Center for Transportation Studies

CELEBRATING
10 YEARS OF EXCELLENCE

University of Missouri St. Louis

2011-12

First CTS Group Picture

CELEBRATING TEN YEARS OF EXCELLENCE!

Welcoming its first students in 2001, the Center for Transportation Studies at the University of Missouri-St. Louis is an interdisciplinary, university-wide center, bridging contemporary and historical aspects of transportation, logistics and supply chain management.

Supported through endowments created by the St. Louis Mercantile Library and the John W. Barriger III National Railroad Library, the Center offers full and part-time research opportunities to University of Missouri-St. Louis faculty and graduate students, and sponsors the development of academic degree programs through its faculty's teaching mission. CTS faculty are drawn from both academia and industry, and are noted for their outstanding work in industry and supply chain management.

While conducting traditional transportation research projects, the Center is increasingly focusing on its industry partnerships which support the development of improved supply chains.

2010 CTS Group Picture

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Most photographs by Daniel Rust, Assistant Director of CTS
Publication design by Daniel Rust

Director's Welcome

Dear Business Professionals,

As in the past, this brochure is our way of introducing you to our staff and associates, students, programs, and research being conducted here at the Center for Transportation Studies. We are extremely proud of these students and their research. We hope that you will consider them and others here at the University of Missouri-St. Louis when your employment needs arise.

As shown, we now have students graduating with a Minor in Transportation, a Graduate Certificate in Supply Chain Management, an emphasis in Logistics and Supply Chain Management in the MBA program, and a Ph.D. in Logistics and Supply Chain Management. In addition, CTS is unique within the country because it also has considerable participation and supports courses in the history of transportation. The Western History Association, the largest such association west of the Mississippi, is a functioning part of the Center. There has been considerable progress made in all of these programs and the research efforts supported by our faculty and staff.

Our graduate business program is heavily weighted on a software applications approach to logistics and supply chain management. All graduates will have had several courses that immerse them in real world applications of software and practical problem solving through the heavy use of the case method and "industry partners" in our graduate programs. Most of these students have had full-time Ph.D., graduate, or undergraduate research assistantships here in the Center, gaining valuable on-the-job experience in research and business applications. Visit the Center's website, www.cts-umsl.org, and the student's or association's own web pages to see samples of work, as well as more personal data on these outstanding individuals.

The problems, but yet opportunities, present in today's world-wide competitive marketplace require a detailed analysis and constant updating of a firm's supply chain management. We, here at the University, are seriously dedicated to researching and teaching students how to map, model, and analyze both domestic and international supply chains. For firms wishing to learn more about their own supply chains, competitive supply chain strategies, and the implementation of modern supply chain software and technology, we urge you to consider becoming a "University Partner" with UM-Saint Louis and CTS. Working together, we can provide valuable university-based solutions to supply chain issues which have been proven to lower costs and improve velocity within a firm's supply chain.

Ray Mundy, Ph.D.

Director, Center for Transportation Studies
Barriger Endowed Professor of Transportation and Logistics

Dear Business Professionals,

The College of Business Administration at the University of Missouri-St. Louis is committed to:

- Providing students with a first-rate business education at the undergraduate and graduate levels.
- Conducting and disseminating basic and applied research that advances our understanding of issues relevant to the effective administration of organizations.
- Creating educational value by delivering innovative, cutting-edge curriculum, using both traditional and nontraditional delivery methods.
- Serving the University, the St. Louis business and not-for-profit communities, the citizens of Missouri, and society at large.

The Center for Transportation Studies helps us to accomplish this mission by linking us to the business community and supporting each element of the mission in the areas of transportation and supply chain management. The Center's innovative programs and research capabilities attract gifted students from the region and from the world. Faculty who are associated with the Center are among the world's experts in their fields. The interactions between these students and faculty have resulted in growth, diversity and recognition for the Center and the College.

We are proud of the Center's accomplishments and we look forward to even more progress in the coming years. This booklet describes some of these research faculty and students. It also describes some of their current research projects. Thus it provides a window into one of the most innovative outreach programs of the college.

Just as St. Louis is the Gateway to the West, the Center for Transportation Studies is our College's Gateway to the World.

L to R: Dr. Ray Mundy, Director of CTS; Dr. Kamrul Ahsan, Senior Lecturer from Auckland University of Technology; Dr. Keith Womer, Dean of the College of Business Administration

Keith Womer, Ph.D.

Dean, College of Business Administration

Professor of Logistics and Operations Management

Dean, College of Arts and Sciences

Professor of Microbiology

Ron Yasbin, Ph.D.

Dear Professionals,

The College of Arts and Sciences is delighted to be part of the Center for Transportation Studies. The faculty and students who participate in the work of the Center add to the diversity and enhance academic, as well as research activities of the College. The Center represents a model of interdisciplinary research and study that is at the very forefront of critical issues for our state and nation. This body of work is not only vital to our ability to provide efficient and ecologically-friendly transportation, but is a cornerstone of American trade. Thus, it is critical for maintaining our security and quality of life.

As you read this brochure you will definitely become excited about the diversity of studies and the quality of the faculty, students and staff that constitute the Center for Transportation Studies.

Wesley Boyce

Wesley is pursuing his Ph.D. in Business Administration with an emphasis in Logistics and Supply Chain Management. His expected graduation date is May of 2012. He attained his Bachelor of Science degree in Administrative Management from Missouri State University in 2007, as well as his MBA with a marketing emphasis from Missouri State University in 2008. Prior to joining the Center for Transportation Studies, Wesley worked as a Business Analyst at the brokerage firm Wells Fargo Advisors, formerly known as Wachovia Securities and A.G. Edwards, for over a year. He is a Boeing Scholar, a member of the Council of Supply Chain Management Professionals, and a member of the national marketing honor society Alpha Mu Alpha.

David Long

Currently, David is working on his MBA with an Emphasis in IS with an expected graduation in May 2010. He received his Bachelor of Science degree in Management Information Systems in 2006. He has returned to school with 10 years work experience. He has prior transportation experience with Sunmark, Inc., a division of Nestle USA, Inc. and prior applications development with Energizer Battery Co. and ExpressScripts, Inc. As a research analyst in the Center for Business and Industrial Studies, he has studied the development of integrated court management systems and justice information systems for the 22nd Circuit Court of Missouri. David started working at the Center in August 2004.

William Ellegood

William Ellegood is pursuing a PhD in Logistics and Supply Chain Management. He currently holds a MBA degree from Ball State University and BS in Mechanical Engineering from GMI – Engineering and Management Institute. He has twelve years of manufacturing experience progressing from Manufacturing Engineer, to Project Manager, to his last position as Vice President of Engineering. For the past five years he has owned and operated his own firm. Research interests include optimization and rationalization modeling, lean operations, and vehicle routing. He will graduate in 2013.

Jeremy North

Jeremy is pursuing a PhD in Logistics and Supply Chain Management. He currently holds a Masters in Business Administration degree and a Bachelors degree in Management both from Pittsburg State University. From 1999 to 2005, Jeremy served as a Counter Intelligence Agent in the US Army. He was deployed twice during his service in order to perform human intelligence missions and was the rank of Sergeant upon separation from the Army. Research interests include simulation modeling, and supply chain network rationalization and optimization. Jeremy is also a member of the Council of Supply Chain Management Professionals.

Michael Sciaroni

Michael is a candidate for PhD in Logistics and Supply Chain Management with expected graduation in 2010. He has also earned a graduate certificate in Logistics & Supply Chain Management, a Bachelors Degree in International Business, and an MBA. With a professional background in procurement, he has traveled extensively throughout China and speaks Chinese as a second language. He is currently a board member of the Council of Supply Chain Management Professionals-St. Louis Roundtable (CSCMP). Research interests include International SCM, Optimization and Simulation Modeling, Transportation Infrastructure, and Sustainable SCM.

How to Apply for a CTS Assistantship

The Center for Transportation Studies offers a number of undergraduate, graduate and doctorate transportation scholar assistantships. Research assistants develop projects ranging from efficient utilization of public transportation to inventory/order fulfillment analysis. Research assistants work 20 hours per week and are supported with a tuition waiver and monthly stipends. Both first-time applicants and current students at UM-St. Louis are eligible to apply.

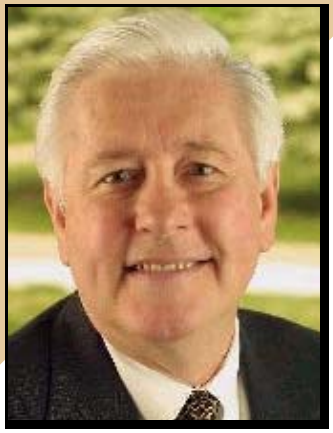
To apply, visit http://www.cts-umsl.org to download and print the graduate research assistant application form. Submit the completed form, along with a resume, a copy of GMAT and TOEFL scores (where applicable), and a writing sample to:

The Director, Center for Transportation Studies
University of Missouri-St. Louis
154 University Center
One University Boulevard
Saint Louis, MO 63121-4499

Ray A. Mundy, Ph.D.

Director, Center for Transportation Studies
John Barriger III Endowed Professor of Transportation & Logistics

Email: mundyr@umsl.edu



Degrees Held:

Ph.D., Transportation and Logistics
Pennsylvania State University, 1973

M.B.A., Management
Bowling Green State University, 1968

B.A., General Business
Bowling Green State University, 1966

Director of the Center for Transportation Studies and Barriger Endowed Professor of Transportation and Logistics at the University of Missouri-St. Louis since January 2000, Dr. Mundy currently teaches courses in Supply Chain Management and Transportation. He has authored numerous industry reports, is an active lecturer at national transportation and logistics seminars, and is a frequent contributor of articles to trade publications and journals. More recently he co-authored a text on taxicab transportation with Dr. James Cooper, the Head of the Taxi Studies Group at Edinburgh Napier University, and Dr. John Nelson, Professor of Transport Studies at the University of Aberdeen.

Dr. Mundy currently sits on the editorial review boards of the *International Journal of Transportation Planning and Technology* and the *Transportation Management Journal*. He has participated on research teams that have twice been awarded the Plowman Award for outstanding logistics research and publication. Dr. Mundy has previously completed a series of industry texts centered on process flow analysis and statistical process control.

Prior to joining the UM-St. Louis, Dr. Mundy was the Taylor Professor of Logistics and Transportation at the University of Tennessee, Knoxville. He managed the University's Transportation Management and Policies Studies program and was a director of the University of Tennessee's Supply Chain Forum. Dr. Mundy was the Logistics MBA advisor for the department. In these capacities, he managed numerous major research efforts, training programs, and technical assistance projects over his twenty-seven years with the University. He retired early from University of Tennessee as Professor Emeritus in 2000. His current research interests include the issues of quality and security in Supply Chain Management.

As the Director of the Center for Transportation Studies, Dr. Mundy has generated in excess of $2.0 million in grants and endowments. Dr. Mundy also sits on Board of Directors and Advisory Boards for internet, transportation, and logistics companies. Among these is Forward Air, Inc. Dr. Mundy also serves as Executive Director of the Airport Ground Transportation Association and Chief Executive Officer of the Tennessee Transportation and Logistics Foundation

Teaching Areas:
Transportation
Logistics and Supply Chain Management

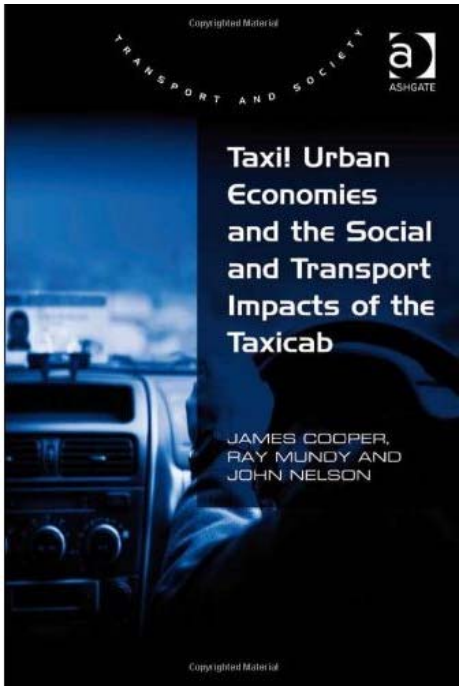
Current Graduate Courses:
Supply Chain Management Strategy
Seminar in Domestic Transportation

Taxi!
Urban Economies and the Social and Transport Impacts of the Taxicab

By James Cooper, Ray Mundy and John Nelson
(Ashgate Publishing Company, 2010)

The taxicab makes a significant contribution to the accessibility of a city, and provides a wide range of services across many different social groups and urban environments. This study considers the roles and functions of the taxi from its origins as the first licensed form of public transport, to the current variations of vehicle type and operation, to predictions for its future development. Also addressed here is the impact which this ubiquitous form of transport has on contemporary urban life, and the analytical tools being used and developed for its licensing and control.

Cloth
208 pages
16 b&w illustrations
41 figures
Index



Donald C. Sweeney II, Ph.D.

Associate Director
Center for Transportation Studies

Email: sweeneyd@umsl.edu

Degrees Held:
Ph.D., Economics
Washington University, 1987

M.S., Economics
Washington University, 1977

B.S., Mathematics and Economics
Knox College, 1973

Dr. Sweeney joined the Center for Transportation Studies as its Associate Director and Teaching Professor of Logistics and Operations Management in January of 2005. Prior to joining the Center he served as the Supervisory Regional Economist for the St. Louis District Office of the US Army Corps of Engineers. Dr. Sweeney has twenty-seven years of transportation planning experience and is a nationally recognized expert in the economics of water transportation. He was honored as the Public Servant of the Year in 2001 by the Special Counsel of the United States and received the prestigious Service to America Medal in 2002 for advances in Environment, Science, and Technology in association with his work on the economic evaluation of federal water transportation infrastructure projects.

Teaching Areas:
Transportation Economics
Logistics and Supply Chain Modeling
Research Topics in Logistics and Supply Chain Management
Econometrics

Previous Courses Taught:
Advanced Price Theory
Statistics for Business
Principles of Transportation Economics
Econometrics
Supply Chain Modeling

Courses:
Logistics and Supply Chain Operations Modeling
Logistics and Supply Chain Strategic Modeling
Principles of Transportation Economics

Recent Research Interests and Activities:
Dr. Sweeney has recently published in the *Journal of the Operational Research Society* and the *International Journal of Logistics Management*. He has consulted with and built strategic supply chain models for global Center partners such as ICL LLC, White-Rodgers, Sigma-Aldrich, and the Federal Mogul Corporation. He has provided discrete event simulation models of taxi operations at major North American airports. He has also recently appeared on National Public Radio and Public Broadcasting Service television discussing economic issues arising from water transportation infrastructure improvements.

Donald Sweeney's Service to America Medal for Environment, Science and Technology

The Service to America Medals awards program pays tribute to America's dedicated federal workforce, highlighting those who have made significant contributions to our country. Honorees are chosen based on their commitment and innovation, as well as the impact of their work on addressing the needs of the nation.

Daniel L. Rust, Ph.D.

Assistant Director for Undergraduate Program Development, Center for Transportation Studies

Email: rustd@umsl.edu

Degrees Held:
Ph.D., History
University of Idaho, 2003

M.A., History
University of Idaho, 1996

B.A., History
Northwest Nazarene University, 1993

Dr. Rust's recent research includes an investigation of the costs and benefits of video event data recorders (EDR) in private fleet vehicles, and a U.S. Department of Transportation-funded inventory and survey of transportation, distribution, and logistics (TDL) providers within Missouri.

While his interests span all modes of transportation, Dr. Rust specializes in the history of commercial air travel in the United States. In 2009, the University of Oklahoma Press published his book, *Flying Across America: The Airline Passenger Experience.* Over one hundred photographs, many from the St. Louis Mercantile Library's Trans World Airlines collection, accompany this examination of air travel from the passengers' point of view through the prism of first-hand travel accounts found in popular periodicals during the formative era of coast-to-coast passenger service in the United States. The book has received many favorable reviews from publications including *The Wall Street Journal*, *The Washington Times*, and *Air & Space Smithsonian*.

Articles in *Journal of the West* and *Aviation History* featured Dr. Rust's research on the life of aviator Nick Mamer and the 1929 round trip, non-stop, transcontinental flight of the "Spokane Sun God."

Dr. Rust is currently writing the history of AEP River Operations, one of the largest providers of inland marine transportation in the United States.

Courses:
Introduction to Transportation
Aviation in American Life
Transportation Security, Safety and Disaster Preparedness

Faculty

Flying Across America:
The Airline Passenger Experience

By Daniel L. Rust (University of Oklahoma Press, 2009)

A colorfully illustrated history of air travel, emphasizing the personal experience of commercial flight

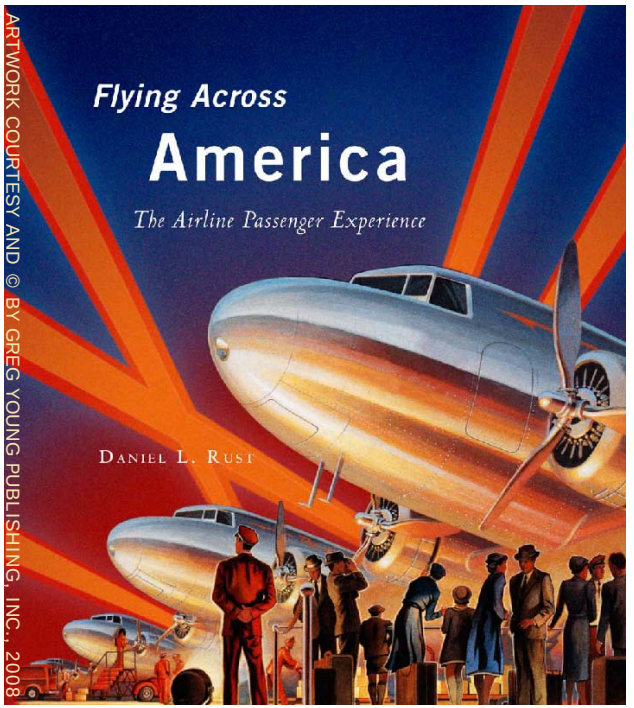
Americans who now endure the inconveniences of crowded airports, packed airplanes, and missed connections might not realize that flying was once an elegant, exhilarating adventure. In this colorful history, Daniel L. Rust traces the evolution of commercial air travel from the first transcontinental expeditions of the 1920s, through the luxurious airline environments of the 1960s, to the more hectic, fatiguing experiences of flying in the post-9/11 era.

In the beginning, flying coast-to-coast was an exciting yet uncomfortable journey of nearly forty-eight hours that required numerous stops and overnight travel by train. With time and technical innovation, passengers became increasingly removed both physically and psychologically from the raw experience of flying. Faster planes, pressurized cabins, onboard amenities, and stronger safety precautions made flying more convenient and predictable—but also less evocative and sensational.

Prior to the 1980s, Americans dressed for air travel in their formal best and enjoyed such luxurious onboard amenities as delicious meals and ample cabin space. What made air travel glamorous, however, also made it more expensive. With deregulation in 1978, cost reductions reduced flying to a more tedious and, after 9/11, more regimented experience.

Rust's narrative brims with firsthand accounts from such celebrities as Will Rogers and from ordinary Americans. Enlivened by more than 100 illustrations, including vintage brochures, posters, and photographs, Flying Across America reminds today's airline passengers of what they have gained—and what they have lost—in the transcontinental flying experience.

Cloth,
272 pages
57 color illustrations
54 b&w illustrations
4 maps
Index



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Carlos A. Schwantes, Ph.D.

St. Louis Mercantile Library Endowed Professor for Transportation Studies and the West

Email: schwantesc@umsl.edu

Degrees Held:
Ph.D., History
University of Michigan, Ann Arbor, 1976

M.A., History
University of Michigan, Ann Arbor, 1968

B.A., History
Andrew's University, Michigan, 1967

Dr. Schwantes is the author of several books on different facets of transportation in the American West, including one published in 2003 and titled *Going Places: Transportation Redefines the Twentieth Century West*. He came to the University of Missouri-St. Louis in 2001 after 18 years of teaching and research at the University of Idaho.

Recent book projects include *Just One Restless Rider: Reflections on Trains and Travel,* published in 2009 by the University of Missouri Press. Dr. Schwantes is past-president of the Pacific Coast Branch of the American Historical Association and has been a shipboard lecturer for Lindblad Expeditions since 1990 (on the Columbia River and in Alaska) and a train lecturer for the American Orient Express Railway Company from 1995 until 2007 (across the United States and Canada).

Teaching Areas:
Transportation in American Life, American Railroads in Global Perspective, History of the American West, History of the United States, St. Louis and the West, Making of the American Landscape

Courses:
American Railroads in Global Perspective
St. Louis and the West
The American West: Gateways and Corridors

Faculty

Just One Restless Rider:
Reflections on Trains and Travel

By Carlos A. Schwantes (University of Missouri Press, 2009)

In *Just One Restless Rider*, Carlos Schwantes invites readers to climb aboard for a ride they'll never forget. This sweeping memoir reflects a lifetime's love of observing and riding trains. Growing up in Indiana, Schwantes was enthralled by trains speeding through his town and especially dreamt of one day riding the Pennsylvania Railroad's all-Pullman flagship *Spirit of St. Louis.* Now the "dean of travel historians," Schwantes recalls his many trips along the legendary rails of America and traces the evolution of American passenger trains from the 1950s to the present. The recollections are illustrated with a host of the author's own photos that capture old steam engines, ultramodern European terminals, and even the staff of a luxury train in action.

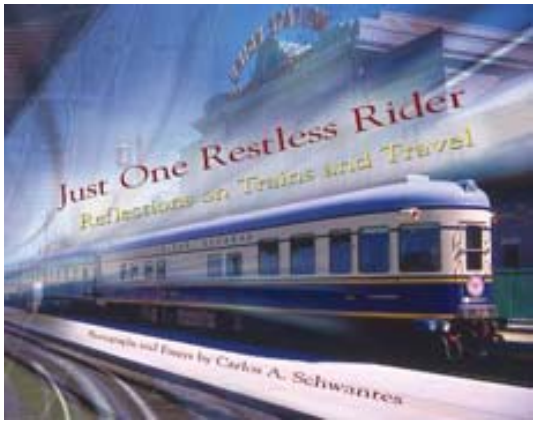
In 1993, Schwantes was invited to travel as a lecturer aboard the cruise train American Orient Express, a dream come true that enabled him to log personal reflections and take photos over the course of twelve years; he subsequently rode tens of thousands of miles on more than thirty separate train cruises. His narrative includes reflections on life aboard American and European trains and embraces not only trains themselves but also the view from the car windows as he ponders the meaning of passing skylines. His photographic eye eschews stereotypical shots of locomotives and cars, instead seeking images of trains, stations, and passengers that more fully depict the human journey.

From boyhood memories of the Pennsy—"the mightiest thing I knew"—to adult travels, Schwantes takes in the rich history and lore of rail travel. He muses over the legend of ghostly brakeman Joe Baldwin on the Wilmington and Manchester, decapitated in an accident and said to walk the nighttime tracks swinging his lantern in search of his missing head. He discovers the confusing variety in timetables issued by the numerous British lines following the privatization of British Rail and the adventure of sharing a coach with cigarette smugglers in Eastern Europe. And he hears the recollections of old railroad men like Bill Dixon, retired president of the famed Rock Island Line ("a mighty good road").

By the time Schwantes actually rode on the *Spirit of St. Louis* in 1970, it had been downsized to a single coach and left him a rider even more restless than those celebrated by Arlo Guthrie in the song "City of New Orleans."

Just One Restless Rider is an enjoyable trip for those with the "disappearing railroad blues" or anyone who has ever been captivated by the rhythm of the rails.

Cloth
224 pages
119 color illustrations
28 black & white illustrations
1 map
Index



Haitao Li, Ph.D.

Research Fellow, CTS
Assistant Professor of Logistics and Operations Management

Email: lihait@umsl.edu

Degrees Held:
Ph.D., Production and Operations Management
The University of Mississippi, 2005

M.A., Economics
The University of Mississippi, 2002

B.E., International Trade and Aeronautical Engineering
Beijing University of Aeronautics and Astronautics, 2000

Dr. Li's areas of research include optimization modeling, simulation, and algorithm design. His research involves optimal scheduling and configuring complex systems in the areas of resource-constrained project scheduling and supply chain planning. He has worked as a Statistical Analyst at the Naval Personnel Research, Study and Technology (NPRST) in Millington, TN, and was a Visiting Scholar at the Hewlett-Packard Laboratory (HP Lab) in Palo Alto, CA. He has also worked as a Research Consultant at the NPRST on the Navy's shipboard manpower optimization project. Dr. Li has extensive experience in linear and integer programming modeling, combinatorial optimization, statistical analysis, and hybrid algorithm design. He has published in journals such as *Annals of Operations Research, Military Operations Research,* and *Journal of Scheduling.*

Teaching Areas:
Supply Chain Modeling
Management Science
Operations Management

Courses:
Supply Chain Operational Modeling
Production and Operations Management
Introduction to Management Science
Introduction to Operation Management
Business Statistics

Research Interests:
Resource-Constrained Project Scheduling
Supply Chain Optimization
Stochastic Modeling and Optimization
Hybrid Algorithm Design and Implementation

Recent Sponsored Research Projects:
Dr. Li was recently awarded the United States Army Research Office's (ARO) Young Investigator Program grant for a project entitled "Resource-Constrained Project Scheduling under Uncertainty: Models, Algorithms and Applications." Resource-constrained project scheduling has a wide range of application areas such as machine scheduling, make-to-order supply chain design, project portfolio optimization and workforce optimization. The real-world scheduling environment is often subject to various uncertainty and randomness about project structure and data due to incomplete information, possible failure of tasks, and/or disruption of resources. Thus operations researchers are facing the formidable tasks of obtaining high quality and robust project plans and schedules under a variety of uncertainties about task outcome, duration, cost and reliability, as well as resource availability and capacity. In addition, not only solution quality, but also computational time matters in many applications. This research aims at developing new effective and efficient models and computational algorithms for optimizing project scheduling decisions under both resource constraints and uncertainty.

Another of Dr. Li's recently awarded projects is "Optimizing the Project Portfolio Design and Staffing Decisions for Professional Services Enterprises," sponsored by HP Labs Innovative Research Program. This research will address and tackle the problem of optimizing project portfolio design and staffing decisions for professional service enterprises. The approach attempts to model the project selection, scheduling and staffing decisions in one integrated problem. Various randomness and uncertainty in real life environment will be explicitly dealt with in the model. The major research effort will be the design and implementation of efficient and effective computational algorithms for both deterministic and stochastic versions of the problem.

Sandra Mundy

Administrator/Planner
Airport Ground Transportation Association

Email: admin@agtaweb.org

Degrees Held:
M.Ed., Curriculum and Education
Pennsylvania State University, 1972

B.S., Elementary Education
Bowling Green State University, 1966

Ms. Mundy has served as Administrator/Planner of the Airport Ground Transportation Association since 1976. She is responsible for the collection and maintenance of numerous data surveys related to airports and airport ground transportation, as well as the publication of *The AGTA Newsletter*, a summary of pertinent news articles from throughout North American and world newspapers. Ms. Mundy is additionally responsible for arrangements for the Association's annual spring and fall educational conferences, held in various locations throughout the U.S. and Canada.

Betty Jo Ditmeyer

Administrative Assistant
Center for Transportation Studies

Degrees Held:
M.A., Speech Communications
Southern Illinois University at Edwardsville, 1991

B.S., Journalism
Southern Illinois University at Edwardsville, 1989

Ms. Ditmeyer joined the Center for Transportation Studies in the spring of 2003. Betty came to the Center with eight years of office management experience in the private sector. She serves as administrative assistant to the Director of CTS and the Director of WHA, aids research assistants in their research efforts, assists in conference planning as well as CSCMP monthly meetings. She also has responsibility for a variety of other duties.

James Campbell, Ph.D.

Professor of Management Science
and Information Systems

Email: campbell@umsl.edu

Degrees Held:
Ph.D., Industrial Engineering & Operations Research
University of California, Berkeley, 1987

M.S., Industrial Engineering & Operations Research
University of California, Berkeley, 1983

B.S., Systems Science & Mathematics
Washington University, 1981
Supply Chain Management

Dr. Campbell has authored over 50 scholarly publications, and his work has appeared in leading journals, including *Management Science, Operations Research, Journal of Business Logistics, Transportation Research, European Journal of Operational Research*, *Naval Research Logistics,* and *Transportation Science.* He is a member of the Editorial Advisory Board of *Transportation Research* Journal. His current research involves modeling and optimization in logistics, transportation and supply chain management, and he has worked with companies and organizations in Canada, Australia and the U.S. His research interests include modeling transportation networks for air and truck transportation, locating hub facilities, and decision support for snow removal.

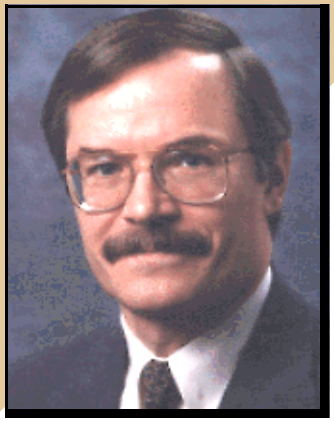
Teaching Areas:
Logistics
Management Science
Operations Research
Geographic Information Systems

Courses:
Introduction to Operations Management
Business Logistics Systems
Management Science Methods
Introduction to Geographic Information Systems
Business Logistics and Supply Chain Management

Joseph S. Martinich, Ph.D.

Professor of Operations Management/ Management Science

Email: martinich@umsl.edu



Degrees Held:
Ph.D., Industrial Engineering & Mgmt. Science
Northwestern University, Evanston, 1980

M.A., Economics
California State University, Fullerton, 1975

B.S., Industrial Engineering
Northwestern University, Evanston, 1972

Dr. Martinich has worked and/or consulted for companies in several manufacturing and service industries. He has held visiting and adjunct faculty positions at the John M. Olin School of Business Administration of Washington University (St. Louis), the Engineering Management Department of the University of Missouri-Rolla, and the Industrial Engineering Department of California State Polytechnic University-Pomona. Dr. Martinich is the author of two books and over 20 scholarly articles and reviews. His work has appeared in leading journals, such as *Decision Sciences, European Journal of Operational Research, Naval Research Logistics, American Economic Review, Journal of Regional Science, and Technological Forecasting and Social Change.* His current research includes the environmental aspects of business operations, the application of Lean Production methods to service systems, and applications of queuing theory.

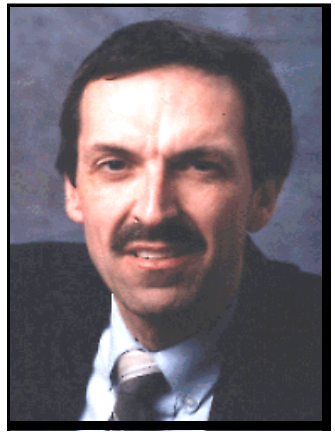
Teaching Areas:
Production and Operations Management

Courses:
Introduction to Operations Management
Lean Production in Manufacturing and Service Operations
Service Operations Management
Production and Operations Management

Robert M. Nauss, Ph.D.

Professor of Management Science

Email: robert_nauss@umsl.edu



Degrees Held:
Ph.D., Operations Research
UCLA, 1974

M.S., Operations Research
Cornell University, 1972

B.S., Industrial Engineering
Northwestern University, 1970

Dr. Nauss is Professor of Management Science in the College of Business Administration at the University of Missouri-St. Louis. His research interests include integer programming, combinatorics, and mathematical modeling in finance and transportation. He has published articles in journals such as *Management Science, Journal on Computing, European Journal of Operational Research, Transportation Research, Journal of Banking and Finance,* and *Financial Management*. Currently he serves as Finance Area Editor for the INFORMS journal, *Interfaces*.

Teaching Areas:
Mathematical Programming
Combinatorial Optimization
Integer Programming

Courses:
Business statistics
Operations Management
Graduate Statistics
Operations Research
Management Science Methods

David Ronen, Ph.D.

Professor of Logistics and Transportation Management

Email: David.Ronen@umsl.edu

Degrees Held:
Ph.D., Business Logistics
The Ohio State University, 1980

M.S., Operations Research
Technion-Israel Institute of Technology, 1972

B.S., Industrial Engineering & Management
Technion, 1970

Prior to his arrival in the U.S., Dr. Ronen worked for five years in research and commercial organizations involved in international shipping, trade, and manufacturing. His primary interests lie in the application of quantitative tools and information technology to solving practical business logistics problems. Since 1980 he has been involved in the development of logistics management tools for major corporations in the U.S., Japan, and Europe. His research has been published in *Operations Research*, *Management Science*, *Transportation Science*, *Naval Research Logistics*, *Interfaces*, *Journal of the Operational Research Society*, *European Journal of Operational Research*, *Journal of Business Logistics*, *OMEGA*, and other journals. Presently he serves as Associate Editor for *Interfaces*, *OMEGA*, and *Maritime Economics & Logistics*.

Teaching Areas:
Business Logistics
Operations Management
Management Science

Courses:
Introduction to Operations Management
Business Logistics Systems
Production and Operations Management

L. Douglas Smith, Ph.D.

Professor of Management Science and Director of Center for Business and Industrial Studies

Email: ldsmith@umsl.edu

Degrees Held:
Ph.D., Management Sciences
University of Minnesota, 1972

M.B.A.
McMaster University (Hamilton, Canada), 1968

B.Sc., Physics
McMaster University, 1966

With over 30 years of academic and professional experience, Dr. Smith's sponsored research program has encompassed the development of computer-based systems for dispatching vehicles in mass transit systems, simulation of operations in equipment maintenance facilities, modeling competition in the distribution of petroleum products, strategic planning for municipal information systems, estimation of retail sales potential in competitive business environments, analysis for site selection of service facilities, creation of analytical models for manpower planning and scheduling in service operations, and development of statistical models for forecasting and risk management in financial institutions. Dr. Smith's articles have appeared in numerous academic and professional journals, including *Decision Sciences, Transportation Research, European Journal of Operational Research, Naval Research Logistics, Computers and Operations Research, International Journal of Production Research, OMEGA, and Information Systems and Operational Research (INFOR).*

Teaching Areas:
Operations Research and Applied Statistics

Courses:
International Logistics and Operations Management
Simulation for Managerial Decision Making
Advanced Statistical Methods for Management
Management Science Methods
Operations Research

Western History Association at the Center for Transportation Studies

Since the fall 2006, the Western History Association (WHA) has been housed in and supported by the Center for Transportation Studies on the campus of the University of Missouri-St. Louis.

The Western History Association was founded in 1961 and since then has met annually in cities all over the United States, bringing together a diverse group of academic historians, public historians, writers, and enthusiasts. The purpose of the WHA is to promote the study and teaching of the North American West in its varied aspects and broadest sense. The Association's publications include the *Western Historical Quarterly* and *Montana: the Magazine of Western History*. Since 1961 the WHA has grown dramatically in size (over 1,300 members) and its publications have become the most prestigious in the field. The association's annual conference attracts over 800 attendees each year.

Holder of various certificates in the hospitality industry, Laura Diel assumed her responsibilities at the Western History Association in July 2006. Laura is a 15-year veteran of the University Missouri-St. Louis, and she serves as the Events Coordinator/ Chief Administrative Assistant for the St. Louis Mercantile Library in addition to her position with the WHA. Laura's years of hospitality and customer service experience aid her in the planning of events large and small at the Library, as well as the annual conference of the Western History Association.

Laura Diel

Executive Assistant
Western History Association

Berta Simic

Berta earned a Bachelor of Arts degree in International Relations and Peace and Conflict Resolution from American University in Washington D.C. During her time in the D.C. area, she worked for the Center for Civil Society in Southeast Europe and helped develop "peace centers" in the former Yugoslavia. Upon her return to St. Louis, she completed her Master's of Secondary Education with an emphasis in History at the University of Missouri-St. Louis and is currently pursuing her Master's in Education Administration. Berta is certified to teach 5-12 Social Studies and English as a Second Language (ESL) and is currently teaching ESL for the Parkway School District Adult Education Literacy (AEL) program. She also serves on the Teaching Committee for the WHA.

Matt Morris

Matt is currently working towards a Master's degree in Secondary Education with an emphasis in History at the University of Missouri-St. Louis. He expects to be certified and in the classroom by the fall 2010. Matt earned a Bachelor of Arts degree in History and Political Science from the University of Wisconsin-Madison in December of 2006. Matt is presently student teaching at McCluer High School in the Ferguson-Florissant school district where he teaches World History.

L to R: Betty Jo Ditmeyer, Valenda Curtis, Laura Diel, Berta Simic, and Dr. Kevin Fernlund at the WHA's 2009 annual conference in Denver, Colorado

Kevin Fernlund, Ph.D.

Executive Director, Western History Association
Associate Professor of History and Education

Email: fernlundk@umsl.edu

Degrees Held:
Ph.D., History
University of New Mexico, 1992

M.A., History
Northern Arizona University, 1983

B.S., History
Northern Arizona University, 1981

Kevin J. Fernlund is an Associate Professor of History and Education and the Executive Director of the Western History Association. Dr. Fernlund was a Fulbright Scholar to Vietnam (2001-2002). He is the author of *Lyndon B. Johnson and Modern America* (University of Oklahoma Press, 2009) and *William Henry Holmes and the Rediscovery of the American West* (2000), which the Denver Public Library selected as an "Honor Book" in the Caroline Bancroft History Prize competition for 2001; the book was also short-listed for the prestigious Evans Biography Award in 2000. He also edited *The Cold War American West, 1945 to 1989* (1998). According to the *New Mexico Historical Review*, "The pioneering essays in [this] volume will mark the starting point for all future historians." He is interested in teaching with primary documents and is editor of the fifth and sixth editions of *Selected Historical Documents to Accompany America's History, Vol. 2: Since 1865*, Boston: Bedford/St. Martin's (2004 and 2008, respectively).

Courses:
American Environmental History
History of the American West
History of Exploration
World History for the Secondary Classroom

WHA Faculty

Lyndon B. Johnson and Modern America

By Kevin Fernlund (University of Oklahoma Press, 2009)

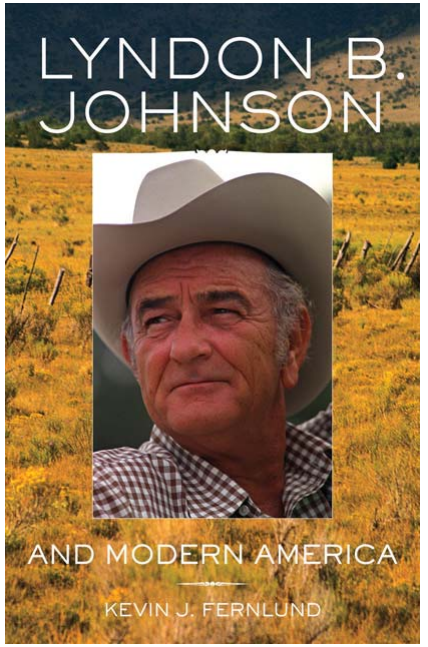
Born in a farmhouse in the Texas Hill Country, Lyndon Baines Johnson brought a western sensibility to the White House. Building on recent studies that have delved into Johnson's Texas roots, Kevin J. Fernlund has written a brief, lively biography of the thirty-sixth president that better shows how his home state molded his early years—and how the one-time Houston schoolteacher eventually became a Texas tornado twisting across the state's and soon the nation's political landscape.

Lyndon B. Johnson and Modern America offers general readers and students a concise look at LBJ that shows how his career coincided with the ascendancy of American liberalism within a Cold War context. In particular, Fernlund extends recent observations regarding Johnson's important role in regional transformation at a time when the South and West became full partners in the American economy. In examining LBJ's promotion of the space program and his disastrous decision to escalate the war in Vietnam, Fernlund shows how these and other Johnson administration policies affected the American West. He describes how Johnson's liberal agenda for the West became subverted by illiberal wars with enemies foreign and domestic, exposing the limits of liberalism and fostering the region's nascent conservatism. He also compares Johnson's commitment to social justice with that of his arch nemesis Ho Chi Minh, providing new insight for readers and an intriguing springboard for classroom discussion.

Although subsequent presidents also hailed from the West, Fernlund argues that Johnson was our last truly western chief executive. This new approach to LBJ offers a novel reading of an important Texan, his huge circles of influence, and his lasting impact on the American scene.

Volume 25 in The Oklahoma Western Biographies

Cloth
192 pages
15 b&w illustrations



The Center has partnered with many companies from the transportation, logistics, and supply chain industries. Companies present problems and CTS provides graduate students to help solve them. In this program, graduate scholars assist participating firms in solving everyday problems through the use of analytical tools and industry software packages. Through this program, students obtain valuable experience in applying computer and analytical problem solving techniques to real-world situations. A number of companies, associations, and foundations from the public and private sectors have participated in the Industry Partnership Program. Among these participants are:

AEP River Operations
A wholly owned subsidiary of American Electric Power of Columbus, Ohio, and headquartered in St. Louis, Missouri, AEP River Operations offers unparalleled service in barge transportation of dry bulk commodities throughout the inland river system.
http://www.aepriverops.com

Airport Ground Transportation Association (AGTA)
The Airport Ground Transportation Association, headquartered at the UM-St. Louis Center for Transportation Studies, is a trade association composed of members who are the owners/managers of for-hire and courtesy airport ground transportation provider firms, airport landslide transportation managers, and suppliers of goods and services for the conduct of the airport ground transportation industry. The AGTA Newsletter, a survey of articles relating to airports and airport ground transportation management, is published quarterly for the membership.
http://www.agtaweb.org

Caterpillar Inc.
With 2009 sales and revenues of $32.4 billion, Caterpillar is the largest maker of construction and mining equipment, diesel and natural gas engines and industrial gas turbines in the world.
http://www.cat.com

Courier's Inc.
Courier's Inc. is a non-asset based, privately held corporation headquartered in St. Louis, Missouri. Courier's Inc. is a local delivery service provider that offers a range of route and on-demand delivery services involving contract drivers and their private automobiles. http://www.couriersinc.com

Distribution Transportation Services (DTS)
DTS is a family-owned, privately held corporation headquartered in O'Fallon, Missouri. DTS is a total logistics service provider that offers a wide range of freight services including truck brokerage, contract carriers, intermodal rail, expedited and international.
http://www.dtscompanies.com

Emerson Motor Technologies
Founded in St. Louis in the 1890s, Emerson Motor Company built an electric fan which became the foundation of the company. Today, Emerson Motor Technologies is the largest fractional horsepower electric motor manufacturer in the world. The firm offers motors to support a wide variety of applications including commercial and industrial, appliance, hermetic, automotive, pump, HVAC, ventilation, and heating and air conditioning.
http://www.emersonmotors.com

Federal-Mogul Corporation
Founded in 1899 and headquartered in Southfield, Michigan, Federal-Mogul is a global supplier of original equipment and after-market automobile parts. Federal-Mogul has revenues of over $6 billion with 130 manufacturing sites worldwide producing powertrain system components, vehicle safety and performance parts, and aftermarket products and services.
http://www.federal-mogul.com

Forward Air Corporation
Forward Air Corporation operates the largest and most comprehensive network of surface transportation for deferred airfreight. The company provides scheduled surface transportation through an extensive network of 75 terminals located on or near airports in the United States and Canada. Forward Air focuses its services on freight forwarders, integrators and airlines by locating terminals on or near all major airports and maintaining regularly scheduled transportation service between cities.
http://www.forwardair.com

ICL Performance Products LP
Headquartered in St. Louis, Missouri, ICL Performance Products LP is a wholly owned subsidiary of Israel Chemicals Limited (ICL). ICL develops, manufactures, and markets a variety of industrial products, metallurgy, and fertilizers. ICL Performance Products LP specializes in phosphate salts and phosphoric acid for food and technical applications.
http://www.icl-perfproductslp.com/

The Institute for Agriculture and Trade Policy (IATP)
The Institute for Agriculture and Trade Policy promotes resilient family farms, rural communities and ecosystems around the world through research and education, science and technology, and advocacy.
http://www.iatp.org

Lanter Distributing
Lanter Distributing is a transportation services division of Ozburn-Hessey Logistics, a Nashville, Tennessee-based third-party logistics provider. Ozburn-Hessey offers a comprehensive set of logistics solutions to support customer needs throughout the world. Services include transportation, warehousing and distribution, customs brokerage, freight forwarding and trade consulting services.
http://www.ohl.com

Logistics Management Solutions (LMS)
LMS is a non-asset-based, third party logistics provider specializing in creating transportation cost savings for companies like BASF, Monsanto and The Scotts Company. St Louis headquartered LMS uses proven logistics practices and Web-enabled technology to offer optimization, execution, and data management services that significantly reduce transportation costs.
http://www.lmslogistics.com

Sigma-Aldrich Corporation
Sigma-Aldrich, with 6,800 employees operating in 35 countries, manufactures biochemical and organic chemical products for customers such as hospitals, life-science companies and universities.
http://www.sigmaaldrich.com

Sunset Transportation
Sunset is a privately owned, non-asset based transportation company mainly involved in the brokerage and freight payment business. Sunset operates nationally, matching shippers and carriers across modes by utilizing its large database and extensive buying power to provide integrated solutions. It offers comprehensive services for its customers by managing the information exchange and payment flow between shippers and carriers.
http://onthemove.sunsettrans.com/

Taxicab, Limousine and Paratransit Association (TLPA)
Established in 1917, the Taxicab, Limousine and Paratransit Association (TLPA) is a non-profit trade association of, and for, the private passenger transportation industry. Its extensive membership spans the globe to include 1,100 taxicab companies, executive sedan and limousine services, airport shuttle fleets, non-emergency medical transportation companies, and paratransit services.
http://www.tlpa.org

UniGroup, Inc.
Founded in 1987, Unigroup is the parent company of United Van Lines, Mayflower Transit and other subsidiaries which support the worldwide operations of these two leading transportation companies. UniGroup is among the nation's largest privately owned firms with consolidated revenue of $2.2 billion.
http://www.unigroupinc.com

United States Air Force (USAF) Air Mobility Command
Headquartered at Scott Air Force Base, Illinois, just outside of St. Louis, Missouri, Air Mobility Command provides airlift and aerial refueling for all of America's armed forces.
http://www.amc.af.mil

CTS Research Areas

Business Logistics Systems

- Facility Locations
- Distribution Costs vs. Service Levels
- Transportation Alternatives

Supply Chain Management

- Procurement Alternatives Analysis
- Supply Chain Integration
- Inventory Management

Public Policy

- Transportation Regulation
- Airport Ground Operations
- Military Logistics

Research Methodologies

Students working at CTS receive classroom instruction on state-of-the-art supply chain and logistics systems analyses, and apply this knowledge to real-world applications, under the guidance of senior faculty.

Specific methodologies studied and employed include statistical analyses, mathematical programming (LP/IP/MIP), simulation modeling, survey administration, and other transportation and supply chain research.

Leading software packages are utilized to provide the computing power necessary to solve large problems.

Software Capabilities

Optimization
Insight SAILS
iLog OPL Studio
ARC Logistics
Simulation
ARENA
MicroSaint
Statistical
SAS
SPSS
Microsoft Access & Excel

Excellence in Research

Transportation & Inventory Optimization

The Center has recently partnered with several large companies to optimize their supply chains. This process included minimizing system-wide production and distribution costs given a set of customer service requirements and demands, and identifying where and how much inventory to store in order to minimize working capital requirements while meeting specified service levels.

Federal-Mogul Network Optimization Study

Federal Mogul is a $6B global supplier of aftermarket & original equipment automotive parts with numerous manufacturing sites and multiple distribution centers in the United States.

Senior management at Federal Mogul desired a rigorous method to determine the optimal configuration of their existing North American manufacturing plants and distribution centers to meet their growing customer demand as efficiently as possible.

CTS researchers interviewed senior management to identify their goals for the partnership and to familiarize themselves with the current operation of their supply chain, completed a process mapping of their existing supply chain operations, and, after intensive compilation, cleansing, analysis and formatting required data from multiple internal data sources, constructed a commercial software-based strategic supply chain model which accurately represented the operation of existing network including historical flows of raw materials and finished products throughout the entire supply chain. CTS researchers formulated three “what-if” scenarios altering the missions of the central and regional distribution centers before optimizing the model for each alternative scenario.

Implementation of CTS recommendations resulted in millions of dollars of annual operating cost reductions.

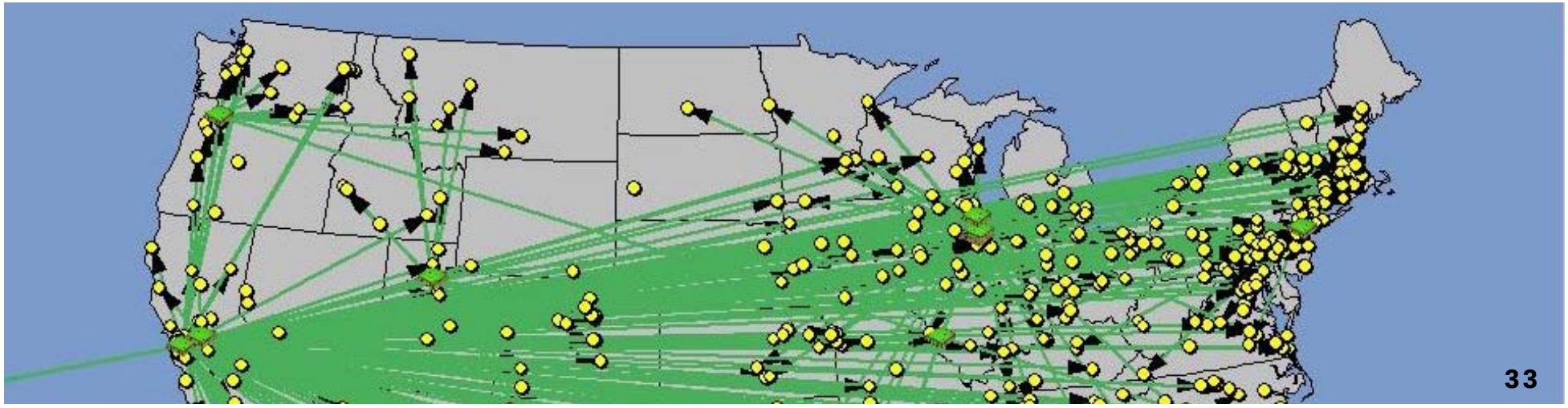
White-Rogers Network Optimization Study

White-Rodgers is a division of the Emerson Electric Company. With production facilities in Mexico and China and distribution centers located in the United States and Canada, White-Rodgers produces electronic thermostats, gas valves, and related components.

The company currently uses primarily truckload shipping for warehouse replenishment and less-than-truckload shipping for customer deliveries. The company was considering consolidating operations to a single warehouse location near the Mexico/US border and wanted to understand the impact this would have on both operating costs and customer service levels. It was generally accepted within the firm that order transit times (service levels) would increase from consolidation but it was unclear the impact consolidation would have on total transportation costs.

After constructing and validating a strategic supply chain model using optimization software, CTS researchers estimated that 24% of customers would experience increased service times of one day, 46% would experience increased service times of two days, and only 6% would suffer increased service times of three or more days. Additionally, outbound transportation costs would increase by 10%. However, this outbound transportation cost increase was more than offset by decreased transportation costs for inbound raw materials to production locations and decreased transportation costs of replenishment from factories to the consolidated warehouse. Since the new network would only have one warehouse, which was located very near the production facility, the replenishment costs dropped by almost 75%. The network model also identified large savings in warehousing costs since several existing warehouses were no longer required, eliminating large fixed overhead and variable operating costs. Overall, the net change in total transportation and warehousing costs would be a decrease of approximately 9%.

This case evidenced a classic example of the tradeoff between operating costs and customer service. The company could significantly lower operating costs, but ultimately only at the expense of decreased service levels to customers.



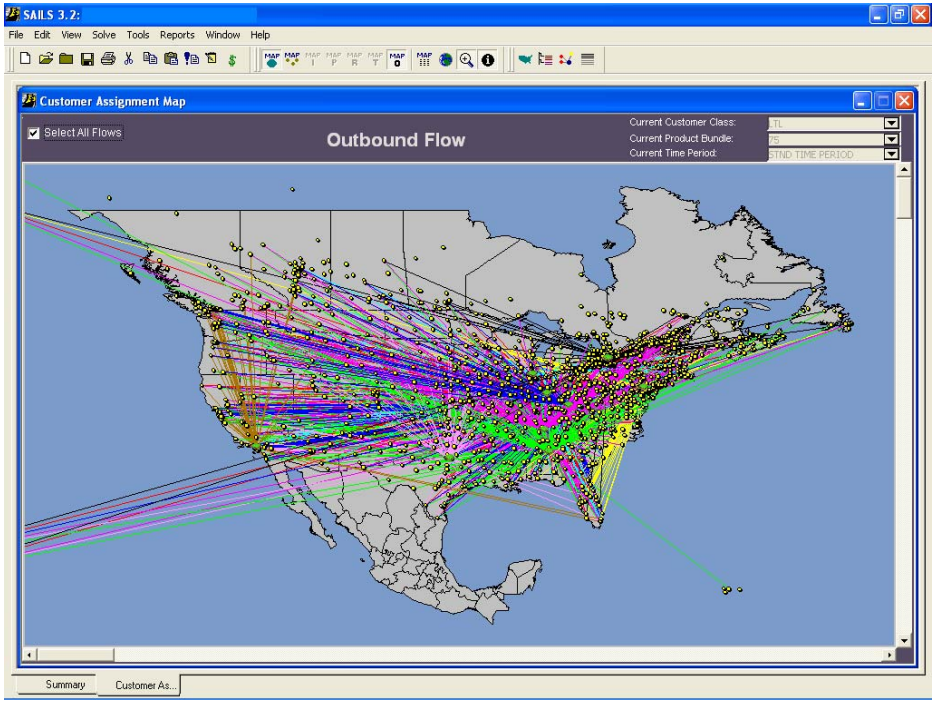
Sigma-Aldrich Network Optimization Study

A St. Louis-based manufacturer of specialty chemicals which markets products internationally under multiple brand names, Sigma-Aldrich operates warehouses in North America. The company sought to identify the cost and service impacts associated with consolidating warehouse and production operations.

CTS researchers used data collected from the company's ERP system to construct a strategic supply chain model which represented the existing network including historical flows of raw materials and finished products through the entire supply chain.

CTS researchers validated the model to baseline conditions and then used it to examine the warehouse and production consolidation envisioned by the company. The model simulations indicated little change in total supply chain costs from consolidating production and operating facilities, little change in service characteristics of the consolidated supply chain, but a significantly increased risk resulting from the lack of redundancy in production and storage capabilities.

Since the consolidation cost savings were small, company executives decided to maintain their status quo infrastructure with only some minor modifications in customer service assignments among the existing warehouses.



ICL Network Optimization

ICL Performance Products LP is a bulk chemical manufacturer based overseas with customers worldwide including many in North America. The North American operating division of this firm experienced strong sales growth and expected the trend to continue, however production levels were near capacity and the company was soon to lose existing warehouse space. The key strategic questions were whether to replace or relocate warehouses and to determine the optimal location for a new production facility.

After interviews with senior management, supply chain process mapping, data compilation, cleansing and analysis, CTS researchers constructed a strategic supply chain model which represented the existing network including historical flows of raw materials and finished products through the entire supply chain. Researchers validated the model to baseline conditions and then employed it to determine the optimal relocation of lost warehouse space and the best site to locate additional productive capacity.

The company implemented the results of the analysis by relocating one of the two distribution centers and adding productive capacity at the location CTS researcher recommended. The company has benefited from significantly decreased supply chain operating costs.

Subsequently, ICL management asked CTS to produce a system-wide distribution network optimization model, with considerations for closing obsolete/redundant distribution facilities. Following the same procedure as the first project, CTS researchers performed the necessary data collection, processing, model building and analysis.

The resulting model indicated that a large amount of redundancy could be eliminated, and that consolidation of facilities could result in a significant reduction in operating costs, without negatively impacting service provided to customers.

United States Air Force (USAF) Air Mobility Command

Project: Optimization of Aerial Refueling Tanker Deployments

The USAF Air Mobility Command at Scott Air Force Base has been developing software programs for the scheduling of aerial refueling tanker deployments. The Center for Transportation Studies has contributed to this effort through our work on an optimization model which acts as a pre-processor for the simulation of the tanker deployment scheduler. The goal of this project was to explore the opportunities for optimization approaches to improve tanker deployment planning and to investigate the feasibility of integrating optimization into the tanker deployment simulation models.

AEP River Operations

Project: *AEP River Operations: A Legacy of Inland Marine Excellence*

From flatboats to multiple-barge tows, transportation on the inland waterways of the American heartland possesses a rich heritage. Center researchers are currently investigating and writing the corporate history of AEP River Operations within the larger context of the inland barge transportation industry.

UniGroup, Inc.

Project: Container Design for Household Goods Transport

The household goods transport industry has increasingly embraced the advantages of containerization. These advantages include flexibility of usage, lower costs, improved security, and ease of loading and warehousing. An industry leader, UniGroup asked the Center to determine optimal dimensions of a container for moving household goods via UniGroup's subsidiaries. At UniGroup's request, the CTS research team examined a range of configurations, overall container dimensions, and materials for constructing containers.

Missouri Department of Transportation (MoDOT)

Project: Best Practices for Intelligent Transportation Systems (ITS) Equipment Procurement

The Center review the best practices for Intelligent Transportation Systems (ITS) utilized by the nation's DOTs and provided recommended procurement guidelines for MoDOT. The research involved a review of NCHRP Report 560 and its applicability to MoDOT (with special emphasis on web-based acquisition), surveying other DOTs on their existing practices and written policies, a secondary literature search on articles or opinions regarding best procurement practices by DOTs for the acquisition and integration of IT products, and finally developing Best Practice recommendations.

Council of Supply Chain Management Professionals (CSCMP)

The Center for Transportation Studies provides administrative and registration support to the monthly meetings and luncheons of the Council of Supply Chain Management Professionals (CSCMP) St. Louis Roundtable conferences. The Center has actively participated in the arrangements committee of the national annual conferences, and is dedicated to assigning student members to represent the St. Louis Roundtable at these events. The Center has also initiated the St. Louis Roundtable Student Mentoring Program through which students from the University are paired up with professionals in the St. Louis logistics and supply chain industry.

Missouri Transportation Institute

Project: Transportation, Distribution and Logistics: An Inventory and Survey of the Industry in the State of Missouri

Missouri possesses a large number of transportation, distribution and logistics (TDL) firms with networks throughout the Middle West region and around the world. The state's strategic geographic location is of increasing importance as firms operate fewer distribution centers in favor of vast networks of time-definite deliveries from large, mega distribution centers. Missouri has a unique opportunity to attract mega distribution centers which would act as both distribution points for products moving east of Missouri, as well as collection point for products moving to the Pacific coast and beyond. The St. Louis and Kansas City metro areas have been ranked recently among the top 10 logistics-friendly metropolitan areas in the United States. These two metropolitan areas have outstanding rail, water, air, and highway infrastructures, in addition to large numbers of well-trained TDL employees. Given the size and significance of TDL industry in Missouri, our research team developed a detailed inventory of TDL providers in Missouri. After compiling a list of TDL providers, the research team created and distributed surveys to select TDL providers, assembled the results of the survey, and released the results in a final report.

L to R: CTS Graduate Research Assistants Michelle Luu, Regis Perrot, and Michael Sciaroni during a tour of the FedEx Ground sorting facility in St. Louis, sponsored by the St. Louis Roundtable of the CSCMP.

Airport Ground Transportation Association (AGTA)

Project: Biennial Airport Ground Transportation Fees and Fares Survey

This survey began in 2002 and biennially updates the ground transportation vehicle fees paid to airports by North American airport ground transportation service providers. The airports are categorized by name and size. Collected data included insurance requirements, fees paid by on-and off-airport car rental companies, off-airport parking companies, charter buses, limousines and shared ride vans. Taxicab operations specified their gate fees, annual fees, and concession fees, if any. Airport landside managers utilize this information in determining the fair and appropriate fees to charge commercial airport ground transportation providers.

Miami-Dade County Taxicab

Project: Miami-Dade County Taxicab Ridership Project

The purpose of this study is to investigate the efficiency of taxicabs in Miami-Dade County, Florida. The research team entered raw data into spreadsheets, then cleaned and analyzed the data. Center for Transportation Studies' research assistants are building a computer model to simulate the process of taxicab operations serving the Miami International Airport. Future recommendations will be developed from the data analysis and simulation results.

Independent Research Project

Project: Taxicab Regulations in North America

Researchers at the Center have studied several aspects of regulatory and industry-related issues that affect taxi services in North America. Areas of investigation included a comparative study of taxicab regulations in specific U.S. cities and data analysis of taxicab usage and service levels. An initial white paper examined taxicab driver status in the United States. Using several case studies, researchers emphasized the role of the regulatory environment that presently exists with respect to driver status in the U.S. taxicab industry and presented a detailed study of the role of independent contractors in various taxicab business models. A second paper focused on the different taxicab business models currently found in the industry. The study included a comparison of various taxi company business models and a detailed examination of the full-service taxi company business model.

Taxicab in front of Main Terminal at Lambert-St. Louis International Airport.

At the Center for Transportation Studies, the Airport Ground Transportation Association (AGTA) maintains a comprehensive file on ground-side contracts, fees and fares of all North American commercial aviation airports.

Airport Ground Transportation Association (AGTA)

Project 1: Airport Taxicab Curb Design in Major U.S. Airports

This project was an effort to ascertain best practices for efficiency and safety in airport curb design. Fifty U.S. and Canadian airports responded to questions regarding airport speed zones, loading areas, number of taxicabs in service, causes of accidents, security personnel, and the number of passengers using taxi service per day. The primary goal of the study was to build a descriptive model from which future recommendations might be developed.

Project 2: Airport Landside Management Study

This project provided North American airport landside managers with a current profile of the duties of their counterparts at other airports. Information on duties performed, employees, salaries and organizational structure was collected with respect to airport size, compiled and reported in both tabular and article form.

Project 3: Airport Commercial Ground Transportation Safety and Security Survey

This survey of North American airports documented visually and statistically the current situation of airport curbside security measured for courtesy and commercial vehicles following of the September 11, 2001 terrorist attacks.

Project 4: Airport Charter Bus Survey

Bus companies face difficulties when attempting to drop off or pick up charter groups at airports that they do not normally serve. Airports across the country are not uniform in what charges, if any, must be paid, where to stage or park buses, whom to contact, how to negotiate the airport environment, and generally how bus drivers may access and leave the airport. The purpose of this survey was to create a simple and easy-to-access webpage, where charter bus companies and drivers could retrieve important information about airports and their regulations regarding infrequent buses.

Project 5: On-line Regulatory Library

CTS organized and conducted a thorough and detailed research on the regulations of taxicabs and airports. In general, CTS and AGTA researched the on-line availability of municipality ordinances, as they pertain to the taxicab industry, and several airports. The results of the study were filed at the CTS, and a listing of all participating airports can be found online at www.cts-umsl.org/regulatory.

Midwest Transportation Consortium (MTC)

Project: Research and Training of Private Transportation Providers for the Efficient and Effective Provision of Public Transportation Services

The objectives for this project were to undertake research and training programs which support more efficient and effective public transportation services from both the public and private sector transportation operators.

Great Cities' Universities Coalition

Project 1: Travel Information System at the User Level

This research demonstrated how existing, inexpensive information technology can be utilized to improve the lives of ordinary transit users. A secondary objective was to investigate how simple technologies can be applied to the urban public transportation field for the purpose of using information in place of on-time performance and its effect on overall satisfaction with transit service.

Project 2: Measurement Standards for ADA Service Firms

This project was an investigation into what ADA standards exist in the 17 communities served by GCU members and discovery of what processes might be utilized in establishing these standards. A further objective of this project was to ascertain a common process for setting ADA standards within the 17 GCU communities.

Project: Technology Transfer from Private to Public Transportation Providers

The objective of this research was to conduct an in-depth inquiry to determine what public agencies might learn from technologies and/or practices employed by the private sector. The Great Cities' Universities Coalition extended this project to investigate the costs and benefits of video event data recorders (EDR) in private fleet vehicles. The project revealed research and anecdotal evidence demonstrating the considerable potential benefits, including improved driver behavior and reduced insurance costs, of video EDR systems installed in school buses, mass transit vehicles and vans.

Using Independent Contractors; "What is the management and local regulatory structure for taxicabs that delivers the highest level of services, and is the best for the driver?"

Project: Independent Contractor (IC) Drivers have played a crucial role in the Transportation Industry as key entities involved in the market process. This paper seeks to transpose the role of the IC drivers in conjunction with the numerous transportation firms in the nation, with a special emphasis on the taxicab industry and assess whether their presence is beneficial to the industry and consumers as a whole.

College of Business Administration - UM-Saint Louis

Facility Management Survey

Facility Management is a relatively new concept and there are only a handful of universities offering FM degrees worldwide, and even fewer that offer graduate programs. The Center for Transportation Studies conducted this survey in order to identify the attractiveness of a Facility Management Program in the greater St. Louis area, and post-graduation employment potentials for students.

Forward Air Corporation - Greenville, TN

Project: Industry Partnership Grant

Forward Air is supporting basic and applied research into transportation pricing and modeling. The mutual goal was to research the latest in quantitative techniques and to teach employees and students how to apply these techniques.

St. Onge Company - York, PA

Project: The purpose of this study was to document, aggregate, and analyze data for the St. Onge Company from the 1977 Census of Transportation Flows. Center personnel prepared Excel spreadsheets summarizing commodity flows through the St. Louis, MO region and prepared presentation graphics. CTS also investigated the sources, availability, and cost of more detailed data regarding commodity and modal specific flows through the St. Louis region.

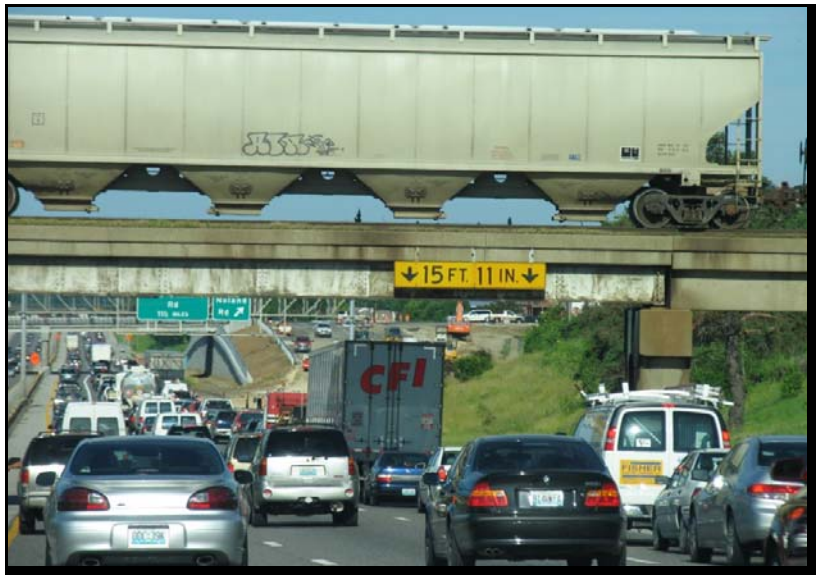
Lanter Logistics - Madison, IL

Project: Lanter Purchase Order Fulfillment

The purpose of this study was to understand the current purchase order fulfillment process. CTS students first mapped the steps taken to complete an order. The mapped business process enabled Lanter to: (1) Identify non-value-added steps; (2) Define areas that cause order delay and (3) Establish key performance indicators that employees should use for continuous improvement.

Emerson Motor Technologies - Saint Louis, MO

Project: The goal of this study was to perform a detailed analysis of Emerson Motor's freight bill payment process, focusing on the freight bill rejections. The study was based on the logistics management continuous improvement model, and included (1) a comprehensive flowchart of the freight bill rejection process; (2) data analysis and Pareto charts; (3) a cost analysis; (4) and recommendations to reduce the amount of non-value added activities created during the process.



A railroad flyover above Interstate 70 in western Missouri

TriStar Business Communities - Chesterfield, MO

Project: Prospective Supply Chain Network Designs

At the request of TriStar Business Communities the Center for Transportation Studies evaluated designs of alternative supply chain networks to investigate the role of the St. Louis region in prospective import oriented supply chains. The St. Louis region was found to be competitive with other national distribution locations for certain network configurations, typically involving a Midwest distribution center.

Institute for Agriculture and Trade Policy (IATP)

Upper Mississippi River and Illinois Waterways: How to Reduce Waiting Times of Vessels While Using the Current Infrastructure.

At the request of the Institute for Agriculture and Trade Policy (IATP) we have looked into low-cost traffic management measures that have the potential to reduce waiting times of vessels on the Upper Mississippi River and Illinois Waterways IATP is interested in traffic management measures that can be quickly implemented, do not require a significant investment, and are friendly to the environment.

St. Louis Regional Chamber & Growth Association (RCGA)

Project: Project Delivery System Alternatives for Missouri Highways

The purposes of this report were to describe the characteristics of the traditional design-bid-build delivery system, which is the current prevalent process of constructing highways; define and analyze design-build; explain its advantages and contrast the concerns regarding its implementation; and provide examples of other states which have used design-build as an empirical evidence about its results.

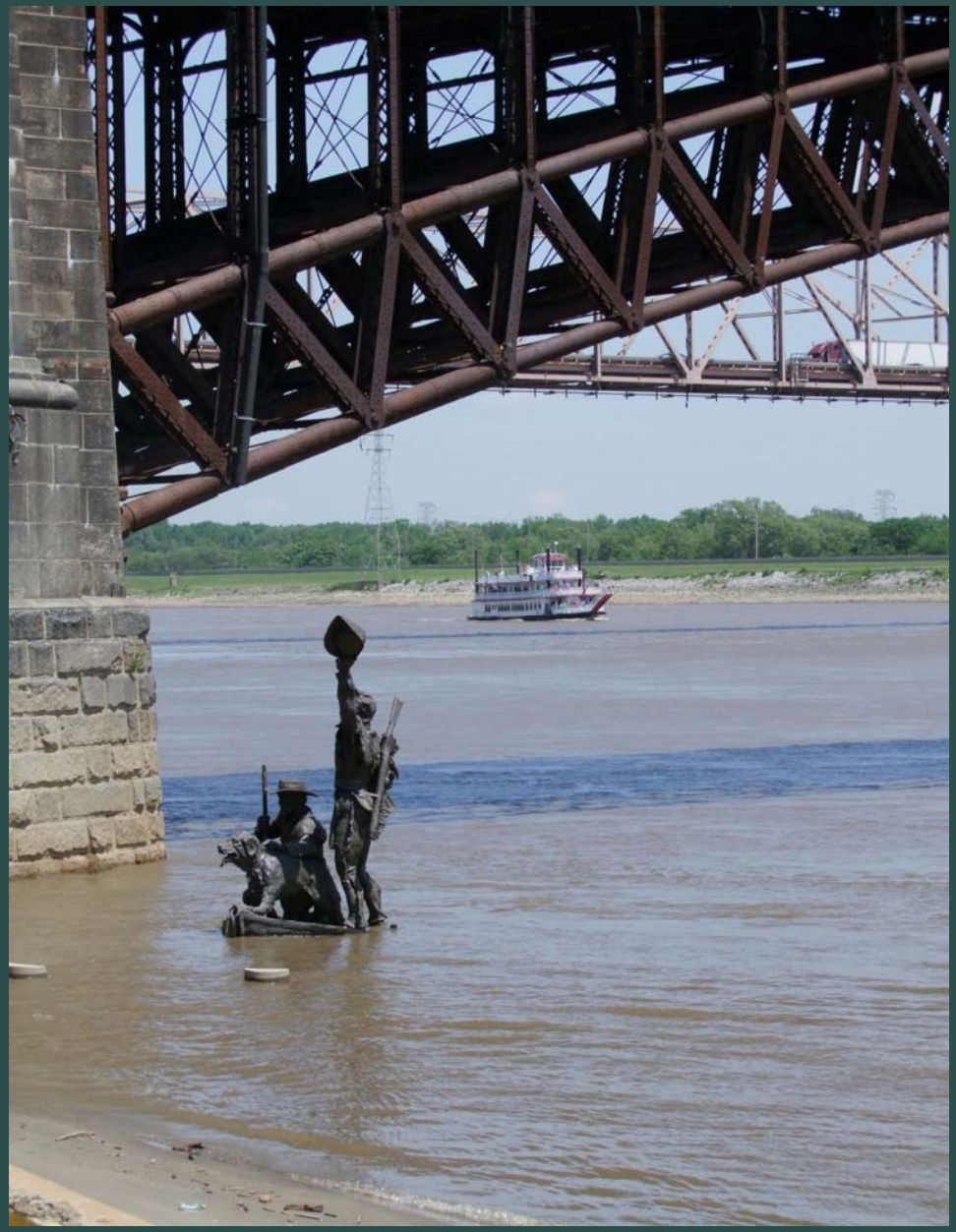
Independent Research Projects

Project: The St. Louis Region: An Excellent Choice in Distribution

In an independent research project the Center for Transportation Studies determined that the St. Louis Region is one of the nation's best sites to locate a regional distribution center because of the area's abundant transportation related resources. An already capable cargo freight distribution system at the St. Louis regional airports could be further improved by the location of additional businesses near the existing airports.

Project: Ikea and the last mile issue

Shipping to a customer's house is very costly. The last step of the delivery, also called the "last mile", usually accounts for over 40% of the overall shipping costs. Home deliveries require significant handling and are also largely unsuccessful (60% on average), requiring multiple attempts. The Center for Transportation Studies has investigated the concept of adding a network of pick-up locations to Ikea's existing home-delivery logistics network. The new network would give Ikea customers the possibility to pick-up their online and catalog orders at a listed pick-up location, rather than having their products home delivered. The study also examined reverse logistics opportunities using the network of pick-up locations as the proposed "pick-up" network could be used to manage returns at lower costs for Ikea and its customers.



For centuries St. Louis has been a transportation crossroads and gateway. This twice life-sized statue of Lewis and Clark, located near the Arch on the St. Louis waterfront, commemorates the 1806 return of their expedition to the Pacific Coast which signaled the start of America's expansion across the trans-Mississippi frontier. Steamboats dominated westward trade until the second half of the nineteenth century. The Eads Bridge, towering over the statue in this picture, facilitated rail traffic across the Mississippi River to St. Louis and beyond after its completion in 1874. While rail and water transportation continue to play key roles, the St. Louis region is at the intersection of four interstate highways. St. Louis is within 500 miles of one-third of the U.S. population. St. Louis's location and transportation connections, coupled with an abundance of flat, inexpensive land, all contribute to the region's desirability for building warehouses and distribution centers. Greater St. Louis is home to large distribution facilities operated by more than 125 companies, with a combined space of approximately 10 million square feet.

Landair Corporation - Greenville, TN

Project: Impacts of FHA Proposed Changes in Drivers' Hours of Service Regulations

The proposed FHA Rules for changing the limits on hours of service for truck drivers may have negative effects on transportation providers' costs. At the request of the Landair Corporation, the Center for Transportation Studies evaluated the effects of the proposed rules on an existing distribution network and concluded that the proposed regulations could have a significant impact on delivery costs.

Taxicab, Limousine and Paratransit Association (TLPA) and the Midwest Transportation Consortium (MTC)

Project 1: Research and Training of Private Transportation Providers for the Efficient and Effective Provision of Public Transportation Services

The Center for Transportation Studies devoted considerable time and effort to the research and training of private transportation providers for the efficient provision of public transportation services. This work consisted of the development of a series of industry seminars for offering recommendations to the large number of private transportation officials engaged in providing public transportation. The topics for the seminars were selected on the basis of industry surveys and an understanding of the most important issues in the industry such as marketing, maintenance, dealing with the media, human resource development, and technology innovations.

Exemplified by this tractor semitrailer entering Interstate 55 in southeast Missouri, motor carriers provide a vital transportation service.

United States Army Corps. of Engineers and the Midwest Transportation Consortium (MTC)

Project: Management Systems for Inland Waterway Traffic Control

The Upper Mississippi River is an integral part of a national inland water transportation network, providing an important transportation link both into and out of America's Midwest. Our research team examined and evaluated alternative policies designed to improve the efficiency of lockage operations in an intermittently congested segment of the Upper Mississippi River navigation system. The team used a discrete event simulation model explicitly incorporating seasonal and interdependent traffic demands for specific origin and destination trips. A second portion of the project examined the feasibility of vessel tracking systems for better managing lockages on the UMR navigation system.

Dr. Donald Sweeney and Dr. Ray Mundy examine a lock on the Mississippi River.

Sunset Transportation

Project: Analysis of Freight Payment Database for Consolidation Opportunities

CTS undertook this study to investigate statistical shipment patterns and consolidation opportunities from Freight Payment Data. Multiyear data analysis was performed for the company's major customers, and a number of reports were produced and shared. The Center built a custom software, developed with proprietary code written in Visual Basic to assist in identifying potential consolidation savings and frequent shipping lanes. In addition, the study included process mapping (flowcharting) and process optimization of the brokerage operations.

UM Columbia/Boyce and Bynum Pathology Laboratories

Project: Routing/Scheduling and Data Analysis

The purpose of this project was to examine the business processes utilized by the Boyce and Bynum Pathology Laboratories for routing and scheduling phlebotomists. Arc-logistics software package was used to model the routing and scheduling processes. The recommendations for a new business model were identified.

The University of Missouri-Saint Louis College of Business Administration

The University of Missouri-St. Louis College of Business Administration is the largest college of business in the St. Louis metropolitan area. It offers five graduate business degrees: the Ph.D. in Business Administration, the Master of Business Administration (MBA) in a traditional evening format, the Professional MBA On-Line in an internet-based format, the Master of Science in Management Information Systems, and the Master of Accounting. The graduate programs in business at UM-St. Louis are among a select group that have been fully accredited by the prestigious Association to Advance Collegiate Schools of Business. AACSB accreditation is carried by only three Colleges of Business in St. Louis: Washington University, St. Louis University, and the University of Missouri-St. Louis. Only UM-St. Louis is able to provide a combination of high quality, program availability, and reasonable cost. In addition to the degree programs described above, the College offers 18-hour (6 course) graduate certificate programs designed to provide specialized study. Current graduate certificates include Logistics & Supply Chain Management, Business Administration, Electronic Commerce, Human Resource Management, Information Resource Management, Information Systems Development, Marketing Management, Taxation, and Telecommunications Management.

The University of Missouri-St. Louis is one of four campuses that constitute the University of Missouri. Founded in 1839 upon the ideals of Thomas Jefferson, the University of Missouri is the ninth largest university in the United States. The St. Louis campus was added in 1963 and UM-St. Louis has become the largest university serving St. Louisans, and the third largest university in the state. UM-St. Louis offers 46 undergraduate programs, 26 master's programs, seven pre-professional programs, eleven doctoral programs, and one professional degree program. There are also many opportunities for students to combine their academic course work with internships. As a major metropolitan university in a center of commerce and transportation, UM-St. Louis works in partnership with key businesses and institutions to help the St. Louis region progress and prosper. By means of a careful melding of strengths in scholarly research, teaching, and community service, UM-St. Louis plays a leadership role in advancing scholarship; providing quality education; and contributing to economic development throughout the area, region, state and nation.

LOGISTICS & SUPPLY CHAIN MANAGEMENT (LSCM) PROGRAMS

The Logistics & Supply Chain Management programs at UM-St. Louis are a key component of initiatives in Transportation, Logistics & Supply Chain Management that seek to make UM-St. Louis ***the*** source in Missouri for educational programs in these areas. The programs provide a solid foundation in Logistics & Supply Chain Management, and advanced training in the use of information systems and quantitative tools. These programs capitalize on existing expertise within the College of Business Administration and the Center for Transportation Studies, as well as additional resources of the St. Louis metropolitan area.

The Center for Transportation Studies and the College of Business Administration are especially pleased at the introduction and growth of the Ph.D. program in Business Administration with an emphasis in Logistics & Supply Chain Management (LSCM). This Ph.D. program is the only one in the St. Louis region and the state of Missouri specializing in Logistics & Supply Chain Management.

Academic Excellence

Ph.D. Program in Logistics & Supply Chain Management (LCSM)

Logistics & Supply Chain Management (LSCM) are key areas of growing importance for 21st century economies locally, nationally and internationally. The Ph.D. in Business Administration with a Logistics & Supply Chain Management emphasis features major themes of analytical modeling and international business. It provides a solid understanding of broad business issues, the latest developments in supply chain management, and current technology - all complemented with expertise in international and analytical aspects of LSCM.

The full-time program accommodates traditional students with baccalaureate or graduate degrees in a relevant area (e.g., business, management science, transportation, operations research), as well as more experienced individuals seeking a career change through in-depth study leading to a doctoral degree. A part-time program is also available for highly qualified students, such as mid-career managers with an MBA. The primary markets for graduates are academic institutions and research organizations, both nationally and internationally, and recent studies project a strong demand for new faculty in LSCM. Graduates will also find opportunities in the growing private sector demand for advanced LSCM expertise.

The core philosophy of the instructional component of the LSCM Ph.D. program is to provide a solid grounding in business, with special coverage of international business logistics topics and analytical modeling. The primary focus of the research component of the program is applied research in logistics and supply chain management. This will contribute to the knowledge base in an operating environment that is increasingly complex, international, data-rich and technologically-driven.

The LSCM Ph.D. program relies on the College of Business Administration 's nucleus of high quality faculty in the LSCM area. The program also leverages links with the College's affiliated research centers (the Center for Transportation Studies and the Center for Business and Industrial Studies), the International Business Institute, and the Ph.D. program in Information Systems.

Ph.D. candidate Michael Sciaroni assisting at a CSCMP meeting

Master of Business Administration (MBA) Program

The Master of Business Administration (MBA) program at UM-St. Louis is designed to educate a well-rounded business professional, and it has been fully accredited by the AACSB since 1973. It is flexible enough to accommodate the person who seeks a general, broad-ranging knowledge of business, as well as one who seeks to obtain an emphasis in a specific discipline. Although demanding and challenging, the MBA curriculum provides the breadth of study needed to understand business operations in present and future environments. Themes which run throughout the program include: analyzing ethical issues, managing worker diversity, evaluating global and international market opportunities, and addressing technological issues. The MBA experience at UM-St. Louis is not just a credential, it is a source of management knowledge and education intended to enhance critical thinking and understanding in the business environment.

Students pursuing the MBA may seek an emphasis in an array of areas including Operations Management and Logistics & Supply Chain Management.

Master of Science in Information Systems (MIS) Program

The Master of Science in Information Systems (MIS) program at UM-St. Louis is designed to provide students with technical and managerial knowledge, and to expose them to the specific skills which will enable them to operate successfully in the rapidly changing careers associated with the design, development and management of computer-based information, telecommunications, and internet application systems. The MIS curriculum prepares students for technical, managerial and academic careers incorporating leading-edge technologies in public and private organizations. MIS curriculum builds on the core of the business program to prepare students for the social and technical design, development, and implementation of state-of-the-art, computer-based, internet-based and telecommunications systems. The program is enriched by advice from an advisory board and an active mentoring program.

Graduate Certificate in Logistics and Supply Chain Management

The Graduate Certificate in Logistics and Supply Chain Management is an 18-hour program designed to provide a focused, intensive study of important issues within logistics and, more broadly, in supply chain management. Three required courses provide thorough background in operations, logistics and supply chain management. Three elective courses allow specialization in areas such as logistics and supply chain software, international logistics, operations research, e-commerce, and quality.

Undergraduate Program in Transportation Studies

In addition to its graduate programs, the Center for Transportation Studies at the University of Missouri-St. Louis is pleased to present an undergraduate program. A minor in Transportation Studies is available to undergraduate UM-Saint Louis students of any major. This interdisciplinary minor combines contemporary and historical aspects of transportation through classes including:

- Introduction to Transportation
- Traffic and Transportation Management
- Aviation in American Life
- American Railroads in Global Perspective
- Transportation Security, Safety, and Disaster Preparedness
- Introduction to Supply Chain Management
- Transportation Carrier Management
- Independent Study
- Internship

This minor provides students in the St. Louis area who desire employment in a transportation-related field with the opportunity to gain valuable skills applicable to the transportation industry. The minor also provides the transportation/warehousing industry with a source of university-trained personnel in their field.

For more information about the undergraduate program in Transportation Studies, please contact:

Daniel Rust
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UM-St. Louis student, James North, received the prestigious John Grant Helm Memorial Scholarship from the St. Louis Roundtable of the Council of Supply Chain Management Professionals.

Internships

Internships are an integral part of the undergraduate program in Transportation Studies. Offered through the College of Business Administration, internships provide opportunities for students to earn academic credit for approved internship situations and supplement his or her academic program by providing "real world" experience prior to graduation.

An academic internship is a temporary work experience in the student's discipline that contains sufficient academic content and rigor to merit the granting of academic credit. It is supervised both by a sponsoring faculty member in the discipline, and by an onsite representative of the employing firm. The student must pay tuition and fees for the number of hours for which he/she expects to receive academic credit. The internship may or may not entail compensation for the student from the host organization. Such compensation may take several forms, including stipends or scholarships for tuition and fees. Internships can be obtained several ways:

- On your own- through your own resources or contacts. An internship may also be approved for credit if the work involves a special project outside of your current job.
- Through Career Services. Check with the Career Services Department frequently and follow up on opportunities provided.
- Through referrals received from CoBA faculty and the Internship Coordinator.

Not only are businesses good sources for internships, but many business students can receive extensive experience interning for non-profit agencies and local government entities as well. Students in the Transportation Studies program have participated in internships with a range of companies, including Sunset Transportation, Xtra Lease, Arch Coal, and Boeing.

The Center for Transportation Studies is particularly proud of its graduates and their accomplishments.

Graduates

Aysin Koparan "I graduated in 2009 with an MBA- Operations Management. Upon my graduation from UMSL, I was hired by The Boeing Company - IDS Supply Chain Management. Currently, I am working in procurement of complex machine parts for F-18, C-17 and F-15 programs. My experience working at The Center for Transportation Studies played an important role to join a multibillion dollar global company. At CTS, I was exposed to real life projects, introduced to professional groups, business negotiations and scholarly conferences. Today, I acknowledge my success to education that I received from UMSL and experience that I gained from CTS. Thanks to all my professors and everyone at CTS. "

Adam Michalski graduated in 2009 with an M.A. in History with an emphasis in United States and Transportation History. His thesis was entitled: *Unfulfilled Promise: Electrification and the Chicago, Milwaukee & St. Paul Railroad*. While a student at UM-SL, Adam worked as a research assistant at the Western History Association. He has been involved with the Railway & Locomotive Historical Society. He currently works for the San Antonio Conservation Society at the Steves Homestead and volunteers at the Institute of Texan Cultures in San Antonio, Texas.

Michelle Luu graduated in August 2008 with a Bachelor of Business Administration with an emphasis in Logistics and Operations Management. She has been working at Unyson Logistics since August 2008, a leading third-party logistics provider. Her projects at Unyson entail optimization modeling analyses ranging from network-optimization, fleet routing, transportation procurement bid analyses, and process re-engineering. These results then produce innovative and cost-effective solutions that are customized for prospective customers. Michelle has greatly leveraged her experience from the Center at Unyson. Michelle is also a board member of the St. Louis Roundtable for the Council of Supply Chain Management Professionals.

Regis Perrot graduated in 2008 with a Master's degree in Operations Management and Supply Chain Logistics from IAE IUP University Jean-Moulin Lyon 3. While an exchange student at UMSL, he worked as a graduate research assistant at the Center from November 2007-April 2008. He is currently employed as a demand and supply-chain analyst for PPG industries refinish branch in Milan, Italy. He specializes in the creation of forecasts using planning software, and development and ownership of supply-chain reports such as coverage of sku's, sales month to date, vetting of open orders.

Daniela Wagner "I graduated in August 2008 with an International Master of Business Administration from the University of Missouri-St. Louis. Ever since I returned to my home country – Austria – I have been working as an auditor with KPMG Austria. My teams are mainly auditing Austrian banks but also some industrial enterprises. My responsibilities are mostly financial audits, even though compliance audits and audits of internal control systems are also part of my job. Working at the Center for Transportation Studies not only gave me the chance to gain experience in a new field of business but also to meet very interesting people at the monthly meetings of the St. Louis Roundtable of CSCMP."

Teresa Wolfram "I graduated in June 2008 with an International Master of Business Administration from the University of Missouri in Saint Louis. I have since started working as a Site Activity Coordinator responsible for pet food products in the logistics department of Mars Austria in Bruck an der Leitha. My responsibilities include coordinating all new product launches, delistings, promotions and product innovations in the pet food portfolio in our factory in cross-functional teams. My work at the Center for Transportation Studies not only gave me the opportunity to work on very interesting projects in the field of transportation studies, but also helped me to broaden my horizons."

Denise Franke graduated with an MBA in 2008, a Master of Science degree in Management Information Systems, and a Graduate Certificate in Logistics and Supply Chain Management in 2007. She is currently a build manager and senior Java programmer at Tripos (DE) Inc., in Saint Louis. She has been employed in the MIS field for fifteen years as a senior technical services professional working with companies including A.G. Edwards and Sons, Enterprise Rent-A-Car, SBC, and the United States Transportation Command. She has worked in both Operations, and Applications Development areas including Project Management, Application Design, and System, Network and Database Administration.

Gaurav Tiwari graduated with a Master's degree in Economics and a Graduate Certificate in Logistics and Supply Chain Management in December 2006. During his research assistantship position at the Center for Transportation Studies, he participated in logistics modeling projects, along with undertaking directed research on issues in the U.S. transportation industry. Immediately after graduation, Gaurav joined the Council on Foreign Relations in New York City as a Research Associate in their Geoeconomics Studies program.

David Crombie graduated in December 2006 with a Master of Business Administration degree and a Graduate Certificate in Logistics and Supply Chain Management. David also has a Master of Information Systems Engineering degree from Imperial College in London, England. David worked at the center from April 2005 until his graduation in December 2006. David was awarded the Top Graduate Logistics and Supply Chain Student Award in 2006. He is also a member of the Beta Gamma Sigma Honors Society. David is living in England and working out of Norway as a Survey Technician for DOF Subsea Norway AS.

Yanfang Echo Li "I graduated in August 2006 with a Master of Accounting and a Graduate Certificate in Supply Chain Management. I have been working as an internal auditor at Insituform Technologies Inc., a worldwide company specializing in replacing and installing underground pipes. My responsibilities include financial audit, compliance audit and operational audit (analyzing business processes and developing recommendations for improving process efficiency). At the Center for Transportation Studies, I had opportunities to strengthen my business and analytical skills. Working at the Center was a valuable and enjoyable experience."

Amrita Sinha graduated in Summer of 2006 with an MBA and a Graduate Certificate in Logistics and Supply Chain Management. Since then she has got an opportunity to work with some of the most prestigious companies of the world such as Tyco Healthcare and Cisco Systems Inc. Currently she is working with Apple in Cupertino, CA as the Demand and Supply Planning Manager (WW) for one of their product lines. She manages the regional product planning teams and provides direction and feedback to them to ensure companies financial goals are met. She collaborates with Sales and Marketing teams to come with the final forecast which is communicated to the senior executives and makes sure that it gets executed at an operational level. Her main responsibility is to manage and develop the team to execute world class demand/supply management in the organization.

Sima Eghbal graduated in 2005 with an MBA and a Graduate Certificate in Logistics and Supply Chain Management. Sima has several years of work experience with International organizations in project management, process analysis, process reengineering, and international business. Her primary areas of focus have been in Logistics, Operations, and Customer Service with multinational shipping companies. In October 2004, she was awarded the prestigious CSCMP Student Sponsorship to represent the St. Louis Roundtable at the Annual National Conference in Philadelphia, PA . Sima works for one of the leading juice and beverage manufacturer's in North America.

Sokrates Kosmides graduated in 2004 with two Master's degrees and a Graduate Certificate in Supply Chain Management. Since January 2005, he has been working for Elementis Pigments Inc., the world leading manufacturer of Iron Oxide Pigments. Sokrates has been recently promoted to Transportation Manager North America and is currently responsible for an $8 million annual freight budget. He has effectively managed several projects including two world-wide Ocean Container RFPs saving Elementis over $800,000 in a period of one year. Apart from managing day-to-day carrier relationships, he has participated in contract negotiations with providers in warehousing, and transportation, and concurrently managed working relationships with several outside warehouses. Sokrates is responsible for a number of reports including monthly OTIF, carrier scorecards, cost performance, and transportation spend variance. He currently reports to the VP of Supply Chain for North American operations.

Matthew Doughty graduated in 2004 with an MBA and a Graduate Certificate in Supply Chain Management. For the past two years, he has been working for Booz Allen Hamilton in McLean, VA. Matt was recently promoted out-of-cycle to Senior Consultant for his performance on the United States Army's implementation of the Defense Integrated Military Human Resources System (DIMHRS), which is the largest Human Resources ERP implementation in the world. While on DIMHRS, his responsibilities have focused on Program Operations tasks such as Integrated Logistic Support, scheduling, and risk management. Currently, Matt serves as the contractor Risk Manager as well as the Scheduling Co-Lead for the Army DIMHRS Program Office.

Deborah Schillinger graduated in August 2004 with an MBA and a Graduate Certificate in Supply Chain Management. She is using her knowledge and skills gained through her MBA program in Supply Chain Management as an independent distributor with Xango, a global network offering premium mangosteen products in the food industry.

Canser Bilir graduated in May 2004 with an MBA and Graduate Certificate in Logistics & Supply Chain Management. Canser has been recently hired by Performance Consulting, located in Istanbul, Turkey. Performance Consulting provides consulting services to many companies including several transportation firms. Canser is also a member of the Peoplesoft Advanced Planning and Scheduling Products Implementation Team, which is formed by Global-soft representing Peoplesoft products in Turkey.

Julien Marin-Couilloud joined Emerson (Fortune 100) in St Louis upon graduating from the program in 2004. After working on logistics and customs compliance projects for the Emerson Motors division for a 1.5 year, Julien joined Emerson's Corporate Logistics team where he has global responsibility for Emerson's Ocean Program.

Francois Charvet graduated in 2003 with a Master's degree in Information Systems and a Graduate Certificate in Supply Chain Management. Upon graduation, he worked for ORTEC (Atlanta) as a business analyst and routing software specialist, taking on several roles and responsibilities in large-scale optimization software projects. Francois earned a Ph.D. in Business Logistics at the Fisher College of Business, The Ohio State University. He is currently an assistant professor of Supply Chain Management at Northeastern University. "The experience I acquired at the Center for Transportation Studies through education and research projects was invaluable. At ORTEC, I used this experience when working for companies like Coca Cola Enterprises, Roadway Express, or Longview Fibre Company. It also helped me become accepted at a very competitive doctoral program in the field."

Ersin Ertikin has been working as a Fleet Manager at Federal-Mogul Corp., Fortune 500 automotive component manufacturer, since May '03. His responsibilities include management of daily dedicated fleet operations, analyzing - optimizing the fleet routes, monitoring the performance and customer service. He has also been involved in several transportation and supply chain related projects in the company. Currently, he is a member of a team formed with people from several departments to implement Transportation Management System to North America Distribution Centers and Plants.

Stephanie Weber graduated in December of 2003 with a Master of Business Administration degree with a certificate in Supply Chain Management. Stephanie has a Bachelor of Animal Science with a minor in biology/Chemistry from the University of Missouri -Columbia. She is currently pursuing further studies in Veterinarian School.

Hani Yafi graduated in May 2003 with an MBA and two Graduate Certificates in Supply Chain Management and E-Commerce, and has been working for the Jacobson Companies as a Logistics Analyst since October 2003. Jacobson is a full service third party logistics provider. The company provides innovative logistics solutions to its clientele developed through the latest technological advances in warehousing and transportation. His experience with the Center, has helped him develop the right skills to succeed in his new position. He is a key player in analyzing data, developing cost effective programs that helps secure new business, supporting modeling and optimizing the logistics operations for different customers to achieve cost efficiency for his company.

Laura Hrabar graduated in December of 2002 with a Master of Science in Information Systems degree in December 2002. Laura is experienced in project management, process analysis, process reengineering, operations management and information systems. She worked at Accenture for several years as a Consultant and later joined the Federal Bureau of Investigation as a Special Agent in Sacramento, California.

Chia-Lin graduated in December of 2002 with a Master of Business Administration degree. She worked at the Center since November 2000 where she explored different aspects of Supply Chain and transportation asset management. She is interested in utilizing her analytical skills to integrate her knowledge in Managerial Accounting, Resources Management, Urban Planning as well as the Asia Market to enhance the value of Supply Chain.

Kwabena Boaten "I graduated in 2002, and currently work as a logistics planner at the distribution arm of Praxair Inc., one of the largest players worldwide in the Industrial Gases business. My current work entails implementing routing software for next day delivery of cylinder gases to customers ranging from restaurants to hospitals to manufacturing outfits. Prior to joining the center, my knowledge of the impact of the practice of supply chain and logistics was pretty vague. At the Center opportunities to attend local, and national Council of Logistics Management events enabled me to gain a greater insight into the field of Logistics and Supply Chain Management. I immediately realized that the world of supply chain was critical to a firm's success. While no amount of course work can prepare you exactly for the challenges of the real world, I realized that the flexibility and breadth of courses available through the Center's co-operation with the Business School, and MIS programs armed me with a good baseline for appreciating and tackling supply chain problems from an integrative approach. I strongly urge potential UMSL students to seriously consider this great opportunity and encourage current CTS fellows to take full advantage of the Center's offerings."

Irina Kovshar graduated in December of 2002 with a Master of Business Administration degree with a Supply Chain Management Certificate. Her experience involves statistical modeling and ArcView analysis for price modeling at a large expedited motor carrier in North America; an analysis of potential uses of GPS-GIS technology in sharing real-time information on scheduling with end-users in various public transit systems; decision support systems for supply chain, logistics, and transportation; and public transportation. Irina is currently the director of Strategic Planning Department at GSM Kazakhstan (K'cell).

Display of CTS graduates in the lobby of University Center

Develop Online Transportation Studies Program

In an effort to bridge the current lack of managerial and leadership education in transportation among the nation's universities, the Center is providing leadership for a group of senior faculty from the business schools of six universities to form a Transportation Education Consortium which will offer in-depth transportation courses online. The six universities are UM-St. Louis, Missouri State University, the University of Arkansas, Auburn University, Georgia Southern University, and the University of Tennessee. Modal courses (no longer taught at these universities) include Railroad Management, Motor Carrier Management, Transportation Policy, and Water and Air Transport. They will be offered as Distance Learning credit courses through UM-St. Louis. These participating universities are all members of the Association to Advance Collegiate Schools of Business (AACSB), with similar standards and agreements to accept each other's academic credits. In practice, if a three-hour credit course is satisfactorily completed through one of these schools, other AACSB schools accept those credit courses as transfers. Thus, by offering these courses online, students at more than 500 universities in North America can take the course and apply it toward the business degree where they are enrolled. Faculty participants in the Consortium seek to educate many more students than the transportation industry can absorb. This is for two reasons: First is to create a pool of the best and brightest students from which the future generations of transportation managers may come; second is to educate the general population of college graduates on the importance of transportation in our society. Business men and women—our future managerial and political leaders—need to know the importance of transportation in terms of taxation, funding for infrastructure, and the delivery of societal benefits to all.

Gain Approval of Undergraduate Major in Transportation Studies

As the undergraduate program in Transportation Studies continues to grow in the number of courses offered and the number of students taking those courses, the Center is working toward developing an undergraduate major in Transportation Studies to complement the existing minor in the field.

Become a Tier II University Transportation Center under US DOT

The United States Department of Transportation invests in the future of transportation through its University Transportation Centers Program, which awards grants to universities across the U.S. to advance the state-of-the-art in transportation research and develop the next generation of transportation professionals. The Center for Transportation Studies at UM-St. Louis has submitted an application, and received the support of Missouri's congressional delegation, to become a Tier II University Transportation Center under the US DOT's Research and Innovative Technology Administration. Worth up to $2.5 million in matching federal funds over a five-year period, the award of Tier II status is contingent upon passage of a new transportation funding bill on Capital Hill. The proposed theme of the Center for Transportation Studies at UM–St. Louis is "to enhance regional transportation business employment opportunities, and economic development of the region by improving efficiency, safety, and environmental impact of the intermodal transportation systems in the region."

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