



Roundtable: future of reauthorization and finance

Congress as a whole is not happy with the delay in reauthorizing the federal transportation bill and wants “very badly” to complete new legislation before June, said **David Heymsfeld**, minority staff director with the



Lee Munnich, Betsy Parker, and David Heymsfeld

U.S. House Committee on Transportation and Infrastructure. He made his comments December 9 at the “Reauthorization and the Future of Transportation Finance” roundtable, one in a series of transportation finance roundtables sponsored by CTS and the Humphrey Institute’s State and Local Policy Program (SLPP) with the Minnesota Department of Transportation.

In addition to Heymsfeld’s federal outlook, participants heard Mn/DOT’s perspective on reauthorization from **Betsy Parker**, director of Mn/DOT’s Office of Governmental Affairs. CTS director **Robert Johns** gave welcoming remarks and the wrap-up, and **Lee Munnich**, director of the SLPP, served as roundtable moderator.

recognizes how difficult it makes it for state departments of transportation to do long-term planning and commit to projects,” he added.

Although the new Congress will start fresh with new bills, Heymsfeld thinks much of last year’s legislation will be incorporated. This should make it possible to get new bills introduced fairly early in the new session, he predicted.

He then reviewed what happened last year in order to set a framework for upcoming deliberations. When the bill was first under development two years ago, Congressmen **James Oberstar** of Minnesota and **Don Young** of Alaska proposed a bill of \$375 billion over six years, an

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High cost and low capacity portend major changes for freight transportation industry

After 20 years of high productivity and capacity, the landscape for the freight transportation industry has changed. According to **Gary Petersen**, director of transportation for General Mills, this continuing trend has significant implications for freight and logistics management.



Gary Petersen



Cecil Selness

December 3, 2004. During his keynote speech, he explained that bankruptcies and lack of drivers contributed to low capacity, and rising costs are the result of increases in the cost of fuel, driver pay, insurance, and equipment.

What’s more, Petersen predicts that tonnage will grow by 6 percent, so the transportation industry will continue to be driven by demand. Trends in 2005, he added, will include pay increases to attract more drivers, more restrictive government regulation, and an increase

Petersen shared his perspective on transportation industry challenges with about 100 freight and logistics professionals, policymakers, and researchers at the Eighth Annual Freight and Logistics Symposium held in Minneapolis on

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Enclosed flyer previews upcoming events

The enclosed flyer announces upcoming CTS events for spring semester 2005. Some of the highlights are:

- CTS Winter Luncheon on February 10, featuring a presentation by Professor **Hani Mahmassani** of the University of Maryland titled “In Real Time, Virtually: Evolving Paradigms and Methodologies for Intelligent Transportation Systems.”
 - **James L. Oberstar** Forum on Transportation Policy and Technology. The *CTS Report* will have details in the future.
 - 10th Annual Transportation Career Expo, March 2 (see enclosed flyer)
 - 16th Annual CTS Transportation Research Conference, April 26–27
 - Minnesota Local Technical Assistance Program (LTAP) workshops
- Also, visit the CTS events Web site—www.cts.umn.edu/events—to see an up-to-date list of CTS events plus other transportation-related events in Minnesota and elsewhere. **CTS**

UMD hosts third annual research event

The Northland Advanced Transportation Systems Research Laboratories (NATSRL) held its third annual Research Day on November 4 at Mn/DOT District 1 Headquarters in Duluth. NATSRL is a program of the University of Minnesota Duluth (UMD) and the Intelligent Transportation Systems (ITS) Institute at CTS. **Mike Robinson**, Mn/DOT District 1 district engineer, welcomed the audience of transportation practitioners, researchers, students, and community members to the event.

During the morning session, principal investigators presented updates on their projects:

- **Stanley Burns** (UMD's Electrical and Computer Engineering) discussed the incorporation of magneto-resistive sensors at the Advanced Sensor Research Laboratory near Cloquet, Minn.
- **Richard Maclin** (Computer Science) provided an update on the traffic data warehousing project under development.
- **Taek Kwon** (Electrical and Computer Engineering) discussed his work with vehicle inductance signatures.
- **David Wyrick** (Mechanical and Industrial Engineering) provided an analysis of his work in determining the most cost-effective life cycle for fleet vehicles and other fleet assets in the Mn/DOT inventory.

In the afternoon session, researchers provided summaries of their initial work on new project initiatives:

- **Harlan Stech** (UMD's Mathematics and Statistics) presented an overview of the department's work in modeling various sensor technology applications in conjunction with the non-destructive evaluation methods for timber bridges.
- **Taek Kwon** presented his work in developing a probe using weigh-in-motion diagnostic equipment.
- **Emmanuel U. Enemuoh** (Mechanical and Industrial Engineering) presented his initial findings on the existing operations for deicing methods used for winter road maintenance.

Seven project teams held poster sessions on their research efforts. Many of the students and researchers involved in the program presented updates and answered questions on their project roles and findings. The posters were on display throughout the day.

Two additional highlights to this year's event included a presentation by **Stacey Stark**, the program manager for UMD's Geographic Information Systems Laboratory, on her work in the creation of a statewide roadway data resource system for Mn/DOT. Also, **Eil Kwon**, Mn/DOT traffic research engineer, presented an update on Mn/DOT's research problem statements



Harlan Stech, graduate students Joseph Erickson and Fenghuan Wang, and Guihua Fei at poster display

and discussed the importance of focusing research on traffic applications and producing effective results to meet transportation needs.

James Riehl, the dean of the College of Science and Engineering and the director of NATSRL, provided closing remarks for the conference and gave an update on several future initiatives that are being planned for the UMD transportation programs.

Research Day 2005 is already being planned for **November 3, 2005**, at the Mn/DOT District 1 Headquarters building.

For additional information on Research Day or to obtain further details of the event, please contact **Carol Wolosz**, NATSRL program coordinator, at 218-726-7446 or natsrl@d.umn.edu. **CTS**

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in intermodal transport to compensate for decreased trucking capacity.

Before Petersen's presentation, CTS director **Robert Johns** welcomed participants to the symposium by saying that growing freight challenges indicate a need for common discussion between the public and private sector. Following Johns, **Greg West**, Council of Logistics Management Twin Cities Roundtable president, echoed the need for dialog, especially in determining the impacts of regulation on trucking.

In a panel discussion about forces of change affecting the future of trucking, **Cecil Selness**, director of Mn/DOT's Office of Freight and Commercial Vehicle Operations, outlined his public-sector perspective by looking at longer-term economic and transportation issues. Projected increases in population, employment, and consumption, he theorized, will fuel the need for growth in truck as well as rail, air, and water transport. Moreover, increases in trucking and road congestion mean planning for significant road construction to add capacity. But other efficiencies in technology, infrastructure, and regulations will be needed, too, he said.

Also during this session, **Jim Butts**, vice president for transportation at C.H. Robinson Worldwide, provided a private-sector perspective by describing capacity challenges, rising carrier costs,



Jim Butts

and increasing rates that affect manufacturers. He emphasized the need to improve collaboration between shippers and carriers.

Three panelists expanded the picture of the future of trucking painted by Selness and Butts. **John Hausladen**, president of the Minnesota Trucking Association, talked about capacity, truck size, and weight. Carriers, he said, want to add heavier rather than longer trucks and are concerned about intrusive regulations related to hours-of-service as well as safety issues related to hiring less experienced drivers. By contrast, **Natalio Diaz**, director of Metropolitan Transportation Services for the Met Council, discussed capacity in terms of highways. Though greatly increased traffic volume and congestion will drive the need for increased road construction, he speculated, lack of increased funding would continue to create cost and capacity problems.

In an overview of the county and state highway system, **Rick Kjonaas**, Mn/DOT deputy state aid engineer, said county engineers want to work with highway users to create a seamless transportation system to improve access, capacity, and safety. But panelists agreed there is no easy fix—oftentimes because the public sector tends to look at long-term solutions while the private sector seeks shorter-

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amount the USDOT believed was needed to maintain the system and begin reducing congestion.

Because existing revenue sources were not adequate to support this level, they proposed a variety of funding options, most obviously an increase in the gas tax by indexing it to inflation. The administration, however, declared a tax increase was “totally unacceptable, so we started off widely apart,” Heymsfeld said.

In fact, the administration’s bill—at \$256 billion—would have meant flat funding for the next six years, Heymsfeld said. The House proposed a compromise bill somewhat higher than the administration’s, at \$275 billion, and the Senate came in at \$290 billion.

Toward the end of the process last summer, there was a signal that the administration might be willing to support a \$285 billion level, he said, but that amount proved to be too low for two main reasons: many members believed it wouldn’t meet needs, and it didn’t address the percentage received by each state.

The latter point—the percentage of revenues states receive back from their contributions to the highway trust fund—is the focus of “tremendous competition between states,” Heymsfeld said. In current law, at least 90.5 percent of a state’s revenues must be returned. A number of “donor” states are at that level and want their share increased to 95 percent—but that means “donee” states such as Minnesota would see their percentage reduced.

The answer to this zero-sum problem, Heymsfeld said, is more money. Donee states might accept a lower percentage if the actual dollar value they receive is higher (after inflation). But even the Senate’s

bill was not enough to get votes for passage last year.

Heymsfeld believes there are several grounds for hope this year: the uncertainty of the election has been removed, and the administration might be more receptive to a larger bill in a non-election year. “One is known, one we’ll now know,” he said. There is some feeling that the \$300 billion was a “magic number” for the administration, he added, so if the bill were shortened to five years (for less money), that restraint could be gone.

And finally, there is “getting to be a certain fatigue to work on this and never get it done,” he concluded. “We’re hopeful that the administration will rethink its position some, but [we have] no sign one way or the other on that. Still, there’s a good shot we can get it done before the June 1 deadline.”

Mn/DOT determines the effect of every proposal in the bill, Parker began, in order to plan what kinds of projects it can do and when. The bill also provides money for local governments, she pointed out. “Sometimes people forget how locals are also suffering from the lack of a bill.”

The delay began to concern the department last spring, but it didn’t take action at that point. “It was hard to imagine that Congress would let it go this long, which never happened before,” she said. “Everyone was justified in being optimistic.”

But by summer, Mn/DOT informed the state’s delegation that further delay would affect its program. Specifically, two of the bond-accelerated projects the department had identified in 2003 would be delayed: the interchange at I-694 and I-35E north of St. Paul, for a year; and work on I-494 and Hwy. 169, in southern Bloomington, for at least one year.

Minnesota’s delegation has been very responsive to Minnesota projects, Parker stressed, and Mn/DOT does not imply any criticism. “Our delegation understood,” she said, “but some situations are beyond the control of any individual delegation, and this was one of them.” While unhappy about the delay of those two projects, it was the only thing to do. “We can’t bid, let, and award, unless we know we can pay the bill when it comes due.”

The department is now looking toward the future, hoping not for another extension but for a bill to carry on the state’s program, she added.

The session then turned to a lively question-and-answer period. Asked by moderator Munnich about prospects for value pricing in the bill, Heymsfeld replied that Rep. Oberstar has been supportive of pricing but with conditions to meet several concerns. First, Oberstar wants reduced rates for low-income drivers. He also wants limits on non-compete contracts such as one used in California, in which the state agreed not to improve nearby roads in order to prevent competition with a privately run toll lane. And third, toll revenue should be used to develop alternatives, including transit.

In response to another question, Heymsfeld said he expects the bill to create a commission that would look at the effects of hybrids and other alternative vehicles on gas tax revenues. The commission would explore options such as mileage-based charges and make recommendations for the next bill. **CTS**

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term answers. In addition, infrastructure limitations, driver costs, and congestion are complex issues best addressed on a public-policy level, though immediate solutions may be found in better communication among manufacturers, carriers, and transportation agencies.

Next, two presenters shifted focus from trucking to other modes of transportation and technology. **Richard Stewart**, associate professor of transportation and logistics at the University of Wisconsin–Superior, said that costs will rise faster for trucking than rail or marine, and growth in world trade will put long-term capacity pressure on truck and rail. Those pressures, he concluded, may cause a gradual modal shift. **Dan Mur-**



Richard Stewart



Dan Murray



Chuck Horan

ray, research director with the American Transportation Research Institute, was upbeat about the probable industry changes. “With volume up, capacity tight, and truck tonnage up,” he said, “the next few years are going to be wonderful for shippers and truckers.”

Speaker **Chuck Horan**, enforcement and compliance director with the Federal Motor Carrier Safety Administration (FMCSA), closed the symposium by providing a context for government regulations by describing the mission of FMCSA as overseer of road safety in relation to carrier vehicles.

A summary report detailing the entire event will be available from CTS next month. **CTS**

In remembrance: Robert Dexter

Robert Dexter, a University of Minnesota associate professor of civil engineering and a leading expert on fatigue and cracking of steel structural elements, died November 16 from acute leukemia. He was 48.

Dexter was known nationally and internationally for his work on fatigue cracking in bridges, buildings, and other structures and worked as a consultant on scores of projects around the country.

"He was a leading researcher on some of the country's most challenging problems in steel fracture," said civil engineering professor **Jerome Hajjar**.

Dexter was a member of the CTS Infrastructure Council and conducted a number of research projects through the CTS research program.

"Bob's ability to communicate with practitioners was an asset," says **Laurie McGinnis**, associate director of CTS. "He played a key role in developing the strong partnership that the structures faculty have with Mn/DOT." **CTS**

Student organization holds monthly meetings

*Michael Corbett, a University graduate student in civil engineering, leads the November 5, 2004, noon-hour meeting of ITSO, or Interdisciplinary Transportation Student Organization. About 40 students turned out for pizza and a chance to hear civil engineering assistant professor David Levinson detail educational options for students interested in pursuing transportation-related careers. ITSO meets monthly during the school year. To learn more about the organization, check out its Web site at www.tc.umn.edu/~itso. **CTS***



CTS Executive Committee discusses safety research

At its November meeting, the CTS Executive Committee heard a presentation by **Bernie Arseneau**, Mn/DOT state traffic engineer, on the Minnesota Comprehensive Highway Safety Plan (CHSP). The CHSP is a combined effort of Mn/DOT and the Department of Public Safety to reduce fatalities and serious injuries on all roads in Minnesota. It is a critical piece of the state's Toward Zero Deaths (TZD) program, of which CTS is a partner.



Richard Murphy, Tom Chaffin

Following Arseneau's presentation, **Nic Ward**, director of the University's HumanFIRST Program, and **Max Donath**, director of the ITS Institute, briefly discussed the implications for University of Minnesota research. Donath described a new University effort to reduce teenage fatalities through the use of an in-vehicle device that would provide feedback to the teenager, immediately notify parents when a teenager is driving unsafely, and contain a seatbelt-forcing function. "The installation of such a device would have to be voluntary, and incentives would be necessary," he said. There is interest at the federal level in further exploring the development of this device.

Also at the meeting, committee chair **Richard Murphy Jr.**, recognized the contributions of outgoing member **Tom Chaffin**, who recently retired as division vice president for the traffic control materials division at 3M. He served on the committee from 2000–2004.

"During his time on the committee, Tom brought a valued industry perspective to the discussions and activities of the committee," said **Robert Johns**, CTS director. **CTS**

Upcoming events

To publicize your event, call CTS at 612-626-1077, fax 612-625-6381, or e-mail snopl001@cts.umn.edu. Visit the CTS Web site—www.cts.umn.edu—for more comprehensive event information.

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| Jan. 18–21 | Minnesota County Engineers Association Annual Conference, Brainerd. Contact Heather Dorr , 612-625-5267, hdorr@cce.umn.edu . | Feb. 17 | Minnesota Pavement Conference, Continuing Education Conference Center, St. Paul. Contact Teresa Washington , 612-624-3745, twashing@cce.umn.edu . | Mar. 16–17 | 44th Annual Concrete Paving Workshop, Hilton Minneapolis/St. Paul Airport. Sponsor: Concrete Paving Association of Minnesota. Contact Deb LaValle , 763-561-0402, dlavalle@cpamn.com . |
| Jan. 26–28 | City Engineers Association of Minnesota Annual Conference, St. Paul. Contact Heather Dorr , 612-625-5267, hdorr@cce.umn.edu . | Feb. 22 | Minnesota Surveyors & Engineers Society Annual Meeting/Luncheon, Sheraton Four Points, Minneapolis. Contact Ann of MSES, 651-457-2347, ann@msec.org . | Apr. 13–15 | Minnesota Airports Symposium, Mankato. Contact John Puckropp , 218-828-5049, genavcon@charter.net . |
| Feb. 10 | CTS Winter Luncheon, Radisson Hotel Metrodome, Minneapolis. Contact Katie Kjeseth , 612-624-3708, kkjeseth@cce.umn.edu . | Mar. 2 | 10th Annual Transportation Career Expo, Coffman Union, Minneapolis. Contact Mindy Jones , 612-625-1813, jones154@cts.umn.edu . | Apr. 20–21 | Spring Maintenance Training Expo, St. Cloud. Contact Teresa Washington , 612-624-3745, twashing@cce.umn.edu . |
| | | Mar. 9 | ITS Minnesota Annual Meeting and Information Exchange. Contact Katie Kjeseth , 612-624-3708, kkjeseth@cce.umn.edu . | Apr. 26–27 | 16th Annual CTS Transportation Research Conference, RiverCentre, St. Paul. Contact Katie Kjeseth , 612-624-3708, kkjeseth@cce.umn.edu . CTS |