Freight Planning in an Uncertain World

November 30, 2007

A Summary Report

Keeping pace with changing global markets, meeting world demand for a host of commodities and products, and conserving precious fuel resources while developing new ones are among the many challenges facing the transportation industry. The 11th Annual Freight and Logistics Symposium brought together representatives from the public, private, and academic sectors to discuss freight planning in an uncertain world. Robert Johns (CTS director), Rebecca Jasper (Council of Supply Chain Management Professionals—Twin Cities Roundtable president), and Ron Have (Minnesota Freight Advisory Committee chairman) opened the forum by acknowledging the many freight challenges prevalent today and the need for ongoing dialogue between the public and private sectors. Symposium topics included national transportation policy, transportation infrastructure, ports, railroads, biofuels and agricultural byproducts, and transportation education. This report summarizes the three main sessions of the symposium.

The Only Constant is Change: Transportation Changes In The Upper Midwest

Introduction: Robert Johns, Director, Center for Transportation Studies

Keynote Speaker: Richard Stewart, Professor and Director, Transportation and Logistics Research Center,

University of Wisconsin-Superior

Panel: Current Freight Challenges

Moderator: Richard Murphy Jr., President, Murphy Warehouse Company

Panelists: Leslie Blakey, Executive Director, Coalition for America's Gateways and Trade Corridors; David Christianson, Associate, SRF Consulting Group; Jerry Fruin, Associate Professor, Department of Applied

Economics, University of Minnesota; Catherine Petersen, Principal, CJ Petersen & Associates

Panel: Public Policy Alternatives

Moderator: Bill Gardner, Transportation Planning Director, Minnesota Department of Transportation (Mn/DOT) Panelists: Mike Wagner, Director of Public Works and County Engineer, Nicollet County; Adolph Ojard, Executive Director, Duluth Seaway Port Authority; Leslie Blakey, Executive Director, Coalition for America's Gateways and Trade Corridors

Concluding Observations

Robert Johns, Director, Center for Transportation Studies



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The Only Constant Is Change: Transportation Changes in the Upper Midwest

Keynote Presentation

Introduction: Robert Johns, Director, Center for Transportation Studies

Keynote Speaker: Richard Stewart, Professor and Director, Transportation and Logistics Research Center, University of Wisconsin–Superior



Richard Stewart

In his keynote speech, Richard Stewart, professor and director of the Transportation and Logistics Research Center at the University of Wisconsin–Superior, presented an overview of changes in technology and transportation during the last 40 years. Speaking from a global perspective to an estimated 100 freight and logistics professionals, policymakers, and researchers, Stewart outlined five elements essential to transportation in the upper Midwest (including the Canadian provinces of Ontario and Manitoba): corridors, demand, energy, information, and people.

Corridors and the big picture

Stewart pointed out the considerable challenges posed by capacity, congestion, and the cost to upgrade and construct new transportation infrastructure. "We are wrestling with sheer land availability and the gentrification of our waterfronts, which reduces our access for freight to move in corridors," he said.

Further limitations on land development are inevitable,
Stewart added, pointing to likely political battles. "In some areas, we're going to have to limit sprawl and land development," he said.
"This is going to be seen in many communities as anti-growth, but I lay before you that, in many regions of the world, it is vertical development—not horizontal—that they deal with."

The co-mingling of moving people alongside freight complicates the picture. "In the freight world," Steward said, "we wrestle with the issue that all our corridors are shared resources. Ships are filled with iron ore and wind generators and vie for space with recreational boats. All the highways share space with automobiles. Even the private railroads are dealing

with even more demand for passenger transport."

From a Minnesota perspective, one bright spot is the port of Prince Rupert in British Columbia. The port offers an uncongested, high-speed trade corridor between Asia and North America, developed by CN Rail (Canadian National Railway) and the Canadian government, where Asian imports typically arrive in Chicago and the Midwest within 12 days. Stewart noted innovations at the port move containers directly from ships to intermodal rail without the use of trucks.

Stewart said sources of revenue from taxes and other government programs have not kept pace with demand for infrastructure improvements. Since developing and maintaining transportation infrastructure uses a higher portion of all government budgets, resulting in higher fees and taxes, Stewart suggested developing and implementing more equitable means of collecting revenue to pay for transportation corridors, with fuel-

"We can rise to the challenge. We have dynamic people. We have a history and a will to find solutions."

——Richard Stewart, University of Wisconsin–Superior

efficient cars (and the reduced tax base) one likely target.

Demand

According to Stewart, explosive world population and economic growth will continue to deplete global energy resources and trigger continued shifts in trade patterns, especially as emerging nations China, India, and Indonesia adopt Western lifestyles. "Increased demand for products from regions like China, Indonesia, and India will create more rapid change than we've ever

seen before," he said, noting that China has more grammar school students than the total population of the United States. "We'll have to have agile, flexible supply chains to deal with this."

The prevalence of global sourcing, weighed against transportation costs, has created a highly dynamic world market for commodities and goods, Stewart suggested, giving examples of commodities such as steel-mill waste (taconite) and corn waste products exported from the United States to other nations. But he questioned the affordability of shipping unprocessed raw materials or extra packaging demanded by retailers, noting the strain on resources. Japan, for instance, has virtually no raw materials, but its transportation systems allow it to be a producer of automobiles and other equipment.

In the interest of global competitiveness, Stewart also proposed making U.S. borders more open to trade despite security threats, while also finding improved ways to forecast demand via improved data accuracy and information systems.

Energy

Rising energy costs have and will continue to force changes in transportation, including a trend back to regionalized terminals and warehouses to offset fuel costs and congestion delays, Stewart said. Private-public funding scenarios are likely, especially for the development of regional facilities, such as intermodal terminals 300 to 500 miles apart. For example, Stewart cited carrier J.B. Hunt's corporate policy of only moving goods via truckload that take less than a day to deliver—otherwise, the company uses intermodal rail.

Lowered velocity from congestion and rising energy costs also reverse today's streamlined pull demand systems to old-fashioned push logistics systems, causing increased costs due to inventory buffers, away from just-in-time supply chain methods. "When

energy costs are high, the more likely it is that volume trumps time," Stewart said, citing higher volumes of cargo to take advantage of economies of sale.

Congestion and the quest toward fuel savings, Stewart said, have also inspired equipment innovations. For instance, 53-foot containers are increasingly common on international moves as well as double-stack rail cars. Environmental costs, he noted, increasingly are being factored into transportation costs. For example, the Port of Los Angeles in Long Beach has mandated that by 2012, no trucks built prior to 2007 will be allowed into the port network.



Information

A need to track smaller units, track transportation data more accurately, and link disparate information systems presents a significant challenge to transportation and information systems professionals, Stewart said, supporting tax credits for companies that upgrade old systems as a partial solution. "We move three things in transport: product, information, and money," he added. "We must link together cross-border systems to do this effectively, and we've yet to meet that challenge. Security can also be the enemy of optimal system efficiency and information."

"Increased demand for products from regions like China, Indonesia, and India will create more rapid change than we've ever seen before."

> —Richard Stewart, University of Wisconsin–Superior

People

Loss of people in the transportation profession is an ongoing problem, though Stewart said supply-chain management is increasingly seen as the route to CEO in today's com-

petitive global marketplace. Stewart, as well as other presenters, emphasized the need for improving education about the importance of freight transportation and infrastructure to the United States nationally and internationally. "We need to start teaching about transportation at a much earlier age and offer more associate and technical degrees involving transportation," he said.

Above all, Stewart stressed the need for a more comprehensive national transportation policy for all modes that incorporates a truly global perspective while meeting local needs. "We lack vision (as a nation) where we want to be in 10 to 20 years," he said. "The creation of regulations, such as truck-weight limits or a host of others, also creates barriers to a system that is already strained and facing difficulties. This will not be an easy solution."

ernment's principal role in transportation is to ensure safety. He said encouraging public-private dialogue is essential, such as advisory councils with representation from shippers or even consumers. "All politics are local," Stewart said, again, pointing to gaps in education about supply chain and transportation. "Votes count and the government needs to, first and foremost, make the general public aware of what goes into the supply chain when we go to Target and pull down that sweater."

Stewart concluded by predicting global economic growth will push corridors to consolidate. He stressed that shipping distances have to shrink unless productivity can be increased. "In order to have nationalization and move freight across great distances," he said, "it has to be cost-effective."

No easy answers

In response to a question about the Prince Rupert port gateway, Stewart said routes from Print Rupert to the port of Duluth could shave an additional 22 hours off transit times, though some shippers might be hesitate to use the route because it has only one rail line and lacks competition. He also proposed spacing terminals 500 miles apart. "This allows for 250 mile drays—which means you can pick up and bring back a load—as one of the most cost-effective ways of operating the system," he said.

Next, Stewart underscored that the gov-

Stewart stressed the need for a more comprehensive national transportation policy for all modes that incorporates a truly global perspective while meeting local needs.

Despite the many challenges ahead, however, Stewart remains optimistic that the United States will succeed. "We can rise to the challenge," he said. "We have dynamic people. We have a history and a will to find solutions."



(From left) Robert Johns and Richard Stewart

Current Freight Challenges

A Panel Discussion

Moderator: Richard Murphy Jr., President, Murphy Warehouse Company

Panelists:

Leslie Blakey, Executive Director, Coalition for America's Gateways and Trade Corridors; David Christianson, Associate, SRF Consulting Group; Jerry Fruin, Associate Professor, Department of Applied Economics, University of Minnesota; Catherine Petersen, Principal, CJ Petersen & Associates

In this panel discussion about current challenges, moderator Richard Murphy Jr., president of Murphy Warehouse Company, reminded attendees that logistics costs, which have fluctuated in recent years, account for approximately 10 percent of the GDP. Nearly 70 percent of all domestic tonnage runs on trucks.

Murphy underscored a point that keynote speaker Richard Stewart made about the reverse trend toward regionalized distribution, noting how the nation's import-driven economy has changed traffic flows and patterns. Imports have also prompted innovations in containerized cargo that moves on ships, rail, and truck—only a small fraction of the nation's freight volume, but one of the fastest-growing segments.

"The growth is coming at us so quickly that we are really like the people standing on the beach looking at the tsunami.

We need to start focusing on how we're going to manage this, because we are going to be simply swept away."

—Leslie Blakey, Coalition for America's Gateways and Trade Corridors

Murphy, as well as a few presenters, noted widespread container shortages, known as the "Maersk effect." As a result, he said many ocean carriers charge extra to take equipment inland. "Boxes aren't coming inland as much as they did," he said, "and carriers are performing trans-load operations up to 100 miles off port."

Moreover, 40-foot container loads are being consolidated into fewer 53-foot trailer loads. In pointing out other ways to reduce transportation costs by consolidation and alternative transportation modes, Murphy reminded attendees that one barge load is the equivalent of 15 railroad carloads or 80 truckloads.

Cohesive transportation policy lacking

Leslie Blakey, executive director of the Coalition for America's Gateways and Trade Corridors (CAGTC), cautioned attendees that the United States could indeed lose its long-time position as the leading global economic power to regions like China and India in coming decades. CAGTC, formed in 2001 to promote awareness of U.S. freight transportation infrastructure issues, is a group of more than 40 organizations, including representatives from motor carriers, railroads, ports, engineering firms, and freight corridors.

Blakey characterized the growth of other regions as both an opportunity and a huge threat to U.S. efforts aimed at maintaining good jobs, building a strong economy, and developing commerce. "We've taken for granted the way the United States has operated, the kinds of products we produce, and the way we expect to get products from the rest of the world—which is certainly chang-

ing very rapidly," she said, urging a broadened perspective to encompass border points and trade gateways, not just U.S. ports.

Blakey lauded efforts to develop gateways and ports, such as Prince Rupert and Houston, but warned that demand will exceed capacity at many U.S. ports by as much as 200 percent in 2020. "The growth is coming at us so quickly that we are really like the people standing on the beach looking at the tsunami," she said. "We need to start focusing on how we're going to manage this, because we are going to be simply swept away."



Richard Murphy Jr.



Leslie Blakey



David Christianson

Blakey observed that Washington-based policymakers have been slow to recognize the urgency of the national transportation problem, and lack of transportation education contributes to the problem. She predicted the United States' inadequate transportation infrastructure would fall further behind without stronger action at the federal level to fund initiatives and build support for improving the U.S. transportation infrastructure and crafting a national transportation policy.

Physical bottlenecks on highways, rail lines, shipping yards, and other transit points account for 40 percent of all freight congestion. According to Blakey, annual costs associated with congestion and delays at America's top 200 bottleneck sites—many in metropolitan areas—annually cost \$7.8 billion and 243 million hours in lost productivity.

Moreover, Blakey said, as other regions such as India and China pour billions into their developing infrastructures, mature regions like the European Union continue to modernize their networks with public-private partnerships and public support. The solution for the United States, she said, lies in a cohesive national transportation policy with more sources of funding and a greater awareness of the contributions needed from all sectors—government, carriers, and the public.

Agricultural boon increases transportation demand

At the state level, David Christianson, an associate with SRF Consulting Group, discussed the impact on local transportation infrastructure from regional efforts to accommodate trade and economic growth. As an example of a fast-growing Minnesota region closely tied to agriculture, he pointed to District 7, one of Minnesota's eight state DOT districts in

Minnesota and located in the southwestern part of the state.

District 7 is experiencing significant economic growth due to agricultural production as well as new or growing technology-based businesses. Following a comprehensive Minnesota Department of Transporation (Mn/DOT) statewide study, shippers and the public sector contributed to a detailed analysis of District 7's transportation infrastructure as part of a year-long study to help understand Minnesota's transportation needs.

Christianson said increases in crop and hog production—as well as the burgeoning ethanol and biofuels market—had spiked demand for intermodal transportation in District 7 while increasing stress on county roads. He emphasized the need for more intermodal access via short-line rail and improved roads, as well as a statewide road-testing program, to better coordinate real load capacities on road surfaces and structures.

"Ethanol and other biofuels are important to us for national security as a replacement of fossil fuels, and it is very important to agriculture."

> —Jerry Fruin, University of Minnesota

"We don't have the local access points to make the intermodal system efficient," Christianson said, noting farmers have to truck their own goods to ports in Minnesota (Savage and St. Paul) and the quad cities in Iowa. "We're going to be left out of the international market if we don't have good economical access."

Christianson predicted continued large increases in corn production, with 40 percent of the nation's crop going toward motor fuels by 2010. Minnesota is a leading U.S. producer of corn, soybeans, and ethanol (ranked number three for each).

Corn economics

Jerry Fruin, associate professor of applied economics at the University of Minnesota, discussed the effects of biofuels on the economy and transportation infrastructure. "World economics have changed," he said. "Ethanol and other biofuels are important to us for national security as a replacement of fossil fuels, and it is very important to agriculture, both in the United States and around the world, as we transition away from oil."

Fruin's presentation covered both the economic and transportation implications of the current and future ethanol market. He said Minnesota has recently doubled its ethanol production by increasing corn production, and output is expected to nearly double again within the next five years.

From the economic perspective, Fruin forecasted the United States' subsidy of corn-based ethanol, in effect since 1978, could be abolished or lessened once a current tax credit program ends December 31, 2010. "To stabilize the industry, it makes a lot of sense to make that subsidy die and tie the subsidy to the price of the crude oil with an increasing subsidy as the price of crude drops below some point, such as \$50 or \$60 per barrel," he said.

Both Christianson and Fruin noted biofuels-based agricultural production, including exponential increases in Minnesota corn production, has positive and negative economic effects. Corn exports continue to remain high because of world demand and the weak U.S. dollar. And though grain prices have increased (good for farmers), some food price increases, such as eggs and corn products, can be directly attributable to increased demand for corn and its byproducts (bad for consumers). [As noted in the 10th Annual Freight and Logistics Symposium, other drawbacks to increased biofuel development include drains on natural resources, including the overuse of land.]

Fruin cautioned that Minnesota—as one of eight Midwestern states slated to produce

90 percent of the nation's ethanol—and the rest of the nation aren't prepared for the infrastructure strains created by ongoing increases in corn production. He said significant increases in handling due to the byproducts of corn, namely liquid ethanol and the dried byproduct DDGS (distillers dried grains and solubles), will increase costs and add to road congestion. In addition, DDGS, which has a higher feed-value than corn and also is exported, presents a special hauling challenge because of its sticky consistency. As a result, railroads don't want their equipment used to haul DDGS.



Jerry Fruin

According to the Trade Logistics
Performance Index, the United States
ranks sixth in logistics performance
worldwide, behind Singapore, Japan,
Hong Kong/China, the U.K., and Canada.

—Catherine Petersen, CJ Petersen & Associates

Minnesota—a major trading partner

Catherine Petersen, of CJ Petersen & Associates, addressed Minnesota's growing role in the global economy. Minnesota, she said, produced \$15 billion worth of export goods in 2006 alone, with China and Canada as the top markets. Though promotion of free trade is positive, she said, the reality of border enforcement hinders efficient logistics at the import and export levels. "At the borders, Customs is looking for information," she noted, "and it slows down the velocity of the movements of goods."

Petersen explained a need for better information sharing to speed the movement of goods as well as a national database to more accurately measure U.S. logistics performance. Additionally, she challenged transportation researchers throughout the United States to compile their own performance index. "We need to build a national database



Catherine Petersen

to understand where we're going in five to 10 years and to set national goals as well as understand how we measure up and can continue to connect with our leading trade partners, both import and export," Petersen said.

Petersen also cited a measuring system innovation called the Trade Logistics Performance Index, a comprehensive global performance index pioneered in Finland. According to the index, the United States ranks sixth in logistics performance worldwide, behind Singapore, Japan, Hong Kong/China, the U.K., and Canada.

Private-public partnerships

In response to a question about the private-sector role in developing federal transportation policy, Blakey reported that private-sector input had been sought by the National Surface Transportation Policy and Revenue Study Commission, authorized by the 2005 SAFETEA-LU bill to develop a national vision for transportation. She added that the commission was also studying Highway Trust Fund revenues.

"They're looking at what we need to do about the fact the Highway Trust Fund is going broke," she said. "It involves a good deal of input from the banking and finance side."

Blakey also discussed ways to better inform elected officials about transportation. She advocated for a unified approach, which could include a national governing body to oversee transportation planning with input from the private sector. "We really need something that is going to build a much bigger, unified picture of our transport system—beyond just being driven by elected offices," she said. "That's where we are now."

Christianson noted international trade represents a model of a non-political, non-partisan, and largely private market where the private sector has responded, demonstrated especially through innovations at many seaports. "[Private] industry isn't perfect, but it has a huge capacity for expansion and capital generation when it's needed," he said, "Governments should do everything they can to promote that efficiency."



(From left) David Christianson, Jerry Fruin, Catherine Petersen, and Leslie Blakey

Public Policy Alternatives

A Panel Discussion

Moderator: **Bill Gardner**, Transportation Planning Director, Minnesota Department of Transportation (Mn/D0T)

Panelists:

Mike Wagner, Director of Public Works and County Engineer, Nicollet County; Adolph Ojard, Executive Director, Duluth Seaway Port Authority; Leslie Blakey, Executive Director, Coalition for America's Gateways and Trade Corridors

A second panel explored public policy alternatives for meeting freight industry challenges. To initiate discussion, moderator Bill Gardner, transportation planning director at Mn/DOT, noted the overarching question of defining the public responsibility versus the private industry role. He invited the panelists to address ways the two sectors can work together to approach challenges.

An agricultural-based county

In a similar vein to David Christianson's earlier overview of District 7, Mike Wagner, director of public works and county engineer for Nicollet County, gave an overview of road development in the southwestern Minnesota county, which hasn't kept pace with increased agricultural production.

"The old system of designing a road and depending upon law enforcement to make your road last throughout the spring is out the window."

> —Mike Wagner, Nicollet County, Minnesota

Wagner noted Nicollet isn't necessarily typical of other Minnesota counties in its heavy agricultural use of roads. Though he characterized the county as supportive of freight and trucking, he said funding, including national allocations, has not been able to keep pace with the demands caused by increased agricultural production for road improvements and new roads. In particular, the county's small allocation from federal money (highway user's distribution tax fund) is covering mostly maintenance for local roads, not building new roads.

According to Wagner, lack of state funding has forced the need to issue bonds for road enhancements while lack of county resources prevents enforcement of weight limits on county roads, which have a span of 20 years of use. What's more, increasingly larger farm equipment is also threatening county roads. "The old system of designing a road and depending upon law enforcement to make your road last throughout the spring is out the window," he said.

Booming Great Lakes ports

In sharp contrast to roads, the inland port of Duluth holds considerable potential to meet Midwest and global shipping needs. Adolph Ojard, executive director of the Duluth Seaway Port Authority, outlined develop-

ments at the rapidly growing port, one of the largest U.S. ports for dry bulk shipments. The port currently handles some 47 million tons of freight, mostly iron ore and other dry bulk cargo.

Combined, the Great Lakes seaway system accounts for 275 million tons annually, serving a considerable percentage of the

nation's population. But, according to Ojard, no containerized freight passes through Great Lakes ports, and only 10 percent or less of all maritime freight is actually containerized.

A number of world developments have made the Duluth port a dynamic one, especially with a continual influx of import and export traffic. Both the wind energy and steel markets are booming, and the port will continue to handle increasing amounts of volumes in these industries, Ojard said, noting a planned taconite-to-steel plant by



Bill Gardner



Mike Wagner

India-based Essar Steel in development near Nashwauk, Minnesota. "We'll be bringing in newer, higher-volume ships, especially for our export of slab steel, to markets such as India," he added.

"We're in a frenzy now with the wind energy business," Ojard explained, dubbing it a cash crop for the farming community because of incentives to accommodate the equipment. In its 2007 fiscal year, the port shipped some 350,000 freight tons of wind turbine components and expects to double that for its 2008 fiscal year, with robust import and export markets.

Ojard also said the development of the "H20 Highway," an alliance of marine stakeholders in the Great Lakes/St.

Lawrence Seaway System consisting of 18 ports, could ease the burden of other transportation systems. The H20 Highway will work in conjunction with railroads and feeder lines (small

ship lines) that take cargo from a mother ship to a smaller ship and traverse waterways.

Looking ahead, Ojard admitted that infrastructure—both on the water and off-would present challenges. Port side, many in the industry are calling for European electric-powered engines, called "gensets," on high-tech ships. But the United States would need a waiver of the Jones Act, which limits U.S. sea lanes to domestically operated fleets, to operate these. Off the water, he added, developing a more robust intermodal rail corridor in the Great Lakes region is greatly needed to handle highwide and heavy shipments. "We've got a little work to do yet in cooperation with the railroads, but we have to be patient," he concluded. "I think it will come in time."

Federal roadblock

Leslie Blakey, of the Coalition for America's Gateways and Trade Corridors (CAGTC), made a second presentation, this time focusing on policy updates. Most important, she stressed the need for Congress to focus on national funding for transportation and to develop a cohesive national transportation policy.

She noted that groups like ARBTA (American Road and Transportation Builders Association) and AASHTO (American Association of State Highway and Transportation Officials) have been giving more attention to the movement of freight and goods.

"The freight needs are so enormous that we need to be expanding the entire system and not focusing on a silo effect—which we talk about a lot in Washington D.C.—related to the policy and the funding streams that are so modally specific," she said.

"Federal highway and transit (airport, rail, port, and waterway) capital investment programs are woefully underfunded to meet current or future mobility, security, and environmental needs."

—Leslie Blakey, Coalition for America's Gateways and Trade Corridors

While Blakey conceded the nation's policymakers are paying attention to lobbying by her group and others, the long lead times required on major infrastructure projects combined with the nation's continued underinvestment in the projects could create a crisis and further cause the United States to lag in economic power.

Disadvantages, she said, come in a number of areas from aging infrastructure, lack of capacity, and real costs to consumers and shippers from delays and congestion. "Federal highway and transit (airport, rail, port, and waterway) capital investment programs," Blakey said, "are woefully underfunded to meet current or future mobility, security, and environmental needs."

The private sector is absolutely essential to help finance transportation projects, Blakey continued, especially because of the enormous gap between available public funds and the level needed to accommodate the anticipated growth in transportation demand for freight movement.

Blakey cited deregulated railroads as one area where private-sector investment needs to be stepped up. "Railroads are operating at capacity now and making the biggest profit they've ever made," Blakey said, pointing to the strain on highways and added congestion from more trucks on the road because of a lack of investment in railroad and intermodal infrastructure.

In addition, Blakey said, the nearly depleted Highway Trust Fund (HTF) and inflationary effects of older tax programs also beg the need for more public-private partnerships to fund transportation projects. "State DOTs [departments of transportation] are hard up because all money is going for maintenance," she explained. "At least a 10-cent-per-gallon tax increase is needed to bring the Highway

Trust Fund up to 1993 buying power level."

In the face of an estimated and whopping \$1 trillion gap in national transportation infrastructure needs, Blakey said CAGTC and other groups are calling for a freight trust fund to provide a comprehensive fund dedicated to the construction and improvement of freight movement infrastructure, built on programs established in SAFETEAU-LU. The fund could tap other revenue sources besides those currently dedicated to the federal HTF.

Getting the message across

Gardner, as moderator, helped to close the panel by asking panelists how the transportation community can remain flexible while meeting needs. Blakey suggested one step is obtaining better data. "There's more information out there than anyone can process now," she said. "There's opportunity at the federal level for an agency to coordinate data with the private side. DOT sees the need."

The panel session ended with a discussion about communicating the importance of freight transportation to the nation, especially with educational outreach to consumers and lawmakers.



Adolph Ojard



(From left) Bill Gardner, Adolph Ojard, Mike Wagner, and Leslie Blakey

Monitoring and Addressing Changes Is Critical to Competitiveness

Concluding Observations

Robert Johns, Director, Center for Transportation Studies

In closing the symposium, CTS director Robert Johns recapped symposium highlights. Noting Stewart's keynote presentation, Johns emphasized that monitoring and addressing changes, regardless of the type of freight or goods shipment, is critical for the Upper Midwest in order to stay competitive. Johns said each panel offered examples of change, and the messages presented serve as a valuable resource. "We plan to continue doing these symposiums, driven by our research and educational role."

Johns indicated the CTS mission is not only educating professionals inside the transportation industry, but outside as well, including policymakers. Educational outreach by CTS to legislators is an important outgrowth of the annual symposium, and those efforts include distribution of symposium proceedings to the Minnesota House and Senate transportation committees.



Robert Johns