



Global Supply Chain Management/Transportation: Building a Global Network of Scholars and Educators

Phase I

Principal Investigator:

Subba Rao, Professor

Information Operations and Technology Department

College of Business Administration

Toledo, Ohio 43606

419-530-2421 (Office)

419-530-7474 (Fax)

Co- Principal Investigator:

Paul Hong, Professor

Information Operations and Technology Department

College of Business Administration

Toledo, Ohio 43606

419-530-2054 (Office)

419-530-2290 (Fax)

A Report to University of Toledo-University Transportation Center
And the U.S. Department of Transportation

DISCLAIMER

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the information presented herein. This document is disseminated under the sponsorship of the Department of Transportation University Transportation Centers Program, in the interest of information exchange. The U.S. Government assumes no liability for the contents or use thereof.

Abstract:

During the project period two conferences--1st Symposium and Workshop in Global Supply Chain (<http://www.business.utoledo.edu/scm>) at University of Toledo, Toledo, OH, USA (October 6-7, 2007) and 2nd Symposium and Workshop in Global Supply Chain at Pusan University, Busan, Korea (May 29-30, 2008)—have been successfully organized and implemented. This report contains the planning and conference program details and other related activities.

Report on International Symposium and Workshop on
Global Supply Chains, Intermodal Transportation and Logistics
October 25-26
at The University of Toledo, Toledo, OH.

The College of Business Administration, the University Transportation Center and Intermodal Transportation Institute (ITI) at The University of Toledo in collaboration with International Cargo Handling Coordination Association (ICHCA) conducted Symposium and Workshop on *Global Supply Chain, Intermodal Transportation, and Logistics Management* (<http://www.business.utoledo.edu/scm>) This International Symposium and Workshop was held October 25-26, 2007 on the campus of the University of Toledo. The conference proceedings follow.

First, this symposium and workshop has attracted scholars from around the world including, India, Japan, Korea, China, Taiwan, Malaysia, Spain who presented papers on global supply chains, supply chain security, supply chains issues of small and medium enterprises, IT and supply chain, logistics management. Instructional issues in relation to supply chain graduate and certificate program, effective supply chain instruction methods and developing global supply chain programs. Research seminar speakers included Dr. Mark Vonderembse (University of Toledo, Intermodal Transportation Research), Dr. Hokey Min (Bowling Green State University, Current Research in Logistics Management) and Dr. Xenophon Koufteros (Security of Global Supply Chains, Texas A & M University).

Second, representatives from the business world will also give presentations on topics such as supply chain practices of European firms, strategy for purchasing ocean container freight, global transportation and IT. The participants include Ford Motor Company, St. Luke's Hospital in Toledo, Instituto de Empresa and the Toledo-Lucas County Port Authority.

Third, in conjunction with the above symposium, the Great Lakes Maritime Research Institute, Toledo-Lucas County Port Authority and UT's Intermodal Transportation Institute and the Geographic Information Science and Applied Geography Center held the third meeting in a series aimed at increasing freight movements on the Great Lakes.

Fourth, the Thursday evening dinner was well-attended at Libbey Hall of The University of Toledo. Dr. Tom Gutteridge welcomed the guests and spoke about the vision of the University of Toledo as a research university and the College of Business as a leading institution with solid business research and instructional capabilities in the areas of global supply chains, intermodal transportation and logistics. Mr. James Hartung spoke with passion on the mission of the Toledo-Lucas Country Port Authority and International Cargo Handling Coordination Association (ICHCA) and the role of transportation and commerce in promoting world peace.

Fifth, a core group for forming an international research network of universities, industries and businesses was established through this symposium and workshop. This core group included practitioners and researchers from organizations such as Ford Motor Company, St. Luke's Hospital - Toledo, US Army, the Port Authority, 12 universities from the USA (University of Toledo, Eastern Michigan University, University of Detroit – Mercy, Texas A & M, Bowling Green State University, Wayne State University, Ball State, Bryant College, College of Charleston, University of Indiana at Purdue, University of Wisconsin at Eau Claire, New Mexico State University) and 8 universities from major US trading partners like Korea (Kyungppok University and Youngdong University), Japan (University of Tokyo), Taiwan (National Cheng King University), China (Yanshan University), Malaysia (University Utara Malaysia), India (PSG Institute of Management) and Europe (Instituto de Empresa).

Finally, the core group decided to continue to expand this global research network and agreed to hold the future meetings in Busan, Korea (May, 2008), India (January 2009) and Madrid, Spain (2010). Steering committees will follow through with the organizational details.



- College of Business Administration
- UT Univ. Transportation Center
- Intermodal Transportation Institute

International Symposium and Workshop on Global Supply Chain, Intermodal Transportation and Logistics

October 25-26, 2007
University of Toledo
Toledo, Ohio, USA

[Home](#)
[Objectives](#)
[Call for Papers](#)
[Outcomes](#)
[Important Dates](#)
[Program Committee](#)
[Program](#)
[Sponsors](#)
[Registration](#)
[Hotel](#)
[About Toledo](#)
[Contact Us](#)
[The 3rd GLMRI Meeting](#)
[Directions](#)

The College of Business Administration, the University Transportation Center and Intermodal Transportation Institute (ITI) at The University of Toledo in collaboration with International Cargo Handling Association (ICHCA) invites you to participate in a Symposium and Workshop on ***Global Supply Chain, Intermodal Transportation, and Logistics Management***.

The University of Toledo is a designated University Transportation Center by US Department of Transportation. The ITI was established by The University of Toledo in collaboration with its public and private sector partners to develop technology-enabled intermodal transportation systems and supply chains that promote economic development and quality of life.

This International Symposium and Workshop will be held **October 25-26, 2007** on the campus of the University of Toledo.





- College of Business Administration
- UT, Univ. Transportation Center
- Intermodal Transportation Institute

International Symposium and Workshop on Global Supply Chain, Intermodal Transportation and Logistics

October 25-26, 2007
University of Toledo
Toledo, Ohio, USA

- [Home](#)
- [Objectives](#)
- [Call for Papers](#)
- [Outcomes](#)
- [Important Dates](#)
- [Program Committee](#)
- [Program](#)
- [Sponsors](#)
- [Registration](#)
- [Hotel](#)
- [About Toledo](#)
- [Contact Us](#)
- [The 3rd GLMRI Meeting](#)
- [Directions](#)



Steering Committee	Program Committee	Organizing Committee
<ul style="list-style-type: none"> • Subba Rao (University of Toledo, USA) • Mark Vonderembse (University of Toledo, USA) • Paul Hong (University of Toledo, USA) • A. Gunasekaran (University of Massachusetts, USA) • Shahram Taj (University of Detroit Mercy, USA) • Hokey Min (Bowling Green State University, USA) • Rao V. Tummala (Eastern Michigan University, USA) • Tobias Schoenherr (Eastern Michigan University, USA) • Nanda Gopal (PSG Institute of Management, India) • Gyewan Moon (Kyungpook University, Korea) • Ezra Park (University of Tokyo, Japan) • Don Beeman (International Business Institute, USA) • Mauricio Tirado (Libbey Inc., USA) 	<ul style="list-style-type: none"> • Luis Solis (Instituto De Empresa, Spain) • Xenophon Koufteros (Texas A&M University, USA) • Peter Linquist (Geography and Planning, University of Toledo) • Hiroyuki Iseki (University of Toledo, USA) • Devinder Grewal (Maritime University, Australia) • A. K. Rao (ICFAL University, India) • T.S. Ragnathan (University of Toledo, USA) • T. Le (University of Toledo, USA) • James Hartung (ICHICA International, USA) • James Pope (University of Toledo, USA) • Abraham Nahm (University of Wisconsin-Eau Claire, USA) • Marvin E. Gonzalez (College of Charleston, USA) • Ashok Kumar (University of Toledo, USA) • Suhong Li (Bryant College, USA) 	<ul style="list-style-type: none"> • Subba Rao (University of Toledo, USA) • Paul Hong (University of Toledo, USA) • Christine Lonsway (Intermodal Transportation Institute, USA) • Udayan NandKeloyor (University of Toledo, USA) • Carlo Mora (New Mexico State University, USA) • Gioconda Quesada (College of Charleston, USA) • Susita Asree (University of Toledo) • James Roh (University of Toledo) • Erika Marsillac (University of Toledo) • Sufian Qrunflesh (University of Toledo) • Xiadong Deng (Oakland University, USA) • Dothang Truong (Fayetteville State University, USA) • Glen Metts (Indiana University-Fort Wayne, USA)





- College of Business Administration
- UT Univ. Transportation Center
- Intermodal Transportation Institute

[Home](#)
[Objectives](#)
[Call for Papers](#)
[Outcomes](#)
[Important Dates](#)
[Program Committee](#)
[Program](#)
[Sponsors](#)
[Registration](#)
[Hotel](#)
[About Toledo](#)
[Contact Us](#)
[The 3rd GLMRI Meeting](#)
[Directions](#)



International Symposium and Workshop on Global Supply Chain, Intermodal Transportation and Logistics

October 25-26, 2007
 University of Toledo
 Toledo, Ohio, USA

Schedule

October 25, 2007 (Thursday)

12:00 - 1:00 P.M.	Registration
1:00 - 1:30 P.M.	Opening Session
1:30 - 3:00 P.M.	Paper Session (Parallel)
3:00 - 3:15 P.M.	Break
3:15 - 4:45 P.M.	Paper Session (Parallel)
5:00 - 6:00 P.M.	Social Hour
6:00 P.M.	Dinner



October 26, 2007 (Friday)

7:30 - 8:30 A.M.	Continental Breakfast (Registration)
8:30 - 9:45 A.M.	Academic Session
9:45-10:00 A.M.	Break
10:00-11:15 A.M.	Practitioner Session
11:30-12:45 P.M.	Lunch
12:45 - 2:00 P.M.	Instruction and Curriculum (Parallel)
2:00 - 2:15 P.M.	Break
2:15 - 3:30 P.M.	Paper Session (Parallel)
3:30 - 4:00 P.M.	Closing Session

* Click [here](#) to print the program for "International Symposium and Workshop on Global Supply Chain, Intermodal Transportation and Logistics"

Great Lakes: From Data to Markets to Shipping Opportunities

October 26, 2007 (Friday)

10:00 - 10:10 A.M.	Welcome and Introductions
10:10 - 10:30 A.M.	Great Lakes Maritime Research Institute: Status Report
10:30 - 11:30 A.M.	Great Lake's Database: Progress Report
11:30 - 12:30 A.M.	Lunch
12:30 - 1:15 P.M.	Ship Building on the Great Lakes
1:15 - 2:00 P.M.	Shipping Technology: Ballast Free Shipping
2:00 - 2:15 P.M.	Break
2:15 - 3:00 P.M.	Directed Discussion
	Outcome: Specific Program Plan for Commercialization
3:00 P.M.	Adjourn

* Click [here](#) to print the program for "Great Lakes: From Data to Markets to Shipping Opportunities."

Program

The following is the program planned. Some small changes are likely and you will be advised of the changes at this site. All sessions will take place at the Student Union Suites at the University of Toledo.

Registration and Opening Session
Thursday, October 25, 2007
Room SU 2592

12:00 – 1:00 P.M. Registration

1:00 – 1:30 P.M. Opening Session

Session T1 – IT and Supply Chain
Thursday, October 25, 2007
Room SU 2592

1:30 – 3:00 P.M. Session Chair: Monideepa Tarafdar (University of Toledo)

Does Web-Based Electronic Commerce Use Pays off? An Empirical Investigation
Carlo A. Mora-Monge, New Mexico State University
S. Subba Rao, University of Toledo

e- Enabled Supply Chain Management
R. Nandagopal, PSG Institute of Management
Hemamalini Suresh, PSG Institute of Management
R. Sujatha, PSG Institute of Management

The Role of Information Technology and Partner Relationship in the Practices of Supply Chain Management
Suhong Li, Bryant University
T. S. Ragu-Nathan, University of Toledo
S. Subba Rao, University of Toledo
Bhanu Ragu-Nathan, University of Toledo

Impact of Information Technology Adoption on Small Business Value Chain in Developing Economies
Anupam Ghosh, ICFAI Business School
Saoussane Rifai, Rifai Technologies

Session T2 – Logistics Management
Thursday, October 25, 2007
Room SU 2591

1:30 – 3:00 P.M. Chair: Xiao Fang (University of Toledo)

An Emperical Study of the Impact of Logistics Practices of a Firm on its Logistics Performance
R. Nandagopal, PSG Institute of Management
N. Vivek, PSG Institute of Management

Global Logistics Decision System for Medical Equipment Manufacturing
Ahad Ali, Lawrence Technological University
Hamid Seifoddini, University of Wisconsin-Milwaukee
Jay Lee, University of Cincinnati

The integrated secondary route network design model in the hierarchical hub-and-spoke network for dual express services
Cheng-Chang Lin, National Cheng Kung University

A Center for Innovation in Logistics Systems
Greg H. Parlier, Science Applications International Inc.

Product Architecture and Global Supply Chain Management of Liquid Crystal Display (LCD): Case Illustrations from Korean LCD Manufacturers
Youngwon Park, University of Tokyo
Paul Hong, University of Toledo
Takahiro Fujimoto, University of Tokyo

Session T3 – Supply Chain Practices
Thursday, October 25, 2007
Room SU 2592

3:15 – 4:45 P.M.

Session Chair: James Pope (University of Toledo)

Assessing and Managing Risks Using the Supply Chain Risk Management Process
Rao Tummala, Eastern Michigan University
Tobias Schoenherr, Eastern Michigan University

Security in the Supply Chain
James A. Pope, Professor at the University of Toledo

An Empirical Study of the Impact of Strategic Supplier Partnership and Information Quality on Supply Chain Flexibility and Organizational Performance
N. Vivek, PSG Institute of Management
R. Nandagopal, PSG Institute of Management

An Efficiency Model Study to Evaluate the Impact of Port Security Activities on Port Productivity
Marvin E. Gonzalez, College of Charleston
Gioconda Quesada, College of Charleston
Michael Lavine, Johns Hopkins University
Brad Trinkle, College of Charleston

Summary of Session T3-1 – Supply Chain Practices

TITLE: Assessing and Managing Risks Using the Supply Chain Risk Management Process (SCRMP)

PRESENTERS: V. M. Rao Tummala and Tobias Schoenherr, College of Business, Eastern Michigan University, Ypsilanti, MI 48197

ABSTRACT

Much is understood about risk assessment and management related to general business operations. However, our understanding related specifically to effective assessment and management of Supply Chain Risks (SCR) is an important nascent area of research for scholars and practitioners alike. Calling upon previous literature, this presentation addresses (1) the need for assessing and managing supply chain risks, (2) risk management approaches, (3) SC risk management approaches, (4) supply chain risk management practices (SCRMP), and (5) techniques used to use SCRMP. In doing so, three main phases of SCRMP have been identified; (1) phase 1 – involves risk identification, risk measurement and risk assessment, (2) phase 2 – involves risk evaluation and risk mitigation and contingency plans, and (3) phase 3 – involves risk control and monitoring along with the associated data management system. A recursive theoretical model has been formulated identifying risk drivers, risk categories, supplier evaluation criteria, supplier performance measures, and data management system that addresses each phase of SCRMP. Additionally, instruments for practitioner decision making have been developed. This contribution by the authors provides a theoretical framework and much opportunity for future scholarly research and testing, as well as useful tools for practitioners in assessing and managing SCR.

Session T4 – International Issues in Supply Chain
Thursday, October 25, 2007
Room SU 2591

3:15 – 4:45 P.M. Session Chair: Gyewan Moon (Kyungpook National University)

An Empirical Investigation of Mobile Commerce Adoption in China

Suhong Li, Bryant University
Hal Records, Bryant University

Organizational Information Capabilities, Information Trust, Information Quality and Strategic Supply Chain Performance Outcomes: A Case Study of Korean Steel Industry

Jin Hwan Kim, Hongik University
Sun Hee Youn, Hongik University
Jung Sik Jeong, University of Toledo
Paul Hong, University of Toledo

An Analysis of the Effects of Free Trade Agreement with USA on the Korean Mobile Industry and its Suppliers: From a Supply Chain Perspective

Gyewan Moon, Kyungpook National University
Paul Hong, University of Toledo
Jaemin Lee, Kyungpook National University

Supply Chain Management of Japanese Vehicle Manufacturers: The Case studies of Toyota, Nissan and Mitsubishi

Takahiro Tomino, University of Tokyo
Youngwon Park, University of Tokyo
Paul Hong, University of Toledo
James Roh, University of Toledo

5:00 – 6:00 P.M. Social Hour
6:00 – 7:00 P.M. Dinner

Libbey Hall

Dinner Speaker:
James H. Hartung
President/CEO – Toledo-Lucas County Port Authority

Friday, October 26, 2007

Session F1 – Contemporary Research Directions in Global Supply Chains : A Panel Discussion
Friday, October 26, 2007
Room SU 2592

8:30 – 9:45 A.M. Moderator: S. Subba Rao (University of Toledo)

Panelists:

Intermodal Transportation Research
Mark Vonderembse, University of Toledo

Current Research in Logistics Management
Hokey Min, Bowling Green State University

Security of Global Supply Chains
Xenophon Koufteros, Texas A & M University

Biographical Information of Invited Speakers

Roxana P. Molina is Director, Purchasing, Global Transportation, IT, Marketing and Communications for Ford Motor Company. She was appointed to the Transportation Purchasing position in September 2005 and her responsibilities were expanded in January 2007. Ms. Molina is responsible for overseeing Purchasing for the Transportation, IT, Marketing and Communications functions. From July 2002 to August 2005, Ms. Molina was Director, Purchasing, Ford South American Operations based in Brazil. Prior to September 2000, Ms. Molina was a Purchasing Manager for Powertrain and Raw Materials for Land Rover based in the United Kingdom. Ms. Molina joined Ford in Dearborn in 1995 as a college graduate in the Purchasing department. She has held a variety of buying and supervisory positions in Chassis, Powertrain and Purchasing Business Office in the United States. She holds an Industrial Engineering degree from Universidad de Lima (Peru) and a Master in Business Administration from the University of Texas at Austin.

Xenophon A. Koufteros is an associate professor of Supply Chain Management at Mays Business School at Texas A & M University. He studies how firms compete based on their ability to speed up the development and manufacturing of products while improving competitive capabilities. He is also involved in a large scale project to study how companies and governmental organizations throughout the world implement procedures and practices to safeguard the movement of goods around the globe. His studies are primarily empirical as he collects and analyzes data through interviews and administrations of questionnaires to practitioners. He has published widely in journals such as *Journal of Operations Management*, *Decision Sciences Journal*, *International Journal of Production Research*, *International Journal of Production Economics*, *Omega*, *Structural Equation Modeling*, *Educational and Psychological Measurement*, *Behavior and Information Technology*, *International Journal of Vehicle Design*, and others. He is an Associate Editor of *Journal of Operations Management* and serves on the editorial board of *Structural Equation Modeling*, *Information & Management*, and *Decision Sciences Journal of Innovative Education*.

Hokey Min is James R. Good Chair in Global Supply Chain Strategy in the College of Business Administration at the Bowling Green State University. Prior to joining the Bowling Green State University, he was the Distinguished University Scholar and Founding Director of the UPS Center for World-wide Supply Chain Management and the Center for Supply Chain Workforce Development at the University of Louisville. He earned his Ph.D. degree in Management Sciences and Logistics from the Ohio State University. His research interests include global logistics strategy, e-synchronized supply chain, benchmarking, and supply chain modeling. He has published more than 105 articles in various refereed journals including *European Journal of Operational Research*, *Journal of Business Logistics*, *Journal of the Operational Research Society*, *International Journal of Production Research*, *Transportation Journal*, and *Transportation Research*. He is currently serving on the editorial review boards of *International Journal of Logistics: Research and Applications* and *International Journal of Integrated Supply Management*. He also got involved in various outreach or consulting projects for a number of companies including UPS Air, UPS Supply Chain Solutions, Brown-Form Beverage, Lexmark International, Dixie Warehouses, West-Point Stevens, Russell Athletics, Master Lock, Houston-Johnson Inc., and Pegasus Transportation. Recently, he served as the President of Delta Nu Alpha Transportation Fraternity and the Track Chair of Warehousing Education and Research Council.

**Session F2 – Practitioner View of Emerging Global Supply Chains and Logistics: A
Panel Discussion
Friday, October 26, 2007
Room SU 2592**

10:00 – 11:15 A.M. Moderator: Don Beeman (University of Toledo)
Panelists:

Supply Chain Practices of European Firms.
Luis E. Solis, Associate Dean and Professor, Instituto de Empresa, Spain

Global Sourcing – Ocean Containers: Sourcing Strategy for Purchasing Ocean Container Freight
Roxana Molina, Purchasing Director, Global Transportation and IT, Ford Motor Company

Global Supply Chain Practices in Health Care
Les Buker, Director, Resource Management, St. Luke's Hospital

Intermodal and Logistics Issues
James H. Hartung, President/CEO – Toledo-Lucas County Port Authority

**Session F3 – Instruction and Curriculum (A)
Friday, October 26, 2007
Room SU 2584**

12:45 – 2:00 P.M. Session Chair: R. Nandagopal (PSG Institute of Management)

Supply Chain/Transportation Efficiency Systems Graduate Degree Program
Shahram Taj, University of Detroit-Mercy

A Global Logistics Minor in a Liberal Arts Institution: Sharing Experiences
Kent Gourdin, College of Charleston

Teaching Supply Chain Principles Using Simulation
Amelia Carr, Director, Supply Chain Institute, Bowling Green State University

Teaching Supply Chain Management: Input from a Focus Group
Janet Hartley, Chair, Supply Chain Department, Bowling Green State University

**Session F4 – Instruction and Curriculum (B)
Friday, October 26, 2007
Room SU 2591**

12:45 – 2:00 P.M. Session Chair: Gioconda Quesada (College of Charleston)

A Supply Chain Game: A Hands-on-Tool to Teach Supply Chain Decision Making
P. S. Sundararaghavan, University of Toledo

Supply Chain Certificate Program
James Pope, University of Toledo

Enterprise Resource Planning Using Great Lakes Package: A hands on Approach
Udayan Nandkeolyar, University of Toledo

Incorporating SAP into ERP and Supply Chain Courses
Carlo A. Mora-Monge, New Mexico State University

Session F5 – Supply Chain Practices
Friday, October 26, 2007
Room SU 2584

2:15 – 3:30 P.M. Session Chair: Abraham Nahm (University of Wisconsin-Eau Claire)

From Supply Chain Management to Contract Chain Management
Sandeep Kayastha, ICFAI Business School

Relationships and Dependencies among Product, Process and Supply Chain
Erika Marsillac, University of Toledo
James Roh, University of Toledo

Impact of Purchasing Postponement on Supply Chain Costs
Sourabh Bhattacharya, ICFAI Business School

VE Analysis for the Value of Transportation Time
Bin Wang, Qinhuangdao Power Co. Ltd.
Yuzhong Zhao, Yanshan University
Baohua Qin, University of Toledo
Yehua Chen, Yanshan University

Closing Session
Friday, October 25, 2007
Room SU 2592
3:30 – 4:00 P.M.

* Click [here](#) to print the program for " International Symposium and Workshop on Global Supply Chain, Intermodal Transportation and Logistics"



Summary of Sample Sessions
October 25, 2007 (Thursday)
Section T2 – Logistics Management
Room SU 2591

1:30 – 3:00pm

Session Chair: Xiao Fang (The University of Toledo)

1. ***Global Logistics Decision System for Medical Equipment Manufacturing***
(by Ahad Ali of Lawrence Technological University, Hamid Seifoddini of The University of Wisconsin-Milwaukee, and Jay Lee of The University of Cincinnati)

Global logistics aim to optimize and control the material/product flow and the information flow so that materials/products can be moved at a desired pace, in a proper fashion and at the right volume. The production processes in the medical equipment manufacturing industries are highly automated and dynamic and the orders are customized. In order to achieve high economies of scale and shorten the logistics and supply chain lead-times, medical equipment manufacturing system has its manufacturing operations set up in various parts of the globe. The present research studies logistics performance of X-Ray Scanner, one of medical equipment manufacturing system's key products. The purpose of this research is to study for a global logistics system for scheduling and planning of medical equipment production systems to minimize logistics cost. The research develops an intelligent decision system for global logistics of medical equipment manufacturing system.

2. ***The Integrated Secondary Route Network Design Model in the Hierarchical Hub-and-Spoke Network for Dual Express Services***
(by Cheng-Chang Lin, National Cheng Kung University)

The network economy is a way to design and operate physical networks to provide services for spatial interactions. In the hierarchical hub-and-spoke network, each center is connected through a secondary route to its designated hub, while hubs are mutually connected by primary routes. It is a variation of pure hub-and-spoke networks that may eliminate center-hub partial loads with the result of higher load factor and lower cost. The authors study the integrated hierarchical hub-and-spoke network design problem for dual services. It integrates otherwise mutually exclusive secondary route networks for their respective services so that the total operating cost is minimized while meeting the time and operations restrictions. Assuming symmetry in cost/time, it is equivalent to the integration of dual degree and time constrained trees. The research proposed a directed network configuration and formulated a link-based integer mathematical model. Within the research a link-based implicit enumeration with an embedded degree and time-constrained spanning tree algorithm was also developed. The computational result showed that the integration provides a substantial cost reduction over the conventional exclusive secondary route networks for their respective services. In addition, the proper selection of number and location of hubs may achieve a higher cost-effectiveness as well as an increase in service territory at no additional operating cost.

3. ***A Center for Innovation in Logistics Systems***
(by Greg H. Parlier, Science Applications International Inc.)

Fully engaged in the Global War on Terror, the US Army is also committed to a comprehensive and ambitious "Transformation" endeavor. Fundamentally, however, without an enabling transformation in logistics there can be no Army-wide transformation. An

analytical framework is introduced which is guiding an ongoing project addressing major challenges confronting Logistics Transformation. The focus is on inventory management policy prescriptions illuminated through the prism of an enterprise-wide supply chain analysis. Army aviation logistics challenges are emphasized throughout. Following a summary of recent trends for background and context, a multi-stage conceptual model of the logistics structure is presented to segment and guide the effort. Supply chain concepts are explained in terms relevant to Logistics Transformation. A systems approach is then used with major sections focusing on analysis, synthesis and integration, design and evaluation, and change management. The multi-stage model is used to systematically analyze major organizational components of the supply chain, diagnose structural disorders and prescribe remedies. A summary of these disorders and their consequences is presented. Integration challenges are addressed using cost-benefit perspectives which incorporate supply chain objectives of efficiency, resilience, and effectiveness. The design and evaluation section proposes an “analytical architecture” consisting of four complementary modeling approaches, collectively referred to as “dynamic strategic logistics planning”, to enable a coordinated, systemic approach for Logistics Transformation. An organizational construct is presented for an “engine for innovation” to accelerate and sustain continual improvement for Army logistics and supply chain management – a “Center for Innovation in Logistics Systems”. Finally, strategic management challenges associated with transformation are addressed: organizational design; management information and decision support systems; strategic alignment for a learning organization; and workforce considerations including human capital investment needs. The presentation concludes with a relevant historical vignette and closes with a summary of expected benefits.

4. *Product Architecture and Global Supply Chain Management of Liquid Crystal Display (LCD): Case Illustrations from Korean LCD Manufacturers*
(by Youngwon Park of the University of Tokyo and Paul Hong of the University of Toledo)

In LCD Industry LCD panel makers operate in between upstream component suppliers and downstream LCD TV. Since component parts carry larger percentage of total LCD’ overall costs, it is critical for LCD industry to attain supply chain integration with its component part suppliers. This paper (1) examines the LCD industry structure from the product architecture perspective; (2) the Supply Chain Management (SCM) strategy of Korean LCD industry. Korean firms possess substantial competitive advantages in the large scale LCD global TV market. Using case studies, this paper analyzes how Korean firms have built SCM system and are implementing supply chain integration with upstream component parts manufacturers.

October 25, 2007 (Thursday)
Session T4 – International Issues in Supply Chain
Room SU 2591
3:15-4:45pm
Session Chair: Gyewan Moon (Kyungpook National University)

1. *An Empirical Investigation of Mobile Commerce Adoption in China*
(by Suhong Li and Hal Records of Bryant University)

With the expansion of Internet services to mobile devices such as cell phone and PDA, a new commerce trend has been born which is so call Mobile-Commerce or briefly m-Commerce. Regardless of increasing attention on m-commerce, consumers have been slow to adopt new mobile services. This study empirically investigated the adoption of mobile commerce in China using 206 respondents in a northern public university in China, with a focus on the impact of gender. It was found that males have a higher adoption rate of m-commerce services than females. In addition, the extent of actual usage of m-Commerce services differed by gender. In one hand, male respondents have used more types of communication and transaction services than females do; on the other hand, females adopted more types of information services than males. It was also found that the respondents' attitude toward technology and perception of usefulness of m-Commerce services were significant in distinguishing between adopters and non-adopters of m-Commerce services in China.

2. *Organizational Information Capabilities, Information Trust, Information Quality and Strategic Supply Chain Performance Outcomes: A Case Study of Korean Steel Industry*
(by Jin Hwan Kim and Sun Hee Youn of Hongik University, and Jung Sik Jeong and Paul Hong of the University of Toledo)

As the product life cycle becomes shorter and global competition becomes tougher, the importance of collaboration with suppliers in order to improve product quality and cut down lead time has been emphasized. Effective internal integration within an organization and external coordination across other businesses are considered prerequisites for supply chain integration. Use of information and effective information system has been considered as one of the most critical element to achieve effective supply chain. Korean steel industry has evolved over a long period of time and now entered the stage of maturity. As the competition becomes tougher, effective planning and collaboration with other companies in Korean steel industry is inevitable. This research explores the current status of organization information capacity, information quality, information trust and supply chain performance of the companies and their relationships in Korean steel industry. The authors have developed the hypotheses and tested them using PLS (partial least squares). The results show (1) the importance of strategic capacity, organizational capacity, information quality, information trust, supply chain flexibility, customer responsiveness and cost of goods.

3. *An Analysis of the Effects of Free Trade Agreement with USA on the Korean Mobile Industry and its Suppliers: From a Supply Chain Perspective*
(by Gyewan Moon and Jaemin Lee of Kyungpook National University and Paul Hong of the University of Toledo)

On April 2, 2007 South Korea and USA (KORUS) has agreed Free Trade Agreement (FTA) that binds two nations for better economic collaboration. This reflects major changes in market reality that drives firms to reexamine their strategic priorities, business capabilities and performance outcomes. Since this new market reality suggests both opportunities and risks, a careful analysis on this new development is very timely and relevant. The purpose of this paper is to analyze the impact of KORUS FTA agreement on Korean mobile industry and its suppliers from a supply chain perspective. This paper presents (1) economic context of South Korea and USA along with FTA experiences of Mexico and Australia with USA; (2) a theoretical framework; (3) a review of Korean mobile industry; (4) current issues

4. *Supply Chain Management of Japanese Vehicle Manufacturers: Case Studies of Toyota, Nissan and Mitsubishi*
(by Takahiro Tomino and Youngwon Park of the University of Tokyo, and Paul Hong and James Roh of the University of Toledo)

Based on the field research, this paper describes key aspects of Supply Chain Management (SCM) of Japanese Vehicle Manufacturers. Since 1980s the Japanese vehicle manufacturers' production system (e.g., Toyota Production System) has received significant research attention as a source of competitive advantages. In spite of many studies on Japanese flexible manufacturing system a holistic perspective of the manufacturing system is not adequately-explored. Increasingly, manufacturing firms produce products that meet multiple customer requirements (e.g., short lead-time delivery and low inventory). Generally, firms implement "flexible production system" to produce products with short lead-time and low inventory level. Such flexible production system requires cross-functional coordination among design, engineering, manufacturing, and marketing. A close study of modern production system involves a careful examination of cross-functional coordination and holistic system perspective. The objectives of this paper are: (1) a conceptual framework to examine the whole production system of vehicle manufacturing through its order fulfillment processes; (2) comparative case studies of Japanese vehicle manufacturers - Toyota, Nissan and Mitsubishi; (3) Toyota's manufacturing processes--particularly its production, purchasing and supplier management.

October 26, 2007 (Friday)
Session F1 – Contemporary Research Directions in
Global Supply Chains: A Panel Discussion
Room SU 2592
8:30-9:45am
Moderator: S. Subba Rao (The University of Toledo)

1. *Intermodal Transportation Research*
(by Mark Vonderembse of the University of Toledo)

What is intermodal transportation? What are its key perspectives? The phrase intermodal transportation is composed of “inter-modal”- meaning between or among modes, and “transportation” – focusing on the moving of goods. The concise definition provided in the presentation is the “movement of freight using multiple modes of transportation.” The multiple modes of transportation include pipeline, ship, rail, road, and flight. Its key perspectives focus on easing the complexity involved in transporting goods among modes and across borders. In today’s global business word, the transportation of goods (domestically and across international borders) is forecasted to skyrocket and academia must work together with practitioners to develop flexible and time-based changeover methods for goods that will decrease the significant transition costs between modes.

2. *Current Research in Logistics Management*
(by Hokey Min of Bowling Green State University)

This paper summarizes emerging logistics resources and future opportunities. It discusses the role of logistics in improving customers. This paper also discusses some problems related to logistics and some issues of revised logistics. Since driver fatigue has known to be the primary cause of serious truck crashes, the Federal Motor Carrier Safety Administration (FMCSA) has attempted to implement new hours-of-service (HOS) regulations that aimed to promote safer driving environments. The new HOS regulations effective in October 1st of 2005, however, may lead to substantial cost increases for the trucking industry which will in turn hurt shippers and ultimate customers. For instance, motor carriers may need to hire additional 84,000 drivers to comply with new HOS rules requiring that drivers be placed out-of-service until they accumulated enough off-duty time. In particular, off-duty break required to refresh driving hours was increased to 10 consecutive hours from the old rule of eight cumulative hours. A chronic shortage of truck drivers coupled with new HOS rules could further aggravate the driver recruitment and retention problems. In addition, due to potential loading/unloading delays and stiffer fines/penalties resultant from new HOS rules, motor carriers such as Schneider National estimated that trucking productivity would decline by 4-19% (WERC Sheet, 2004). Given the presence of many choke points in the Great Lake transportation corridors that often delay traffics, the Great Lake regions in Ohio and Michigan are more vulnerable to the declining trucking productivity than the other areas in the United States (U.S.). Meta analysis is conducted to provide a systematic overview of prior research that examines the impact of HOS on transportation productivity and safety in the U.S.

3. *Security of Global Supply Chain*
(by Xenophon Koufteros, Texas A & M University)

The security of global supply chains is of increasing importance to consumers, businesses and governments. The implementation of security management programs aims to decrease catastrophic risk and assist in recovery efforts if risks cannot be avoided. However – the culture of an organization, based on its underlying assumptions, espoused values and artifacts, and centered within its larger national culture, will impact program implementation efforts in direct and indirect fashions. A conceptual framework was developed to outline the impact of organizational culture on the initiation and implementation of security related practices and strategies. Data collection will take place both domestically and internationally.

October 26, 2007 (Friday)
Session F2 – Practitioner View of Emerging Global Supply Chains
and Logistics: A Panel Discussion
Room SU 2592
10:00-11:15am
Moderator: Don Beeman (The University of Toledo)

1. *Supply Chain Practices of European Firms*
(by Luis E. Solis of Instituto de Empresa, Spain)

This presentation included a model from a CEO's point of view relating to supply chain management. CEO's of European corporations are demanding their people be able to manage innovation teams across various cultures. These expectations require greater people skills. The challenge of supply chain management is not just the flow of material, but more importantly to reduce cost. This can be accomplished through the deployment of talent with softer people skills to allow companies to work across cultures.

2. *Global Sourcing – Ocean containers: Sourcing strategy for Purchasing Ocean Container Freight*
(by Roxana Molina, Ford Motor Company)

Ford's Global Transportation, IT, Marketing and Communications Department focuses a great deal of attention on Ford's costs of transportation. As a global business, Ford facilitates the world-wide transportation of components and product through six modes, rail, ship, plane, road, small pack (such as FedEx) and the use of logistics services. Ford's total purchasing overview for transport services is approximately US \$3 billion per year. This presentation focused on the transportation of goods through ocean containers. This transportation mode incurs certain challenges, specifically 1) annual contract negotiations with the ocean carriers, 2) relatively fixed ocean trade shipping lanes, 3) fluctuations in demand/supply/pricing for global ocean freight, and 4) return ocean freight loops which require the repositioning of empty containers at a high cost.

3. *Supply Chain Practices in Health Care*
(by Les Buker of St. Luke's Hospital)

This presentation concentrates on hospitals transitioning from a product cost focus to the total cost of the product. Total costs include sourcing, transportation and storage costs. Hospitals are now thinking more strategically and less transactional with their purchases of supplies. With Medicare reducing payments, hospitals are taking additional steps to manage their inventory to reduce cost inefficiencies.

4. *Intermodal and Logistics Issues*
(by James H. Hartung, Toledo-Lucas County Port Authority)

This presentation was rather concise, as the speaker wished to adhere to session time constraints. Mr. Hartung indicated the continued necessity for focus on intermodal transportation research and collaborations between academia and industry.

October 26, 2007 (Friday)
Session F3 – Instruction and Curriculum (A)
Room SU 2584
12:45 – 2:00pm
Session Chair: R. Nandagopal (PSG Institute of Management)

1. *Supply Chain/Transportation Efficiency Systems Graduate Degree Program*
(by Shahram Taj of the University of Detroit-Mercy)

We are facing economic downturn and huge job lost in northern Ohio and southeastern Michigan. Improving transportation efficiency and design and managing of robust supply chains will help to revitalize this depressed region and would make it more competitive to attract economic investments in this area. Our program would be a collaborative educational and interdisciplinary M.S. degree in Supply Chain/Transportation Systems Efficiency program. It includes two core fields: Supply Chain Design and Management (through the College of Business Administration) and Transportation Efficiency (through the Department of Civil and Environmental Engineering). Students could have varied backgrounds such as Business Administration, Science, Engineering, Sociology, Political Science, and Urban Planning. The diversity of students and faculty participating in the Supply Chain and Transportation Efficiency Systems program enriches the academic experience and allows the student to see the strength of interdisciplinary approaches to planning, operating, managing and maintaining the next generation of transportation and supply chain systems.

2. *Building A Successful Logistics and Transportation Program at a Liberal Arts Institution*
(by Kent Gourdin of College of Charleston)

Business graduate with expertise in logistics, transportation, or supply chain management are in great demand by businesses today. Many schools are capitalizing on that need by adding courses and programs in those areas. While liberal arts schools have been slower to embrace business disciplines generally, and logistics programs specifically, the time is right for them to do so. With care, creativity, and planning, these institutions can add additional value to their students without violating the liberal arts precepts of student experimentation and choice. These programs offer additional courses of study that can provide career opportunities students will not find in many other disciplines. Given the growth in globalization and the resultant need for employees knowledgeable in logistics, transportation, and supply chain issues; this opportunity should not be ignored.

3. *Teaching Supply Chain Principles Using Simulation*
(by Amelia Carr of Bowling Green State University)

Simulation software such as Littlefield Technologies and HBS: Global Supply Chain Strategy Simulation are used for effective teaching tools for supply chain principles. Littlefield Technologies software has on- line requirement and multiple assignments. Most students enjoy the opportunity to exchange experiences so you may hold another discussion session for lessons learned. A prize or reward helps to motivate the teams. HBS: Global Supply Chain Strategy Simulation has computer (off-line) requirements. Although time is required to run the simulation, it is flexible and best scenario for running the simulation. Other package like Process Flow Exercise may give us the opportunity to use a local company if available.

4. *Education for SCM Professionals: Input from a Focus Group*
(by Janet L. Hartley of Bowling Green State University)

SCM talent management is viewed as one of the most important challenges for 2010 (Melnik, et al., 2007). Shortage of supply chain talent is due to demand increasing and retirement of baby boomers. What knowledge/skills are important? Specific knowledge depends upon where in the SCM organization but required are general skills such as risk analysis, strategic planning, global perspective, sustainability, leadership, and relationship management, negotiation skills (internal and with suppliers), supplier management, process analysis, and problem solving. Challenges of education for SCM professionals are meeting the diverse knowledge needs, and providing curriculum flexibility, while maintaining relevance of company projects and case studies.

October 26, 2007 (Friday)
Session F4 – Instruction and Curriculum (B)
Room SU 2591
12:45 – 2:00pm
Session Chair: Gioconda Quesada (College of Charleston)

1. *A Supply Chain Game: A Hands-on-Tool to Teach Supply Chain Decision Making*
(by P. S. Sundararaghavan, University of Toledo)

The goal of the Cola-game is to educate students and managers on the issues in supply chain inventory management and the focus of the game is retail supply chain with frequent price based promotions that results in Bi-Level demand pattern. Simple description of the game are presented considering three types of different cost at three different entities in supply chain. After proper preparation for the game, students at different level of students participated in the games. The result, after conducting ANOVA and t-test show that students' performance was improved. This game enables students to understand underlying know ledges and formulate supply chain strategies better.

2. *Supply Chain Certificate Program*
(by James Pope. University of Toledo)

Increasing importance of SCM, rapid changing field, and lack of industry standard creates demand for Supply Chain Certificate Program (SCCP). For this, four domains of knowledge are necessary including supply chain management fundamentals, building competitive operations planning and logistics, managing customer and supplier relationships, and using information technology to enable supply chain management. CSCP is different from CPIM because it emphasizes on external focus, beyond manufacturing, and breadth across many topics. Intended audiences are professionals who are interested in SCM or graduate students.

3. *Enterprise Resource Planning Using Great Lakes Package: A Hands on Approach*
(by Udayan Nandkeolyan. University of Toledo)

Drivers for ERP knowledge and skills are (1) demand for students with integrative skills, (2) software is available, (3) more companies use ERP, and (4) increase enrollment. Through the course students are encouraged to understand the flow of materials, money, and information with the need of enterprise wide planning. For effective education, case based simulation is used under role playing environment. There are 5 functions and they will conduct 10 major business processes. As other activities, students are required to obtain reports, present flow chart analysis, propose improvement and changes.

4. *Incorporating SAP into ERP and Supply Chain Courses*
(by Carlo Mora-Monge, New Mexico State University)

ERP is important for college students because (1) it shows how the span different functional areas can be integrated, (2) ERP is highly desirable skills in the job market, and (3) learning efforts starts recently (around 2004). ERP education at college is supported by Weyerhaeuser, ChevronPhillips, EDS, and Microsoft. The methods used to run the classes are simulation, case exercises, configuration, and APAP programming. The courses can be developed in ERP, accounting, and other basic courses. The follow-up survey shows that most of the students expressed their improvement of ERP knowledge.

October 26, 2007 (Friday)
Session F5 – Supply Chain Practices
Room SU 2584
2:15 – 3:30pm

Session Chair: Abraham Nahm (University of Wisconsin – Eau Claire)

1. *Relationships and Dependencies Among Product, Process and Supply Chain*
(by Erika Marsillac & James Roh of the University of Toledo)

Both researchers and practitioners have recognized the importance of careful consideration of product design in the development of both manufacturing and supply design processes, especially with a focus on the product development stage. Despite this recognition and acceptance of the individual associations between product and manufacturing and product and supply chain, however, there has been little research completed on investigating the *simultaneous* impact of product design on manufacturing process design and supply chain design. Therefore, this research seeks to develop a conceptual model which explores the relationships from product design to manufacturing systems design, from product design to supply chain design, and from manufacturing systems design to supply chain design, and integrates the individual relationships into a single model. The research attempts to answer three questions: (1) how do product characteristics influence the design of manufacturing systems (process) and supply chains? (2) How do specific product characteristics, i.e. product variety, production type, speed to market needs, influence the design of manufacturing systems (process) and supply chains? and (3) How does manufacturing design influence the design of the supply chain? The researchers started by reviewing the literature which first focus on the topic of product design, then manufacturing systems and their links with product design, then supply chains and their links to product design, and the link between manufacturing systems design and supply chain design. Finally, based on previous research, theory and nomological analyses, the researchers propose a conceptual model which suggests certain associations between product design, manufacturing systems design, supply chain design and firm performance. The researchers are attempting to provide a more comprehensive view of operations activities (product, process and supply chain), their interdependencies, and potential impacts on firm performance.

2. *VE Analysis for the Value of Transportation Time*
(by Bin Wang, Qinhuangdao Power Co. Ltd; Yuzhong Zhao, Yanshan University; Baohua Qin, University of Toledo; and Yehua Chen, Yanshan University)

This paper discusses the importance of the value of time of cargo transport. It is important to study the value of time for analyzing the transport behavior and for evaluating the economic benefit of transportation project quantitatively. The basic theory of RUM method is to use random utility function to get the result according to the utility maximum principle. Based on the random utility theory and Value Engineering (VE) theory, this paper presents a new thinking of the establishment of the utility function of time. A VE model of transport time and a calculating formula for the coefficient of time value are presented. The parameters of VE model are estimated effectively by means of maximum likelihood estimation (MLE). Finally, a concrete example is illustrated in this paper.

October 26, 2007 (Friday)
Session F6 – International Issues in Supply Chain
Room SU 2591
2:15 – 3:30pm
Session Chair: Thuong Le (University of Toledo)

1. *Emerging SME's in Demand Chain Management: Case Illustrations and Implications from Korean Firms*
(by Paul Hong of the University of Toledo)

Increasingly, demand chain management (DCM) has received a wide research attention in enhancing the overall effectiveness of customer value creation and delivery. Many of these studies on DCM have focused on large firms. Yet, very little is known about the role of SME's in DCM. We first present a research framework for the analysis of emerging SMEs in DCM. This presentation examines essential characteristics and diverse patterns of demand management practices based on 12 Korean SMEs. These Korean firms display unique characteristics of emerging types of SMEs that serve the global customer base utilizing their technological innovations, new product development, Blue Ocean strategy and IT infrastructure. Management implications are briefly discussed.

2. *Supply Chain Management in Service Industry: Assessing Responsiveness in Hotels Sector*
(by Mohd Rixal Razalli of the Universiti Utara Malaysia; Suzita Asree of the University of Toledo and Noornina Dahlan of the Universiti Sains Malaysia)

Customer responsiveness is one of the important elements of supply chain management because it can improve organizational performance. Customer responsiveness is even more acute in service firms such as hotels due to participation of customers in the service delivery system. Despite the promising growth in hotel industry, customer responsiveness in service organizations is still unexplored by prior studies. Furthermore, the current measurement of customer responsiveness is still insufficient. In this paper, we first defined customer responsiveness as the ability of the service provider to provide speedy service, variety of services, and willingness to help customers. Besides that, we also designed an index known as Responsiveness Index (RI) to assess the level of responsiveness for hotels in Malaysia. This RI provides information in terms of: (1) overall responsiveness level for the hotel industry and peers, and (2) the specific improvement needed by a particular hotel in order to be responsive. Using the method proposed by Phillips and Moutinho (1999), we designed the RI and found that the average responsiveness level of hotels in Malaysia was high among participating hotels. Implications for hotel managers are also discussed.

4. *Innovative Korean SMEs in Global Environment: Case Study Illustrations*
(by Paul Hong of the University of Toledo)

Traditionally, Small and medium enterprises (SMEs) work as suppliers of dominant Original Equipment Manufacturers (OEM) or large conglomerates. Their market positions are fairly limited in domestic markets only. In Korean environment these SMEs restrict their market as domestic suppliers. However, as many Korean global firms (e.g., Samsung, Hyundai, and LG) enlarge their operations in the global markets, these SMEs also enlarge their operations as global suppliers. Some SMEs pioneer global markets quite independent from other global Korean firms. In terms of size of the sales they are not yet global; yet their business

orientation is global in that their sales performance is target mostly in the global market. This presentation is a comparative study of Korean firms in supply chains. The presentation was organized as follows: (1) context of Korean SMEs; (2) a research model that describes the organizational processes and outcomes of SMEs; (3) case illustrations of three innovative global Korean SMEs. Future research issues and managerial implications are also discussed.

5. *Emerging Trends and Issues: Critical Roles of Global Intermodal Logistics*
(by Paul Hong of the University of Toledo)

Despite an extensive body of knowledge on the importance of global intermodal logistics in marketing, international business and logistics literature, the emerging trends and issues of global logistics need further clarification. This presentation reviews current issues in global logistics in terms of shifting equilibrium (i.e., economic size, volume of trades and the level of economic and social integration) among the major economic blocs. These changes particularly influence the roles of global logistic providers. After discussing the current issues that are somewhat obvious, the presenters identify emerging trends of global logistics that are less obvious and yet they are expected to become more critical in influencing the dynamic relationships between economic growths of diverse regional blocs and changing patterns of global logistics players and practices. The findings of the data analysis provide a valuable insight for the global logistics executives and researchers in the areas of global intermodal logistics. Managerial and career implications will be provided.

Great Lakes: From Data to Markets to Shipping Opportunities (October 26, 2007)

The Great Lakes Maritime Research Institute (University of Wisconsin Superior and University of Minnesota Duluth), the Intermodal Transportation Institute/University Transportation Center and the Geographic Information Science and Applied Geography Center (both at the University of Toledo), and the Toledo-Lucas County Port Authority are planning to hold the third meeting in a series aimed at increasing freight movements on the Great Lakes. The first two meetings focused on data needs and sources. The third meeting will discuss implementing the data delivery system including mapping ports and docks, and developing a vessel tracking system. Our goal is to develop a comprehensive information resource accessed at a single location that will support a variety of interests. Additional discussions are planned for ship technology and shipbuilding on the Great Lakes.

Please mark your calendar and join us as we discuss key issues that support and promote Great Lakes shipping. An agenda, registration information, directions, and other details will follow.

Tentative Agenda Great Lakes: From Data to Markets to Shipping Opportunities October 26, 2007 University of Toledo

Time	Activity	Responsibility
9:45 to 10:00	Coffee is available	
10:00 to 10:10	Welcome and Introductions	Mark Vonderembse, The University of Toledo
10:10 to 10:30	Great Lakes Maritime Research Institute: Status Report	Carol Wolosz, Great Lakes Maritime Research Institute
10:30 to 11:30	Great Lake's Database: Progress Report	Pete Lindquist, The University of Toledo
11:30 to 12:30	Lunch	
12:30 to 1:15	Ship Building on the Great Lakes	David Singer, The University of Michigan
1:15 to 2:00	Shipping Technology: Ballast Free Shipping	Michael Parson, The University of Michigan
2:00 to 2:15	Break	
2:15 to 3:00	Directed Discussion Outcome: Specific Program Plan for Commercialization	Pete Lindquist Michael Parson David Singer Mark Vonderembse Carol Wolosz, Moderator
3:00	Adjourn	

* Click [here](#) to print the program for "Great Lakes: From Data to Markets to Shipping Opportunities."



**Report on
The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics**

May 29-30, 2008 the 2nd International Symposium and Workshop on Global Supply Chain, Intermodal Transportation and Logistics was held in Busan, Korea

(<http://www.utoledo.edu/business/BusanSCM/>). The meeting was sponsored by Busan National University, Korean Society for Supply Chain Management, Korea Research Foundation, Korea Science and Engineering Foundation, the University of Toledo, and Bowling Green State University. The Organizing Committee and the Schedule for the meeting follow. Dr. Mark Vonderembse and Dr. Paul Hong, members of the BIE Grant Team made the keynote presentation at the meeting. A full copy of the proceedings can be accessed at http://www.utoledo.edu/research/ututc/docs/Proceedings_Busan_Symposium_20.pdf.

It has all the program details including addresses of co-program chairs, program schedule, summary and all the articles presented in the conference.

The meeting brought together faculty from more than twenty universities in five different countries to discuss research ideas, to build research partnerships, and to identify specific actions that will allow participants to work together. The objectives of the meeting were to identify best practices in supply chain management, to continue to build a global network of universities to study supply chain management, and to develop education and training programs. This would be accomplished by faculty and student exchanges, cooperative research projects, and joint program development.


The following specific actions were identified.


1. Define and conduct cross-national research and publication using cross-national research teams beginning Summer 2008. The University of Toledo will take the lead in developing the framework for the research and will hold video and teleconferences to work with the other universities to refine the document. A survey plan will be developed and implemented. Data will be collected every 2-3 years.
2. Faculty from two or more universities will work together on research to exchange research ideas and skills and to help faculty publish in top journals.
3. Universities will have faculty exchanges to facilitate this process. In August of 2008 and in September 2008, one faculty member from Korea and one faculty member from Japan will spend 1-2 months on the University of Toledo's campus to work on research. Opportunities for faculty from the U.S.A. to teach and do research in Korea is not only allowable, it is strongly encouraged.
4. There are also opportunities for student exchange. This was discussed specifically with several Korea Universities. The University of Toledo currently has such an arrangement with PSG Institute of Management in Coimbatore, India.


5. Discussion of creating an international clearing house for research and an international publication series were discussed. This was put on hold until the research projects are up and running.

Future Symposia and Workshops are scheduled for Coimbatore, India in 2009 and Madrid, Spain in 2010.

In addition to the conference meetings, discussions were held with Hanyang University, Yonsei University, and Korea University in Seoul. These meetings were highly successful. They provided an opportunity to meet with faculty and graduate students at these universities to facilitate cooperation among faculty and students. A meeting was also held with Korea Express which lasted for more than three hours and included the President, Kook-Dong Lee. Dr. Paul Hong and Dr. Mark Vonderembse have agreed to work with Korea Express on global supply chain research.








Proceedings of the 2nd International Symposium
and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics

May 29–30, 2008, Pusan National University, Busan, KOREA



Secretariat Dept. of Industrial Engineering
Pusan National University
Busan 609–735, KOREA

E-mail: ikmoon@pusan.ac.kr
Fax: +82–51–512–7603
<http://www.ie.pusan.ac.kr>

Sponsors Pusan National University, KOREA
Korean Society for Supply Chain Management, KOREA
Korea Research Foundation, KOREA
Korea Science and Engineering Foundation, KOREA
University of Toledo, USA
Bowling Green State University, USA

Organizer Post BK 21 Team (Optimization of Inter-modal Logistics System), KOREA

Proceedings of the 2nd International Symposium and Workshop on Global Supply Chain, Intermodal Transportation and Logistics

May 29–30, 2008, Busan, KOREA

IGSCC 2008

**The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008**

Program Co-Chairs:

Dr. Hokey Min (Bowling Green State University, USA)
Dr. Young-Hae Lee (Korean Society for SCM, KOREA)
Dr. Kap-Hwan Kim (Pusan National University, KOREA)

Research Network Coordinator:
Dr. Paul Hong (University of Toledo, USA)

IGSCC 2008

**The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008**

Sponsors:

Pusan National University, KOREA
Korean Society for Supply Chain Management, KOREA
Korea Research Foundation, KOREA
Korea Science and Engineering Foundation, KOREA
The University of Toledo, USA
Bowling Green State University(BGSU), USA

Organizer:

Post BK21 Team (Optimization of Inter-modal Logistics System), KOREA

IGSCC 2008

**The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008**

Objectives :

**To identify best practices
To establish a global network
To develop education & training programs**

IGSCC 2008

The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008

8 Topics

The Use of Genetic Algorithm in Supply Chain Management
Reverse Supply Chain Management
Supply Chain Network Design
Case Studies in Value Chain Management
Demand Planning
New Product Development
The Use of Information Technology in Supply Chain Management
Global Sourcing

IGSCC 2008

The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008

Parallel Sessions:

30 Papers in 8 Sessions

IGSCC 2008

The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008

Practitioner's Session with Total Soft Bank Ltd.:

Moderators: Dr. Hokey Min, BGSU; Dr. Kap-Hwan Kim, PNU
Trends of advanced operation systems in container terminal

Panel Discussions Session:

Moderator: Dr. Seung-Chul Kim, Hanyang University
Future of Supply Chain Research

Panelists: Prof. Youngwon Park, University of Tokyo;
Prof. Shuo-Yan Chou, National Taiwan University of Science &
Technology

IGSCC 2008

The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008

Keynote Speech:

Dr. Mark Vonderemse, University of Toledo;

Dr. Paul Hong, University of Toledo

*Creating an International Research and Education Panel for Supply
Chain Management*

IGSCC 2008

The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008

May 29, 2008

Time	Room A	Room B
08:45 ~ 09:15	Registration	
09:15 ~ 09:45	Welcome Remarks and Opening Address	
09:45 ~ 10:00	Coffee Break	
10:00 ~ 11:30	Session 1	Session 2
11:30 ~ 13:00	Networking Luncheon	
13:00 ~ 14:30	Session 3	Session 4
14:30 ~ 14:45	Coffee Break	
14:45 ~ 16:15	Session 5	Session 6
16:15 ~ 16:30	Coffee Break	
16:30 ~ 17:45	Practitioner's Session and Panel Discussions	
17:45 ~ 18:15	RFID Center Tour (LIT)	
18:30 ~ 20:30	Networking Banquet	

IGSCC 2008

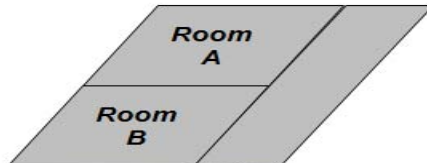
The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008

May 30, 2008

Time	Room A	Room B
09:00 ~ 10:00	Keynote Speech	
10:00 ~ 10:15	Coffee Break	
10:15 ~ 11:45	Session 7	Session 8
11:45 ~ 12:45	Closing Remarks and Luncheon	
12:45 ~ 18:00	Industry Tour Hyundai Motor Company and Hyundai Heavy Industries	
18:30 ~ 20:30	Farewell Dinner	

IGSCC 2008

The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008



Induk Hall
(Pusan National University)

Networking Luncheon



Sang-Nam International House
1F, Restaurant

IGSCC 2008

**The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008**

Networking Banquet

Date & Time: 18:30 - 20:30, May 29 (Thu), 2008

Venue: Nongshim Hotel (Hurshimchung 2nd floor)

IGSCC 2008

**The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008**

Industry Tour to Hyundai Motor Company and Hyundai Heavy Industries

Departure Time: 12:45 P.M., May 30 (Friday), 2008

Meeting Place: In front of Sang-Nam International House

Arrival Time: May 30, 18:00 P.M.

IGSCC 2008

**The 2nd International Symposium and Workshop on Global Supply Chain,
Intermodal Transportation and Logistics 2008**

Enjoy staying in this beautiful city, Busan



CONTENTS

◆ Session 1: The Use of Genetic Algorithm in Supply Chain Management

1. **The evolution of genetic algorithm in supply chain modeling** 1
Hokey Min, Bowling Green State University, USA
Gengui Zhou, Zhejiang University of Technology, China
2. **A study on strategic alliance model in express courier service network based on consolidation terminal** 2
Jae-Jeung Rho, Information and Communication University, Korea
Ki-Ho Chung, Kyungshung University, Korea
Chang Seong Ko, Kyungshung University, Korea
3. **Profit-based reconfiguration of express courier service network with multiple consolidation terminals** 3
Hyun Jeung Ko, Korea Maritime Institute, Korea
Yonghwan Sohn, Security Management Institute, Korea
Byung-In Park, Chonnam National University, Korea
Chang Seong Ko, Kyungshung University, Korea
4. **Optimal route modeling for customer-oriented container truck transportation** 4
Ruiyou Zhang, Pusan National University, Korea
Won Young Yun, Pusan National University, Korea
Il-Kyeong Moon, Pusan National University, Korea

◆ Session 2: Reverse Supply Chain Management

1. **Pricing policies under competition and cooperation in a remanufacturing system** 5
Ki Seung Jung, KAIST, Korea
Hark Hwang, KAIST, Korea
2. **RFID system for centralized reverse supply chain in the apparel industry** 13
Yoon Min Hwang, Information and Communication University, Korea
Jae Jeung Rho, Information and Communication University, Korea
3. **Green management orientation, partner trust, information sharing and performance in supply chain management** 26
Jinhwan Kim, Hongik University, Korea
Sunhee Youn, Hongik University, Korea
Paul Hong, University of Toledo, USA
4. **A closed-loop recycling system with minimum allowed quality level on returned products** 41
Sang Hun Yune, KAIST, Korea
Young Dae Ko, KAIST, Korea
Hark Hwang, KAIST, Korea

CONTENTS

◆ Session 3: Supply Chain Network Design

1. **A framework for managing supply chain flexibility using a neural network** 53
Young Hae Lee, Hanyang University, Korea
Jung Woo Jung, Hanyang University, Korea
Dong Won Cho, Hanyang University, Korea
2. **Analytic network process for analyzing supply chain relationship** 54
Taoun Kim, Kyungsung University, Korea
Hokguan Jo, Kyungsung University, Korea
3. **Supply chain network for sustainable competitive advantages: case studies of global firms operating in greater Shanghai areas** 63
Mingu Kang, Zhejiang University, China
Xiaobo Wu, Zhejiang University, China
Paul Hong, University of Toledo, USA
4. **An improved spatial scheduling algorithm for block assembly shop in shipbuilding company** 72
Shieghyun Koh, Pukyong National University, Korea

◆ Session 4: Case Studies in Value Chain Management

1. **Value creation, innovation, and human resource management: a case study of APPLE Valley Cluster (AVC)** 79
Gyewan Moon, Kyungpook National University, Korea
Paul Hong, University of Toledo, USA
Youngwon Park, University of Tokyo, Japan
Jaikwon Choi, Kyungpook National University, Korea
2. **Value chain management of mobile phone and role of semiconductor: case illustrations from mobile phone companies** 96
Youngwon Park, University of Tokyo, Japan
Ogawa Koichi, University of Tokyo, Japan
Tatsumoto Hirohumi, University of Tokyo, Japan
Paul Hong, University of Toledo, USA
3. **The effect of technological platform on global supply chain: case study of Intel's platform business in PC industry** 114
Tatsumoto Hirohumi, University of Tokyo, Japan
4. **An improved order picking system by using the concept of bucket brigades** 126
Pyung-Hoi Koo, Pukyong National University, Korea

CONTENTS

◆ Session 5: Demand Planning

1. **The impact of seasonal demand on bullwhip effect in a supply chain** 137
Dong Won Cho, Hanyang University, Korea
Young Hae Lee, Hanyang University, Korea
2. **Optimal outbound dispatch policy to consider pricing** 146
Ki-Sung Hong, Korea University, Korea
Chulung Lee, Korea University, Korea
3. **Methods for allocating the cost of quay construction** 147
Soukkyung Sung, Seoul National University, Korea
4. **Supplier selection model using fuzzy-AHP** 148
Heung Suk Hwang, TongMyong University, Korea

◆ Session 6: New Product Development

1. **Antecedents of customer involvement and success of new product development in competitive global market** 159
Abdullah Aldakhil, University of Toledo, USA
Paul Hong, University of Toledo, USA
2. **Product development of Japanese electronic manufacturers and computer aided design usage patterns** 170
Youngwon Park, University of Tokyo, Japan
Takahiro Fujimoto, University of Tokyo, Japan
Paul Hong, University of Toledo, USA
3. **Concurrent impacts of competitive design competence on manufacturing and supply chain and customization capability** 186
James Roh, University of Toledo, USA
Erika Marsillac, University of Toledo, USA
Paul Hong, University of Toledo, USA

◆ Practitioner's Session

- Trends of advanced operation systems in container terminal** 205
Hyun Sook Shin, Total Soft Bank Ltd., Korea
Kap Hwan Kim, Pusan National University, Korea

◆ Panel Discussions Session

Future of Supply Chain Research

Panelists: Prof. Youngwon Park, University of Tokyo, Japan
Prof. Shuo-Yan Chou, National Taiwan University of Science & Technology, Taiwan

CONTENTS

◆ **Keynote Speech**

- Creating an International Research and Education Panel for Supply Chain Management** 207

Dr. Mark Vonderemse, University of Toledo, USA

Dr. Paul Hong, University of Toledo, USA

◆ **Session 7: The Use of Information Technology in Supply Chain Management**

1. **The effects of interactivity of Internet shopping malls on trust and repurchase intention of fashion products** 209
Eun Ju Kim, Youngdong University, Korea
Myung Sun Chung, Chonnam National University, Korea
Soon W. Hong, Youngdong University, Korea
2. **Antecedents of E-business technology use: the impact on supply chain integration and firm performance** 216
Ki-Hyun Park, University of Toledo, USA
Paul Hong, University of Toledo, USA
3. **Simulation study of RFID based air cargo process** 228
J.Y. Kim, Korea Aerospace University, Korea
S.H. Jung, Korea Aerospace University, Korea
H.C. Choi, Korea Aerospace University, Korea
M.K. Sohn, Korea Aerospace University, Korea
J.H. Yang, Korea Aerospace University, Korea
Y.S. Chang, Korea Aerospace University, Korea

◆ **Session 8: Global Sourcing**

1. **Supplier selection strategy and supply chain integration for innovation: an international study** 233
David D. Dobrzykowski, University of Toledo, USA
Paul Hong, University of Toledo, USA
2. **Role of Korean SMEs in global supply chain management: case study illustrations** 244
Soon W. Hong, Youngdong University, Korea
Paul Hong, University of Toledo, USA
Maga Yang, University of Toledo, USA
3. **A study on the practical use of standby letters of credit** 245
Woo-Sik Sohn, Sungkyunkwan University, Korea
4. **The Indian automotive supply chain network: implications for the global automobile industry** 256
Melvin Williams, University of Toledo, USA
Paul Hong, University of Toledo, USA

After the conference, interviews were held with executives of Korea Express on May 9, 2009 in Seoul, Korea.



From Left: Mark Vonderembse and Paul Hong (University of Toledo)
Kook-Dong Lee (President of Korea Express)
Ha-Chang Lee (Vice President of Korea Express)
David Lee (Senior Executive VP of Strategy, Keumho-Asiana Group)

Report on Planning for

3rd International Symposium and Workshop in Global Supply Chains

After the 2nd International Symposium and Workshop in Global Supply Chain in Busan, Korea, the date of 3rd International Symposium and Workshop (<http://www.gscmsymposium.net/>) was determined as of January 6-7, 2009. The hosting institution is PSG Institute of Management, Coimbatore, India. From July-December 2008, all the details were planned for this conference. The list of Planning and Organization Committee follows.

The meeting is sponsored by PSG Institute of Management (India), the College of Business Administration of the University of Toledo (USA), and Instituto de Empresa (Spain). Other sponsors are the University of Toledo University Transportation Center funded by the US Department of Transportation, the International Business Institute (IBI) and their BIE grant funded by the US Department of Education.



- College of Business Administration
- UT Transportation Center
- Intermodal Transportation Institute

Third International Symposium and Workshop on Global Supply Chains

January 6-7, 2009
PSGIM, Coimbatore
India
(UT, PSGIM, Instituto De Empresa)



[Home](#)

[Program
Schedule](#)

[Objectives](#)

[Call for
Papers](#)

[Papers To Be
Presented](#)

[Outcomes](#)

[Important
Dates](#)

[Program
Committee](#)

[Sponsors](#)

[Registration](#)

[Hotel](#)

[About
Coimbatore](#)

Program Committee

- Nandagopal
(PSG Institute of Management, India)
- M Rammohan Rao
(Indian School of Business, India)
- N Ravichandran
(Indian Institute of Management, India)
- Vivek N.
(PSG Institute of Management, India)
- Luis Solis
(Instituto De Empresa, Spain)
- Xenophon Koufteros
(Texas A&M University, USA)
- T.S. Ragunathan
(University of Toledo, USA)
- T. Le
(University of Toledo, USA)
- James Pope
(University of Toledo, USA)
- Abraham Nahm
(University of Wisconsin-Eau Claire, USA)
- Ahmad Syamil
(Arkansas State University, USA)
- Youngwon Park
(Waseda University, Japan)
- SoonW Hong
(Youngdong University, Korea)

Organizing Committee

- T. S. Ragu-Nathan
(University of Toledo, USA)
- Subba Rao
(University of Toledo, USA)
- Sudharani Ravindran
(PSG Institute of Management, India)
- Paul Hong
(University of Toledo, USA)
- Hokey Min
(Bowling Green State University, USA)
- Chrsitine Lonsway
(Intermodal Transportation Institute, USA)
- Udayan NandKeloyor
(University of Toledo, USA)
- Carlo Mora
(New Mexico State University, USA)
- Gioconda Quesada
(College of Charleston, USA)
- James Roh
(Penn State University)
- Gyewan Moon
(Kyungpook University, Korea)
- Shuo-Yan Chou
(National Taiwan University, Taiwan)
- Gioconda Quesada
(College of Charleston, USA)
- Marvin Gonzalez
(College of Charleston, USA)