



Freight and Logistics Symposium: The system after economic recovery

The effects of the recession on the freight and logistics industries will likely linger for some time even after the economy recovers, according to presenters at the 13th Annual Freight and Logistics Symposium. Tight capacity in many transportation modes and the need for increased innovation in supply chain strategies will be among the lasting effects. The symposium was held in Minneapolis on December 4.

Opening remarks were provided by **Laurie McGinnis**, acting director of CTS; **Meg Duncan**, president of the Council of Supply Chain Management Professionals–Twin Cities Roundtable; and **Bill Gardner**, director of freight planning and development at the Minnesota Department of Transportation (Mn/DOT).

Fred Corrigan, executive director of the Aggregate & Ready Mix Association of



Richard Murphy Jr.

Minnesota and chair of the CTS Executive Committee, moderated the first panel, which looked at trends and scenarios for the future.

In the post-recovery landscape, said **Richard Murphy Jr.**, president/CEO of Murphy Warehouse Company,

logistics networks will continue to face the twin challenges of rising fuel prices and shortages of truckload capacity (and, at least in the short term, rail and ocean capacity). “When the recession hit, everybody dropped capacity ASAP,” he said. “Capacity drops will have a haunting effect when we start coming back.”

Transportation planners and logistics providers are already preparing for the economic recovery. “Trucking companies will try to recoup losses by keeping capacity tight, and driver shortages will reappear,” Murphy predicted.

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Leaders discuss personal rapid transit for Minnesota

Transportation engineers and planners have discussed personal rapid transit (PRT)—the use of small, on-demand podcars to serve public transportation needs—since the 1960s. On November 19, 2009, the Minnesota Department of



Tom Sorel

Transportation brought together PRT companies and policymakers to discuss the potential of PRT in Minnesota and beyond. CTS hosted the event for Mn/DOT, and CTS acting director **Laurie McGinnis** served as moderator.

Mn/DOT commissioner **Tom Sorel** kicked off the symposium by discussing the way transportation agencies are evolving to meet the transportation needs of the future. “We want to give people options, to be a multi-modal agency,” he said. “We owe it to our



Ed Anderson

citizens to explore these kinds of things.”

Sorel also emphasized Mn/DOT’s leadership and catalyst role with this new technology. “The door is open,” he said. “Let’s walk through it.”

Two new PRT projects are about to come online—a circulator in London’s Heathrow airport and a 3,000-vehicle system in Masdar City, a planned zero-emissions community in Abu Dhabi. Those projects are bringing new excitement to PRT among the more than two dozen private PRT companies now competing for projects.

PRT has a long history in Minnesota, in part due to the efforts of **Ed Anderson**, who has advocated for personal rapid transit for more than four decades. Anderson, a longtime

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Connect with CTS using social networking

The social networking tools that have emerged in the past two years offer opportunities for CTS to raise the visibility of transportation research at the University of Minnesota and to connect with both current and new audiences in more interactive ways.

CTS has recently embarked on several social media endeavors, starting with a CTS Facebook page and a Facebook group for the Transportation Alumni Group. CTS posts upcoming events and news items to Facebook about once a week. It also has a Twitter site and a CTS Group on LinkedIn.

For an overview of social networking tools and how they are used by transportation agencies, please plan to attend a workshop at the 21st Annual Transportation Research Conference on April 28, 2010.

- Become a fan of CTS on Facebook: www.facebook.com/UMNCTS.
- Follow CTS on Twitter: <http://twitter.com/UMNCTS>.
- Join the CTS Group on LinkedIn: www.linkedin.com/groups?about=&gid=2316997. **CTS**

University of Minnesota professor, is the founder of PRT International and was a panelist at the conference.

Minnesota PRT projects included the St. Paul People Mover proposal in the 1970s, and efforts to pass a \$4 million bonding bill in 2004 to build a PRT safety certification and test facility in Duluth.

Ferrol Robinson, who worked on St. Paul's People Mover project and is now a fellow at the University's Humphrey Institute of Public Affairs, said PRT is not a "magic bullet" to solve the state's transportation problems. "It's going to take all the systems, all the technologies to solve transportation problems."

But, he said, PRT can be a good option when buses and LRT don't have a good way to provide a service. The technologies serve different uses and different markets. PRT, for example, could be used as a circulator or shuttle between transit and other medical, shopping, or education hubs, or to connect heavy trip generators close to each other, he said.

Steve Raney, a principal with ATS ULtra, gave an overview of current PRT technology and discussed ULtra's recently completed PRT project for London's Heathrow airport.

The ULtra circulator runs on an elevated guideway to connect Heathrow's new Terminal 5 to a remote parking lot. Its on-demand nature was particularly



A PRT podcar at London's Heathrow airport

useful for this destination. "PRT was the only practical solution for (the British Airport Authority)," Raney said. "It had a 60 percent travel time savings and 40 percent operating costs savings" over other modes. Construction on the project is currently complete, with revenue service scheduled to begin this spring.

Naveen Lamba, IBM global industry lead, described the PRT system currently under construction in Masdar City, Abu Dhabi. The 100,000-person planned community is being built with the goal of having a zero-carbon footprint. The community's transportation infrastructure is a combination of PRT, light rail, and metro rail transit in an interlocking system to serve travelers. No cars are allowed; instead, 3,000 PRT vehicles will provide all the individual transportation needs of the community, Lamba said.

A panel of Minnesota transportation leaders shared their perspectives on PRT. **Tim Henkel**, Mn/DOT's director of Modal Planning and Program Management, said Minnesota will

continue to see major demographic shifts in coming years, including bigger concentrations of people in the state's urban centers, an increase in the state's elderly population that could spur a greater demand for transit services, and increasing congestion during peak travel times.

With those shifts in mind, Henkel said, "PRT needs to be added to the toolbox of transportation solutions the state needs. It could be an important solution."

(In December 2009, Mn/DOT launched a PRT initiative to study, research, and explore PRT's potential. **Mukhtar Thakur** was appointed director of personal rapid transit.)

Arlene McCarthy, director of transportation services at the Metropolitan Council, said two areas where PRT could be highly complementary are the I-494 and I-394 corridors, both areas with high employment concentrations in campuses separated by distances too great to connect by walking.

"I think PRT has great advantage in that it can bypass station stops," she said. "That's a really tough nut to crack with buses in the 494 and 394 corridors. There isn't high enough ridership to justify all-day service to all of these individual locations."

In the conference's other panel, state Rep. **Tina Liebling** and state Sen. **Gen Olson** discussed the challenges and promise of PRT from a legislative standpoint, and Winona Mayor **Jerry Miller** said his city would like to be home of the state's first PRT facility.

Proceedings of the conference will be available on Mn/DOT's Web site. **CTS**



Tina Liebling



Gen Olson



Arlene McCarthy



Steve Raney

University of Minnesota research featured at TRB Annual Meeting

The University of Minnesota was once again well represented at the Annual Meeting of the Transportation Research Board (TRB) in Washington, D.C., this year held January 10–14.

Findings from the Value Capture for Transportation Finance Study were featured in several sessions. Speakers included principal investigators **David Levinson** (Civil Engineering) and **Zhirong (Jerry) Zhao** (Humphrey Institute of Public Affairs) and co-investigator **Mike Iacono**

(Civil Engineering). CTS led the study at the request of the Minnesota legislature. (For more about the study, see www.cts.umn.edu/Research/ValueCapture.)

In other sessions, **Max Donath**, director of the Intelligent Transportation Systems Institute, discussed distance-based fees for funding transportation, and **Chen-Fu Liao**, educational systems manager with the Minnesota Traffic Observatory (a lab within the Institute), described the use of the Gridlock Buster traffic control game

as part of a traffic engineering curriculum for high school students. (See www.its.umn.edu for more.)

Another highlight was an award presentation to Minnesota's Toward Zero Deaths program (see page 4).

A complete list of University of Minnesota and Mn/DOT presenters is available for download at www.cts.umn.edu/Publications/ResearchENews/2010/01. **CTS**

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Rail is increasingly appealing to a broader spectrum of shippers given energy savings and the potential for cost savings. “The rails are more fuel efficient on a per-mile basis,” Murphy said, noting rail was at or near capacity when the recession hit.

Changes in retail distribution, consumer demands, and growing population centers are causing fundamental changes in U.S. logistics practices, Murphy said. Supply chain strategists are seeing the benefits of reversing a 20-year trend and are moving toward more distribution centers—not fewer—as fuel prices and the pressure to go green make a strong argument for shorter transits. “Since local delivery costs are the most expensive portion of the trip, network modeling becomes much more important in how you fan out your distribution centers,” Murphy said.

As a result of these trends—and particularly, fuel cost concerns—look for increased manufacturing in Mexico, Central and South America, and the United States, Murphy said. “We’re going to see more and more people give serious consideration to ‘near sourcing.’ This is a shift from a focus on labor cost per hour to a greater focus on lowered total landed cost.”

Jim Butts, senior vice president of transportation at CH Robinson, called for more innovation and collaboration among supply chain partners. He predicted the post-recovery landscape will bring increased outsourcing to third-party logistics firms and other specialists as firms realize logistics isn’t a core competency or decide they need a new perspective.

Among chief concerns facing trucking, Butts said, is the potential for an exodus

of drivers from the industry when the economy picks up.

The second panel, moderated by **Dave Christianson**, manager of freight planning and development for Mn/DOT, turned to the changes required for transportation infrastructure, practices, and policy.

Fred Beier, professor emeritus with the Carlson School of Management at the University of Minnesota, said trading partners will be even more demanding given that supply chains are ultimately competing against other supply chains.

“The key to success to supply chains is how they can integrate their activities between different trading partners,” Beier said. Partners need to share data to make supply chains even more transparent, create more customized products, and enhance customer service.

In prerecorded remarks, **Bob Portiss**, port director at the Tulsa, Oklahoma, Port of Catoosa, outlined the development of the inland seaport. The port offers a Foreign Trade Zone and extensive intermodal transportation facilities as a corridor access point for on-site rail, truck, and barge transportation and nearby air service.

“We’ve responded to the recession by helping our terminal operators attract new customers and find ways to ship even more by water,” Portiss said.

Additional major infrastructure for ocean ports, rails, or highways is unlikely to be built, Portiss said, and the development of inland waterway facilities is a viable alternative. “The only answer to future volumes of freight traffic to be moved through our country is our inland waterway system. That’s [as] true for those of you on the Upper Mississippi



Jim Butts



Fred Beier



Dan Murray

as it’s true for us on the McClellan-Kerr waterway,” he said.

Dan Murray, vice president of research with the American Transportation Research Institute, closed the panel discussion with an overview of future transportation policies currently being shaped by policymakers and major national transportation groups. He emphasized that national policies and funding allocations are currently in great flux.

Among several initiatives, the latest transportation bill, proposed by Congressman **James Oberstar**, chairman of the House Transportation and Infrastructure Committee, will likely undergo considerable modifications since it does not identify funding sources, Murray said. “The silence of the Congress seems to say everyone wants a transportation bill yesterday but nobody knows how to fund it.”

The event was sponsored by CTS in cooperation with Mn/DOT, the Minnesota Freight Advisory Committee, the Council of Supply Chain Management Professionals—Twin Cities Roundtable, the Metropolitan Council, and the Transportation Club.

Proceedings of the conference will be published shortly. To receive a copy, call CTS at 612-626-1077 or visit www.cts.umn.edu/publications. **CTS**

Passenger rail commission reviews draft plan

The Midwest Interstate Passenger Rail Commission (MIPRC) gathered for a two-day strategic planning meeting in St. Paul in December. **Laurie McGinnis**, acting director of CTS, worked with Mn/DOT in hosting the event and presented welcoming remarks.

The purpose of the meeting was to develop a vision and agreements about the commission’s 2010–2015 work priorities. In the next five years, the MIPRC

is committed to building strong legislative consensus in each of its member states (Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, North Dakota, Ohio, and Wisconsin) through continued advocacy with lawmakers and proactive communication to increase support for passenger rail among all key constituencies—citizens, local communities and jurisdictions, and private sector stakeholders.

Gerard McCullough, an associate

professor in the University’s Department of Applied Economics (and a former CTS director), gave the keynote presentation titled “The Next Decade of Rail.” **CTS**

New research reports available

The enclosed insert lists research reports written by University researchers and published by CTS, Mn/DOT, the Minnesota Local Road Research Board, and other sponsors since November 2009. **CTS**

Report explores plan for transportation knowledge networks

CTS was part of the research team for a National Cooperative Highway Research Program project that recently published *NCHRP Report 643: Implementing Transportation Knowledge Networks*, which explores a business plan for the development of TKNs in the United States. The business plan defines 10 key products and services to be provided to transportation practitioners by regional TKNs, with support from a national coordination function.

TKNs are defined as “decentralized, managed networks linking information providers to users wherever they are located.”

Transportation libraries such as the Mn/DOT Library and the CTS Library capture, organize, and deliver information that meets the needs of practitioners in their organizations. They also help to maintain the information infrastructure

that supports decision making by transportation professionals and policymakers. The existing information infrastructure is incomplete, however, and information is sometimes difficult to find.

At the request of the American Association of State Highway and Transportation Officials (AASHTO), in 2006 the Transportation Research Board (TRB) issued a policy study on how to improve information management in transportation. The study recommended the development of TKNs, building on successful models in medicine and agriculture as well as the Midwest Transportation Knowledge Network, a pilot TKN started by the National Transportation Library (NTL) in 2001.

The business plan in NCHRP Report 643 outlines next steps for this development. With additional funding, TKNs will expand the number of resources

and experts that can be tapped to answer questions as well as develop a robust technological infrastructure for sharing information. One service envisioned by TKNs is a “one-stop shop” Web portal for transportation information, including legislation, case studies, standards, data sets and map layers, consultant studies, and contact directories. This portal would build upon current information services already provided by TRB, AASHTO, and the USDOT, such as TRIS Online and the NTL’s Digital Library.

The continuing development of TKNs to improve information sharing in transportation will help practitioners find information they need, when they need it—saving time and money, and getting better results for their organizations.

For more information, see www.cts.umn.edu/nchrp20-75. **CTS**

Minnesota Toward Zero Deaths program wins international safety award

Minnesota’s Toward Zero Deaths (TZD) program was one of 11 projects from eight countries honored January 11 by the International Road Federation for contributions to excellence in the road industry.

Minnesota’s TZD program received the federation’s 2009 Global Road Achievement Award for safety, which recognizes significant contributions to

improving road safety by devising concepts, products, processes, or systems in relation to road infrastructure, road/vehicle interaction, and driver behavior.

The award was presented in Washington, D.C., at a luncheon during the annual Transportation Research Board meeting (see page 2).

TZD is a Minnesota partnership led by

the Department of Public Safety, Mn/DOT, and the Department of Health, in cooperation with the Minnesota State Patrol, the Federal Highway Administration, Minnesota county engineers, and CTS.

For more about the program, please see www.minnesotatzd.org. **CTS**

Upcoming events *To see other events or publicize yours, visit www.cts.umn.edu/Events.*

March 2	Transportation Career Expo, Minneapolis. See www.cts.umn.edu/Events/CareerExpo .	March 18–19	Concrete Paving Association of Minnesota 49th Annual Concrete Paving Workshop, Breezy Point, Minn. See www.concreteisbetter.com .
March 3	Interdisciplinary Transportation Student Organization 6th Annual Student Paper Conference, Minneapolis. See www.tc.umn.edu/~itso .	Apr. 20–21	Spring Maintenance Training Expo, St. Cloud. See www.mnltap.umn.edu/Events/SpringMaintenanceExpo .
March 3	54th Annual Asphalt Contractors’ Workshop/Quality Initiative Workshop, Brooklyn Center. See www.asphaltisbest.com/calendar.asp .	Apr. 27–28	21st Annual CTS Transportation Research Conference, RiverCentre, St. Paul.
March 9	ITS Minnesota 16th Annual Meeting and Information Exchange, St. Paul, featuring a track with U of M researchers. Call 612-624-3492, e-mail cceconf3@umn.edu , or see www.itsmn.org .	Apr. 28–30	Minnesota Alcohol Traffic Safety Association annual conference, St. Cloud. See www.matsa.us . CTS