

REPORT

A monthly report on transportation research, education, and information/outreach activities at the University of Minnesota

November 2000

Symposium Addresses Impacts of Logistics

The fourth annual CTS logistics symposium, "Impacts of Logistics on the Upper Midwest Economy," on September 11 brought together members of the private and public sectors to discuss issues related to freight transportation logistics. The event was sponsored by CTS and the CTS Logistics Task Force.

In the keynote address, **Christopher Lofgren**, CEO of Schneider Logistics, described the three components of his model: material flow, funds flow, and information flow

With regard to material flow, Lofgren said that moving goods today requires a complex network of providers to ensure capacity coverage. The funds, or financial, flow, drives the need to move money efficiently. And efficient information flow, Lofgren continued, requires better interaction with trading partners. "To do that, we need to be connected," Lofgren said, adding that universal access to one source of data could create an effective collaboration.

To support this model, companies need three capabilities: operational knowledge, technology, and a network of providers. Operational knowledge results in more effective business processes and operations. For example, the work that happens at the shipping dock is critical to cost. Technology provides the medium to automate reliable business processes and standards and creates an efficient information exchange that leads to reductions in all cost categories. The network of providers, on the other hand, is the means to the end. An integrated network drives both costs and price effectiveness; thus, the quality of the network directly impacts the performance. This network has become the most critical component, and technology and business processes should be built around it. However, he said, "integration is critical if all the pieces of the puzzle are to come together."



Christopher Lofgren

The first panel session, "Urgent Concerns and Issues Facing Freight Transportation," featured panelists **Tom Wintz**, president and CEO of Dedicated Logistics; **Doug Restemayer**, manager of domestic operations for TGT Transportations, Target; and **Jerry Flaherty**, Minnesota marketing manager for United Parcel Service.

Rep. Oberstar Keynotes Opening of Duluth TOCC

Federal, state, and local dignitaries gathered in Duluth on August 25 to celebrate the opening of the area's new transportation operations and communications center (TOCC). The ribbon-cutting ceremony was part of "Duluth Intelligent Transportation Systems Day" and also featured an ITS Minnesota Outreach Forum. CTS is a founding member of ITS Minnesota.



Robert Johns presents the CTS Distinguished Public Service Award to Rep. Jim Oberstar.

U.S. Rep. **Jim Oberstar** was the keynote speaker at the ceremony. Officials from the Minnesota Department of Transportation (Mn/DOT), including Commissioner Doug Weisshaar, explained current efforts to use advanced technology to save time, lives, and money. The TOCC, located at Mn/DOT's Duluth headquarters, acts as the control center for a number of technological additions to the region's transportation system.

Other participants included Duluth Mayor **Gary Doty**, State Sen. **Sam Solon**, and **Robert Johns**, acting CTS director. Johns used the setting to present a plaque to Oberstar in honor of his receiving the 1999 CTS Distinguished Public Leadership Award.

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Wintz said that increased insurance costs, driver shortages, and hours of service are several industry problems. Restemayer said that a major issue for Target is increasing pressure from consumers, such as keeping shelves stocked. "The capacity has become more difficult, especially during our peak times," he said. Flaherty discussed how UPS is preparing for the growing e-commerce world by building a worldwide infrastructure that includes e-commerce fulfillment, letters, packages, and long-haul items. According to Flaherty, a second trend adding global marketplace momentum is consumer pull. The Internet allows consumers to compare prices and features and shop outside of their geographic region, which levels the playing field in rural as well as urban communities, he said. The transportation industry must be prepared to support these new business models, he added.

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In the second panel session, "The Role of Government—Practical Applications/Practical Solutions," **Harry Caldwell** of the Office of Freight Management and Operations, FHWA, **Alan Harger**, manager of Freight and Economic Partnerships for the Washington state DOT, and city councilman Ross Thorfinnson, Jr., chair of the I-494 Corridor Commission, discussed strategies for near-term and long-term solutions.

Caldwell said that the good news for railroads is that intermodalism is a growth industry, substantial annual capital programs exist, and innovation (double stack, car tagging) will help the industry. However, there is a need for a more multi-jurisdictional approach to freight planning and for coordinated public and private investments to benefit intermodal freight, among other things.

Harger emphasized the importance of establishing public/private partnerships, particularly using a market pull approach, not public policy push. "In many state governments, we built it and no one came," Harger said. Thorfinnson then illustrated a partnership issue in which SuperValu, a large grocery wholesaler headquartered in Eden Prairie, wanted the city to install an \$80,000 stoplight near its corporate entrance/exit. After 18 months of negotiations, a deal was crafted with Mn/DOT, Eden Prairie, and SuperValu each paying for one-third of the entire project. "SuperValu was very pleased with the outcome and for the city, there's a huge benefit for traffic control," said Thorfinnson.

[For more coverage of the symposium see www.cts.umn.edu. A short proceedings of the event will also be published in the future.] CTS

Fall Industry Forum Explores Personal Transportation's Future

"The Internet and Wireless Communications: Impacts on Transportation Safety and the Way We Travel" was the theme of ITS Minnesota's Fall Forum, held October 11 in St. Paul. The half-day event examined emerging technologies in the areas of naviga-

tion, driver assistance, and vehicle connectivity, and also explored how these technologies are likely to affect drivers and other travelers. ITS Minnesota sponsors semiannual forums that bring together government, industry, and academic perspectives on selected transportation topics.

ITS Minnesota president **Marthand Nookala** opened the session with a brief overview of technological trends already impacting transportation. He was followed by **Doug Weiszhaar**, deputy commissioner of Mn/DOT, who highlighted the department's ongoing involvement with advanced transportation technologies.

Session One consisted of presentations by representatives of several industry leaders in transportation technology. For example, **Richard Mudge**, president of the Compass Services Division of U.S. Wireless Corporation, explored the convergence of three currently independent networks: transportation, the Internet, and wireless communications. And **Robert Rebholz** from Microsoft offered a vision of the future in which the personal automobile becomes a "communications hub" alongside the home and the office.

Following the morning break, Session Two, moderated by Major **Dennis**

Lazenberry of the Minnesota State Patrol, shifted the focus to human factors and safety implications surrounding wireless technology. Professor **Peter Hancock**, research director of the University's Human Factors Research Laboratory, presented his analysis of communication technology's impact on personal vehicle travel and responded to the preceding industry presentations.

Based on extensive research into driver behavior, he outlined the way humans perform an "overlearned" task such as driving an automobile, and highlighted the ways drivers may respond to an increase in the amount of information they have to process. Hancock urged attendees to think about "what should be done, not just what can be done" in terms of new technology.

A luncheon presentation by **Joe Giglio**, past chairman of ITS America and currently senior advisor at Hagler Bailly, New Jersey, rounded out the forum. Giglio drew a distinction between sustaining technology, which improves our ability to do what we do now, and disruptive technology, which forces a dramatic change in how we conduct our daily activities.

[For more coverage of the forum see www.itsinst.umn.edu.] CTS

Speakers Call for Environmentally Responsible Transportation

The Humphrey Institute of Public Affairs held a conference titled "Transportation as a Service to the Common Good: Developing a Process for Environmentally Responsible Transportation Systems in Minnesota" on October 16. CTS, Mn/DOT, and the Minnesota Office of Environmental Assistance were cosponsors.

The event began with opening remarks from **Frank Douma**, **John Brandl**, and **Lee Munnich** of the Humphrey Institute. The keynote was given by **Shelley Poticha**, executive director of the Congress for the New Urbanism. Next followed a morning session moderated by Commissioner **Elwyn Tinklenberg** of Mn/DOT on "Planning Big: Why Is Now the Right Time for Minnesota Transportation Planning to Become More Environmentally Responsible?" Speakers were **Jay Lindgren**, regional administrator



Peter Hancock

CTS Seeks Nominees for Research Partnership Award

CTS is accepting nominations for the fifth Research Partnership Award. Initiated in 1996, the award is designed to recognize research projects within the CTS program that have resulted in significant impacts on transportation, and to reward those teams of individuals who have drawn on the strengths of their diverse partnerships to achieve those results. Criteria and submission instructions are in the enclosed form.

Last year's winning project was "Efficacy of Erosion Control Blankets and Soil Stabilizers"; partners were the University's Plant Biology department and Biosystems and Agricultural Engineering department, Mn/DOT's Environmental Services, and a landscaping supply company.

An evaluation committee will review the nominations and recommend a winning partnership to the CTS director for approval. Winners will be announced at the CTS Annual Meeting and Awards Luncheon on April 17, 2001. Please return your nomination form to **Diana Flotten** of CTS by January 15, 2001. CTS

Transportation & Regional Growth Study

Seattle and Portland Officials Review Met Council Plan

Barb Thoman and **John DeWitt** of Transit for Livable Communities presented the findings of a peer review of the Metropolitan Council's key transportation planning documents—the Transportation Policy Plan and the TEA-21 project ranking criteria—on October 12. The review was conducted by **Ralph Cipriani** of Seattle, manager of the metropolitan transportation plan for the Puget Sound Regional Council (PSRC), and **Mike Hoglund**, transportation planning manager for the Portland, Oregon, metropolitan area. The presentation was part of the Transportation and Regional Growth study's ongoing workshop series.

The Peer Review identified five themes common to transportation planning in the Twin Cities, Seattle, and Portland:

1. Land use is central. Both Portland and Seattle have made land use regulation central to managing transportation issues as the regions' populations increase. In particular, the PSRC seeks to reinvent the region's form in coming decades by holding the line on growth and increasing overall density.

2. Both incentives and regulation are needed. Portland and the PSRC have adopted regulations and incentives as integral parts of their approaches.

3. Incentives should be defined and implementation guided. The final plans adopted by Seattle and Portland define their incentive-based policies, and include elements like street design guidelines and design classifications.

4. A regional pedestrian and bike approach is included. Both Seattle and Portland incorporate an explicit, regional vision of non-motorized transportation's role; a regional scope is considered critical for success.

5. Transit is a foundation of regional development patterns. Both Portland and the PSRC view fixed rail and other high-capacity transit as a foundation of regional development. In this context, transit hubs become a focus for development and a key element of the overall growth-steering strategy.

For more information see the study's Web site: www.cts.umn.edu/trg.

Additional Issues

In addition, the Peer Review pointed out several areas where the three metropolitan areas differed in their philosophies and implementation strategies.

1. Flexibility in project selection. The Metropolitan Council's proposal is much more detailed and specific, allowing for a greater level of individual project merit evaluation.

2. Focusing on transportation pricing and full costs. This is a major component of the Puget Sound plan, and the PSRC relies on full-cost analysis to inform decision making.

3. Taking account of induced demand. Portland has introduced detailed procedures to account for demand created by transportation and land use projects.

4. Setting goals and measuring progress. Portland has also adopted and applied regional performance indicators to set goals and judge plans.

5. The Twin Cities' strong starting point. Both reviewers had substantial praise for numerous Twin Cities policies and innovations.

Following Thoman and DeWitt's presentation, researcher **Mary Vogel** of the University of Minnesota's Department of Landscape Architecture provided additional analysis of the trans-

portation planning issues raised in the Peer Review. In her view, a comprehensive transportation planning effort should implement a "street focus"—recognizing that the design of a street is important to the development of the community, and therefore to the transportation needs of those who live, work, or travel there.

Next Workshop December 7

The abstract for the December 7 workshop follows. There is no fee for the workshop and registration is not required. It will be held from 3:45–5:00 p.m. in Room 2-213 of the Carlson School of Management, west bank campus, Minneapolis.

"Household Tax Impacts from a More Household-Variable Road Pricing Strategy"

—**Barry Ryan** and **Tom Stinson**,
Department of Applied Economics,
University of Minnesota

What potential influence does state transportation finance policy have on regional development in the Twin Cities? How do road taxes change for households as they move away from jobs in the central cities and commute greater distances to work? Would stronger price signals change their travel and housing location decisions?

These questions are addressed in a comparison of the current road financing policy with a more use-related pricing approach. The analysis varies household size and income level, the vehicles driven and distances traveled, home values, and local community. In the end the average road tax may not be significant enough to influence many household decisions, but as always changing tax policy creates a new set of winners and losers. Ryan asks: Which will you be? **CTS**



Mary Vogel

of the Metropolitan Council; **Lisa Thorvig**, deputy commissioner of the Minnesota Pollution Control Agency; and **Dean Barkley**, director of Minnesota Planning.

Robert Johns of CTS introduced the luncheon speaker, **Mike Erlandson**, chief of staff for U.S. Rep. **Martin Sabo**. The afternoon featured two sessions: the first, "Sustainable Transportation: The Next Generation," featured a video produced by Minneapolis South High School students. The second afternoon session, "Scoring Big: Strategies at Work," was moderated by **Curt Johnson** of The Citistates Group and included representatives of the Maryland Department of Transportation, Portland, Oregon's, planning department, and a consulting firm. **CTS**

Fall Maintenance Expo Features Road, Safety Sessions


The Fall Maintenance Expo & Snow "Roadeo" was held again at the St. Cloud Public Works Facility September 27–28. The two-day expo attracted over 1,300 registrants from state, county, city, and township governments. They shared a common interest in keeping up to date on the latest in road maintenance and safety equipment, and in hearing informational sessions on topics related to road and street maintenance. It was also a chance for attendees to show off their snowplow operating skills in the Roadeo.

Expo attendance has been increasing each year. The booths showing safety equipment, new products, and new techniques in

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maintenance practices, as well as the exhibits of large maintenance equipment located outside in the “yard,” were visited by many attendees throughout both days. Educational session topics included cutting torch safety, winter patching and materials, and wheel loader training, among other things. There also was a session on the ITS Institute’s advanced snowplow research as well as an opportunity to ride in the prototype snowplow which will be used by Mn/DOT this winter.

Maria Hagen of CTS served on the expo planning committee, and the Center’s Minnesota Technology Transfer (T²)/LTAP Program was a cosponsor. 



Learn “Who’s Paying the Price for Congestion” at November Workshop


There’s still time to register for the first Minnesota Value Pricing Workshop, “Congestion in the Twin Cities: Who’s Paying the Price.” The Humphrey Institute and the Federal Highway Administration are hosting the November 29 event at the Holiday Inn Metrodome, Minneapolis west bank campus. Mn/DOT, the Met Council, and CTS are cosponsors.

Registration for the workshop is \$75. For further information please contact **Marit Enerson** at 612-625-8575, menerson@hhh.umn.edu. 

Minnesota T² Lays Down New Asphalt Pavement Course


The Minnesota T² Program, housed within CTS, is offering a new one-day course, “Asphalt Pavement Maintenance and Preservation,” beginning in December (see sidebar at right). Offered at five locations around the state, the course is based on the new *Best Practices Handbook on Asphalt Pavement Maintenance* published by Minnesota T² in partnership with the Minnesota Local Road Research Board and Mn/DOT’s Office of Materials Research.

Participants will learn about the full range of available pavement maintenance and rehabilitation treatments and when to apply these treatments for the most cost-effective measures to extend pavement life.

Classes are expected to fill quickly, so get your registrations in early. Call **Bev Ringsak** at 612-624-3720 for details. 

Upcoming Transportation and Related Events

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

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| Nov. 30 | CTS Fall Luncheon: “New Paradigms in Public Transit,” by Robert Paaswell, Holiday Inn Metrodome, Minneapolis. Call Shirley Mueffelman at 612-624-4754. |
| Dec. 6 | “Are We Building Communities or Enclaves?” Sponsor: Sensible Land Use Coalition. Call 612-474-3302. |
| Dec. 7 | 50th Annual Concrete Conference, Earle Brown Center, St. Paul. Call Catherine Ploetz at 612-625-4257. |
| Jan. 7–11 | 80th Annual TRB Meeting, Washington, D.C. Call 301-694-5243 or visit national-academies.org/trb/meeting . |
| Jan. 16–19 | 56th Annual County Engineers Conference, Cragun’s Conference Center, Brainerd. Call Bev Ringsak at 612-624-3720. |
| Jan. 24–26 | City Engineers Annual Conference, Earle Brown Heritage Center, Brooklyn Center. Call Catherine Ploetz at 612-625-4257. |
| Feb. 22 | Fifth Annual Pavement Conference, Earle Brown Center, St. Paul. Call Catherine Ploetz at 612-625-4257. |
| Apr. 18–19 | Minnesota Spring Maintenance Expo, St. Cloud. Call Bev Ringsak at 612-624-3720. |
| May 23–24 | 12th Annual CTS Research Conference, RiverCentre, St. Paul. Call Catherine Ploetz at 612-625-4257.  |

ITS Institute Seminars


Seminars take place on Thursdays from 4:30–5:30 p.m. in Room 108 of the Mechanical Engineering Building on the Twin Cities campus. They are simultaneously broadcast to the University of Minnesota Duluth Campus, Room 173 Kirby Plaza. For more information check the Institute’s Web site: www.itsinst.umn.edu.

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| Nov. 30: | “Advancements in Transit-Related Research,” Walter Kulyk , Director, Federal Transit Administration (FTA) Office of Mobility Innovation (invited) |
| Dec. 14: | “Monitoring Weaving Sections Using Computer Vision Techniques,” Nikolaos Papanikolopoulos , Computer Science and Engineering |

Minnesota T² Workshops

For details contact **Bev Ringsak**, 612-624-3720, or e-mail bringsak@cce.umn.edu.

Asphalt Pavement Maintenance and Preservation

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| Dec. 12: | Crookston |
| Dec. 14: | Hibbing |
| Feb. 6: | Earle Brown Center, St. Paul |
| Feb. 7: | Marshall |
| Feb. 8: | Rochester  |

Reminder: CTS Fall Luncheon is November 30

Time is running out to register for the CTS Fall Luncheon on November 30 with Robert E. Paaswell, who will speak on “New Paradigms in Public Transport.” Call Shirley Mueffelman at 612-624-4754. 