterly meeting with staff. Eighty percent of the respondents rated those services “good to excellent.” The results of the internal satisfaction and professional development surveys can be found on TTINet.

Also, the $18.8 million TTI State Headquarters and Research Building is scheduled for occupancy in August of next year. Workers are currently preparing the site for the building’s parking lot, which should be finished at the end of April. The construction schedule was announced by Christiansen, who urged employees to attend a construction celebration for the building April 30, at 3:30 p.m., which happens to coincide with the 10-year anniversary of the Gilchrist Building celebration.

A view of the parking lot construction for the new TTI State Headquarters and Research Building.
9. Transportation Economist Visits TTI

A leading transportation economist says the high cost of energy is prompting shippers, carriers and consumers to rethink the way they transport goods. In addition, Chrisman Dager — the navigation economist for the Tennessee Valley Authority — told those attending his presentation at TTI, “We need to think about $5.00 a gallon gasoline, because that may be where we are heading.”

Dager was the guest speaker for the talk sponsored by TTI’s Multimodal Freight Transportation Programs and the Center for Ports and Waterways. Dager entitled the presentation “How Does Change in Public Policy Influence Transportation Energy Use and Logistical Choices?” He said he hoped the presentation would help students and researchers appreciate how fuel costs and regulations affect transportation decisions.

During his presentation, Dager described to the group how the huge increase in international trade has impacted the United States. “Port investment has not kept up with the growth of trade. We do not have a corresponding port infrastructure investment,” he said.

Dager visited TTI to conduct training for researchers working on inland waterways issues. The Army Corps of Engineers has made arrangements with TTI and three other university institutes to take on the responsibility of future rate studies and data analysis work, which was previously conducted by Dager.

10. The Write Stuff

The quality of the written proposal can truly make the difference in whether or not you win funding for a research project. The latest in a series of Research Development Seminars organized by Associate Agency Director Katie Turnbull provided researchers with essential writing tips that could give their proposals an edge on the competition. “Writing Winning Proposals” was presented by Research Editor Rhonda Brinkmann Feb. 20.

“Writing well is important for any document you develop,”
Brinkmann said, “but there are some particular considerations and techniques you can use when preparing a proposal that increase its effectiveness and likelihood of success.”

During the seminar, Brinkmann suggested resources and offered writing tips. Some of her writing tips included:

- Match your proposal’s writing style to the style of the sponsor’s notice.
- Use persuasive, informative and powerful writing techniques.
- Don’t assume a reader’s knowledge about TTI or your topic.
- Echo terminology of the sponsor’s notice, but don’t let it limit your creativity.
- Include graphics where they will present information most effectively.

Brinkmann’s background covers editing, writing, text formatting and training, with extensive experience reviewing technical, business and popular writing. She also writes a monthly article, “Editor’s Corner,” which appears in each CenterLine issue.

11. First TTI Blood Drive of 2008 Attracts First-Time Donors

Of the 42 people who signed up to give blood for TTI’s blood drive Feb. 20, six were non-TTI employees and six of the donors had not given before. “Every time we get first-time donors, I think it means we are doing something right,” said co-organizer Nancy Stratta. “Of course, it's the regulars who keep our numbers high, and we are especially grateful for them, too.”

This was the first TTI blood drive of the year, with the next one scheduled for Oct. 20.

TTI blood drives are administered by the Gulf Coast Regional Blood Center.
12. Editor’s Corner: Editorial Resources at Your Fingertips

Sometimes you need just a little bit of editorial help when you’re developing a technical report — and sometimes you need a lot. Either way, it’s nice to know there are resources available at the touch of a few keystrokes. This column lists some websites that provide guidance on a wide range of editorial topics.

Report Development

Starting close to home, TTINet holds resources for report development. For example, template files give you organizational structure as well as predefined word-processing styles. Editorial guidelines offer guidance on everything from process to punctuation. For template files and editorial guidelines on reports applicable to Research Management Committee (RMC) projects for the Texas Department of Transportation (TxDOT) — which could be used as a basis for other reports — see http://ttinet.tamu.edu/communications/editing/txdot_report_development.stm.

If you are working on a TxDOT RMC project, the Research and Implementation Manual published by TxDOT’s Research and Technology Implementation Office provides additional editorial guidance: ftp://ftp.dot.state.tx.us/pub/txdot-info/gsd/manuals/rtt.pdf.

General Resources

Moving beyond specific organizations or project types, you can reach general editorial resources for style, punctuation and spelling online. Many sites help you find answers, and here are a few of my favorites:


The ancestor of synonym reference books is Roget’s Thesaurus. It’s gone online at http://www.bartleby.com/thesauri. Roget’s Thesaurus is published by Bartleby, which houses a host of other editorial resources. Check them out at http://www.bartleby.com/. If you’re searching for a word specifically related to transportation, try the Transportation Research Thesaurus: http://ntlsearch.bts.gov/tris/trt.do. When I need to get a general grasp of a foreign phrase, I like to use the Babel Fish translation site: http://world.altavista.com/.

For in-depth guidance regarding editorial style, The Chicago Manual of Style (CMOS) is often used for technical reports. While full access to the manual requires a subscription, you can access its quick guide at http://www.chicagomanualofstyle.org/tools_citationguide.html. For journalistic or nontechnical writing, the Associated Press (AP) Stylebook often applies. Like the CMOS site, full access requires a subscription, but the online AP site has useful FAQs: http://www.apstylebook.com/ask_editor.php. The Texas A&M University System has its style guide online at http://www.tamus.edu/offices/communications/style/general.html.

For More Information

Don’t forget that you have some helpful editorial tools within your Microsoft Word® program. I’ll tackle those in a future column.

For in-person editorial assistance, you can always contact your TTI editorial staff. Check with Rhonda Brinkmann for more information.

Editor’s Corner is written by Rhonda Brinkmann, research editor in TTI Communications. Rhonda is happy to take requests for column topics.
13. Reminders/Calendar

March 10 — Step I deadline for employee award nominations
   For more information:  
   http://ttinet.tamu.edu/ttipeople/employee_awards/

March 13–14 — Spring break

March 17 — TxDOT RMC project proposals due to TTI RDO

March 17–19 — 2008 Transportation Research Forum
   For more information or registration:
   http://www.trforum.org/forum/2008/

March 26 — International Research
   Research Development Seminar
   Noon–1:00 p.m.
   102 Gilchrist

March 28 — Step II employee award nomination support
   materials due
   For employee award nomination process:
   http://ttinet.tamu.edu/ttipeople/employee_awards/

March 28 — Keese-Wooton scholarship applications due
   For more information

April 10 — Customer Focused Research
   Research Development Seminar
   Noon–1:00 p.m.
   102 Gilchrist

April 20–22 — Texas Transportation Forum
   Austin, Texas
   For more information:
   www.texastransportationforum.com
   Early registration ends Friday, March 7.

April 30 — Construction Celebration for TTI State
   Headquarters
   and Research Building

May 26 — Memorial Day
CenterLine is a production of TTI Communications. We encourage your comments and suggestions for articles about TTI people and research efforts. Please send email to news@ttimail.tamu.edu or call Rick Davenport at (979) 862-3763.