

Transportation Education at the University of Denver*

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1. INTRODUCTION

Rising majestically west of downtown Denver stands Mount Evans, towering 14,264 feet above sea level. The mountain was named after John

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Evans, a true renaissance man. Evans had made his fortune investing in railroads—the Chicago & Evanston Railroad and the Chicago & Fort Wayne Railroad. He founded the Illinois Republican Party, and was elected to Congress, where he became friends with Abraham Lincoln. A medical doctor, Evans helped found Mercy Hospital in Chicago, and in 1851 Northwestern University, chairing its Board of Trustees until his death in 1887. Today the city of Evanston bears his name.

President Abraham Lincoln asked Evans to leave Illinois, and become the second Territorial Governor of Colorado, then largely an unspoiled wilderness. In Colorado, John Evans founded a second great educational institution—the University of Denver (originally Colorado Seminary), in 1864. Today, the University of Denver (or DU, as it is affectionately known) remains one of the few major private universities between Chicago and the West Coast.

But Evans was not to leave his contribution to Colorado there. The first transcontinental railroads largely bypassed the Denver area, and only took in the corners of eastern Colorado. The Union Pacific cut north through Cheyenne, Wyoming, then west to Promontory Point, Utah, where the link was completed on 10 May 1869.¹ Denver's existence as a commercial center was threatened, as many anticipated that Cheyenne and other towns along the railroad would become the major regional cities. The vice president of the Union Pacific, Thomas Durant, described Denver as “too dead to bury.”

But Denver was full of pioneer spirit, and not about to lie down and die. Recognizing the vital importance the rail avenue would play in the economic growth and prosperity of his adopted city, in 1867, Evans founded the Denver and Pacific Railway & Telegraph Co., which built a spur line from Denver to Cheyenne. The first Denver and Pacific train roared into Denver in June 1870, quickly followed by trains from the Kansas Pacific Railroad and the Denver & Rio Grande Railway. Denver's fortunes reversed, and the city again became the dominant commercial center of the Rocky Mountain West.

Evans had caught transportation fever, and it was now in his blood. In 1872, he founded the Denver, South Park and Pacific Railroad to serve the mining towns in the Colorado Rockies.² In addition, he founded the Denver & New Orleans Railroad in 1881.³ His son, William Evans was also to become a rail baron, taking over the Denver, Northwestern, and Pacific Railroad, and supported development of the Moffat Tunnel (cut

1. Similarly, the Atchison, Topeka & Santa Fe reached Pueblo in 1876, then turned south to lay track over Raton Pass into New Mexico in 1878.

2. This railroad was subsequently taken over by the Union Pacific.

3. This railroad was subsequently renamed the Denver, Texas and Gulf Railroad, and acquired by the Denver, Texas and Ft. Worth Railroad.

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through the continental divide) that was to provide Denver with a solid east-west transcontinental link. His grandson was elected chairman of the Denver & Rio Grande Western (now part of the Union Pacific-Southern Pacific system).

During the ensuing years, Denver has become the dominant rail, highway, and aviation hub on the Front Range, and as a consequence the commercial, cultural and educational center for the Rocky Mountain region. Much of that we owe to John Evans—his profound insight into the vital importance of transportation and education, and his tenacious dedication to their growth.

2. THE TRANSPORTATION CHALLENGES OF THE 21ST CENTURY

As we enter the 21st Century, it has become increasingly clear that the existing transportation system suffers from major deficiencies. Many of these were brought home vividly to Americans with stunning suddenness by the terrorist attacks of 11 September 2001. It became apparent that the security system required strengthening, that the United States is excessively reliant on aviation for intercity travel, that except for the North-East Corridor, intercity commercial passenger transportation alternatives are practically non-existent, that connectivity between the modes is very poor, and that transportation remains highly dependent on petroleum supplies imported from a volatile region. Nor can one overlook the degree to which the conventional transportation networks, built around the individual modes, have already reached service and capacity limits in many areas. Problems of congestion and pollution are commonplace, accidents resulting in deaths and injuries persist at troubling levels, inadequate land-side connections devalue the convenience of air travel, and rural areas continue to lose those critical transport connections that are the basis of their vitality and well-being.

These defects, which have been recognized by many transportation professionals for a number of years, reflect the fundamental fact that the U.S. transportation system remains a system of modes rather than an integrated transportation system that is characterized by efficient connections, choices for passengers and shippers, coordination between modes, and cooperation between government agencies at all levels and the private sector. It has become obvious in recent decades that this pattern no longer suffices, that it cannot meet the growing demands for greater personal mobility and the movement of ever larger amounts of freight. Furthermore, this system possesses severe bottlenecks and imposes heavy social and environmental costs upon populations everywhere. Accordingly there is a great need to pursue ways of developing mobility solutions that utilize each mode's commercial and technical advantages so as

to create an intermodal system that minimizes negative impacts and enhances the productivity of local, regional, national, and international transportation systems. Such a system would benefit young and old alike, stimulate the economy, and promote sustainable development by enhancing efficiency, safety, mobility, and equity.

Many obstacles hinder the achievement of such a vision. Most importantly, each of the modes—air, marine, rail, and road transport—which have, through competitive endeavors, made possible the growth of the U.S. economy and the globalization of world trade to an unprecedented degree, has developed its own infrastructure, culture, and orientation over the years. Overcoming traditional patterns and replacing them with new ones is never a simple matter. In this case, such difficulties are enhanced by the complexity of the coordination and integration that is required, given the variety of public and private actors involved. Clearly the creation of new institutional arrangements will require significant developments in such areas as technology, policy, planning, law and regulation, infrastructure and human resources. Innovative educational and research programs are needed to address these important areas.

The University of Denver is stepping up to this challenge by offering several multidisciplinary educational programs in the transportation arena. In 1991, Chancellor Dan Ritchie announced the creation of an interdisciplinary Center for Transportation Studies at the University of Denver, which later became the Intermodal Transportation Institute. Northwestern University too, has been a major contributor to transportation education for decades. Both of John Evans' higher educational creations are now firmly committed to the same endeavor.

The Intermodal Transportation Institute (ITI) builds on a foundation of earlier transportation educational activities offered at the University of Denver. In the 1880s, engineering professor Sidney Short invented one of the early prototypes of the electric streetcar. In the late 1940s and 1950s, the University offered an educational program in aviation, including pilot training. University aviation researchers conducted an important study on the future of Stapleton Airport, recommending a major expansion in anticipation of booming air traffic in Denver. The transportation focus grew with the inauguration of the Transportation Law Institute in 1967, and the creation of the Transportation Law Program in 1976.⁴ The educational emphasis began in motor carrier law and regulation and has since expanded to embrace bus, rail and air transport. ITI broadened the University's focus by bringing together various perspec-

4. See Paul S. Dempsey, *Legal Education on the Move - Law and Transportation at the University of Denver*, 15 *TRANSP. L.J.* 1 (1986); Paul S. Dempsey, *The Transportation Law Program*, 9 *TRANSP. L.J.* 1 (1979).

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tives, such as law, business,⁵ engineering, chemistry, geography and planning,⁶ international studies,⁷ and educational psychology in the interdisciplinary study of transportation. A key event for ITI occurred in 1996 when Gil Carmichael, head of the Federal Railroad Administration in the early 1990s and later to become Chairman of the Amtrak Reform Council, accepted an offer to form a Board of Directors for ITI and become its first Chairman. The Board has been represented by leaders in the intermodal transportation industry who share the vision of an educational enterprise dedicated to the development of a science of intermodal transportation. In 1998, ITI joined the Transportation Research Center at Mississippi State University in creating the National Center for Intermodal Transportation (NCIT), one of 33 University Transportation Centers supported by the U.S. Department of Transportation (DOT). The creation of NCIT has assisted ITI in its mission to establish educational, research, and technology transfer programs in the field of intermodal transportation. In 1999, ITI established the first-ever graduate degree program in intermodal transportation, the Master of Science in Intermodal Transportation Systems. One of the more important goals of the program is to encourage 'out-of-the-box' thinking about the future of

5. The Daniels College of Business includes faculty who focus on transportation logistics, customer service, air quality and transportation policy, alternative fuel production and distribution, and transportation economics and systems analysis. In 1999, the Daniels College of Business moved into a new \$22 million building. The new facility is equipped with more than 2000 active Internet ports, allowing unparalleled access to information for both students and faculty. It is this advanced technology that allows collaboration between faculty, students, and members of the business community via online discussions, communication software, e-mail, chat rooms, and video conferencing.

Located in the technology core of the new Daniels College of Business building are also the Advanced Technology Center, the Educational Technology Center, and the Instructional Design Center. Each center is equipped with the most up-to-date technological equipment. The Education Technology Center is equipped with the latest scanning and printing technology, graphic and web development tools, and video production equipment. The Advanced Technology Center is a part of the Daniels College that allows companies to display cutting-edge software and hardware that offers students accessibility to the latest software and equipment.

6. Transportation education and research is enhanced through the use of Geographic Information Systems (GIS) facilities available in the Department of Geography. These state-of-the-art facilities are housed in the newly renovated Keck Geosciences Center, and include a 20-seat GIS instructional lab, a 10-seat GIS research lab, Crime Mapping and Analysis lab, and Aerial Photography, Remote Sensing, and Cartography labs. The Geography Department enjoys a special relationship with the Environmental Systems Research Institute (ESRI), making all ESRI software products available, and maintains current licenses of AutoCAD Map, MapInfo, IDRISI, ERDAS Imagine, and other GIS, mapping, and image processing software.

7. Located in its newly renovated building, at a cost of over \$1million, the GSIS enrolls over 300 graduate students, 25% of whom come from overseas. Several of these students have focused on transportation issues in the United States and abroad while pursuing M.A. and PhD degrees. Several courses also deal with transportation and related issues.

transportation that will stimulate development of the next generation of leaders in the intermodal industry.

All of these activities have laid a solid foundation for transportation studies at the University of Denver. This essay addresses the history of transportation education at the University, as well as how current programs are being fashioned to meet the challenging transportation needs of the 21st century.

3. THE TRANSPORTATION LAW PROGRAM

This is an exceptionally challenging era for transportation, for the events of the past few decades have reached to the very core of the industry and its relationship with government. There are many who argue that, at least from a substantive standpoint, transportation is the most dynamic area in all of administrative law. It is precisely this powerful surge in regulatory and legislative interest and activity that gave birth to and insured the success of this academic program.

Transportation is the foundation infrastructure industry upon which the rest of commerce is built. It therefore serves as among the most important industries in any nation's economy. In 1887, it became the first industry to be regulated. And by the mid-1970s, it became the first to enjoy comprehensive regulatory reform.

Few areas of federal law have changed as rapidly and fundamentally as has transportation in the contemporary era. During the past decade, Congress has promulgated comprehensive regulatory reform legislation for each mode of transportation. These bills include:

- The Railroad Revitalization and Regulatory Reform Act of 1976
- The Air Cargo Deregulation Act of 1977
- The Airline Deregulation Act of 1978
- The International Transportation Air Competition Act of 1979
- The Motor Carrier Act of 1980
- The Staggers Rail Act of 1980
- The Household Goods Transportation Act of 1980
- The Bus Regulatory Reform Act of 1982
- The Shipping Act of 1984
- The Civil Aeronautics Board Sunset Act of 1984
- The Surface Freight Forwarder Deregulation Act of 1986
- The Negotiated Rates Act of 1993
- The Trucking Industry Regulatory Reform Act of 1994
- The ICC Termination Act of 1995

During this period, the Civil Aeronautics Board and Interstate Commerce Commission were "sunset," while their remaining regulatory re-

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sponsibilities were transferred to the U.S. DOT and the Surface Transportation Board. The law has evolved rapidly and radically during this era, and economic regulation has been significantly constricted. This has, of course, enhanced the need for education in this field so as to understand the changes upon us. And reform has had a concomitant effect on law students. The competitive advantage of decades of regulatory experience is not as valuable as it once was. Our graduating law students begin the practice of transportation law on a nearly clean slate.

The Transportation Law Program at the University of Denver College of Law began in 1968 as a continuing legal education program for attorneys and practitioners—the Transportation Law Institute.⁸ Since its inception, the Institute has been jointly sponsored by the University of Denver and the Transportation Lawyers Association (TLA was formerly the Motor Carrier Lawyers Association). Ours has been a rich and rewarding relationship which over the ensuing years has matured into one of mutual admiration and common benefit in law and education. As former TLA President Richard Champlin wrote, “Education is clearly an important membership benefit that is provided by the Association through the Transportation Law Institute and a continuing key to increasing membership.”⁹

In 1976, DU’s Transportation Law Program began to blossom with the injection of a series of annual economic contributions by TLA. This made possible the creation of a new faculty position devoted to the discipline of Transportation Law. The incumbent in that chair also serves as Faculty Editor of the Transportation Law Journal. In 1976, DU also assumed responsibility for publication of that periodical, which it shares with TLA’s Transportation Law Journal Board of Governors.

The Transportation Law Program was inaugurated in 1968 as a continuing legal education program for attorneys in transportation law—the Transportation Law Institute. It was expanded significantly in 1976 as a result of a generous series of annual grants by the Transportation Lawyers Association (formerly the Motor Carrier Lawyers Association [MCLA], a bar association comprised of attorneys who practiced before the Interstate Commerce Commission). As a result of this endowment,

8. In 1967, members of the Motor Carrier Lawyers Association (MCLA) and the association’s president determined that members of the transportation bar needed educational programs to keep current with the ever-changing nature of the transportation industry. Among those in the discussion were Alvin J. Meiklejohn, Jr. JD ’51 and John Thompson JD ’50. These gentlemen approached their alma mater, the University of Denver College of Law to propose a transportation law conference. Dean Robert B. Yegge met the idea with interest and enthusiasm. The first conference of the Transportation Law Institute (TLI) was held August 19-23, 1968. This annual Institute remained in Denver at the College of Law for seven years.

9. LOUIS SMITH & RICHARD CHAMPLIN, *THE MILLENNIUM HISTORY OF THE TRANSPORTATION LAWYERS ASSOCIATION* (2000).

the law school was able to establish a chair in transportation law.¹⁰ The

10. Professor Paul Stephen Dempsey held the Transportation Law Chair from 1979-2002. Prior directors of this program have included Professor Andrew F. Popper (1976-1978) and visiting Professor Gale Norton (1978-1979), who subsequently became Secretary of the Interior in the administration of President George W. Bush. Both have made significant literary contributions in the field of transportation law. See, e.g., A. POPPER, SHIPPER ANTITRUST LIABILITY IN A RATE-DEREGULATED MARKET: FUNDAMENTAL INQUIRIES AND ANALYSIS (1979); A. Popper, *Collective Ratemaking: A Case Analysis of the Eastern Central Region and a Hypothesis for Analyzing Competitive Structure*, 10 *Transp. L.J.* 365 (1978); A. Popper & Beabout, *Finance Transactions-Jurisdiction in MOTOR CARRIER FINANCE TRANSACTIONS*, *SUBSTANTIVE LAW* 1 (1977); J. Reed, *Equal Access to Mass Transportation for the Handicapped*, 9 *TRANSP. L.J.* 167 (1977); Note, *1976 Congressional Action on the Clean Air Act: Automobile and Truck Emission Standards*, 8 *TRANSP. L.J.* 353 (1976). Andrew F. Popper was hired by the DU College of Law as the M.C.L.A. Professor of Law and commenced his tenure in September, 1976. In his first report to the program, he outlined his course work, research activity, work with the TLJ and his interactions with the MCLA. In the fall of 1977, Dean Yegge encouraged Popper in his activities with the Journal and MCLA, indicating that it was "crucial" for Professor Popper to create a thoughtful plan for the development of the Transportation Law Program at the College of Law. Additionally, they agreed that the program would be strengthened significantly with the infusion of scholarship funds to support students attending DU with an interest in transportation law.

Other literary contributions in transportation law by the present faculty include two contract reports to the U.S. Department of Transportation: M. BLUMENTHAL & H. ROSS, *TWO EXPERIMENTAL STUDIES OF TRAFFIC LAW* (1973) (Vol. 1: *The Effect of Legal Sanctions of DUI Offenders*; Vol. 2: *The Effect of Court Appearance on Traffic Law Violators*), and W. BEANEY, M. BLUMENTHAL, J. REESE, H. ROSS & L. TIFFANY, *THE DRINKING DRIVER: AN INTERDISCIPLINARY APPROACH TO THE LEGAL MANAGEMENT OF A SOCIAL PROBLEM* (1973). See also J. REESE, *POWER-POLICY-PEOPLE: A STUDY OF DRIVER LICENSING ADMINISTRATION* (1971); J. REESE, *THE LEGAL NATURE OF A DRIVER'S LICENSE* (1965); J. Reese, *The Federal Highway Safety Act of 1966: NHSB Driver Licensing Standard - Power Not Used*, 47 *DENV. U. L. REV.* 408 (1971); PAUL DEMPSEY ET AL., *METROPOLITAN PLANNING ORGANIZATIONS: AN ASSESSMENT OF THE TRANSPORTATION PLANNING PROCESS* (2000) (Three volumes); PAUL DEMPSEY, *AIRPORT PLANNING & DEVELOPMENT: A GLOBAL SURVEY* (1999); PAUL DEMPSEY & LAURENCE GESELL, *AIR TRANSPORTATION: FOUNDATIONS FOR THE 21ST CENTURY* (1997); PAUL DEMPSEY & LAURENCE GESELL, *AIRLINE MANAGEMENT: STRATEGIES FOR THE 21ST CENTURY* (1997); PAUL DEMPSEY ET AL., *DENVER INTERNATIONAL AIRPORT: LESSONS LEARNED* (1997); PAUL DEMPSEY, ROBERT HARDAWAY & WILLIAM THOMS, *AVIATION LAW & REGULATION* (1993) (Two volume treatise and abridged student edition); PAUL DEMPSEY & ANDREW GOETZ, *AIRLINE DEREGULATION AND LAISSEZ FAIRE MYTHOLOGY* (1992); PAUL DEMPSEY, *FLYING BLIND: THE FAILURE OF AIRLINE DEREGULATION* (1990); PAUL DEMPSEY, *THE SOCIAL & ECONOMIC CONSEQUENCES OF DEREGULATION* (1989); PAUL DEMPSEY, *LAW & FOREIGN POLICY IN INTERNATIONAL AVIATION* (1987); PAUL DEMPSEY & WILLIAM THOMS, *LAW & ECONOMIC REGULATION IN TRANSPORTATION* (1986); Paul Dempsey, *Predation in the Air: Competition and Antitrust Law in Commercial Aviation*, in *INTERNATIONAL DEREGULATION AND PRIVATIZATION* 123 (Christian Campbell, ed., 2000); Paul Dempsey, *Globalization As a Euphemism for Cartelization*, in *HANDBOOK OF AIRLINE MARKETING* 513 (G. Butler & M. Keller, eds., 1998); Paul Dempsey, *Dysfunctional Economics and the Airline Industry*, in *HANDBOOK OF AIRLINE ECONOMICS* 185 (D. Jenkins, ed., 1996); Paul Dempsey, *Deregulation and Regulation: Policy, Politics & Economics*, in *HANDBOOK ON REGULATION & ADMINISTRATIVE LAW* (V. Schwartz & D. Rosenbloom, eds., 1994); Paul Dempsey, *Foreign Trade & Economic Injury: A Survey of U.S. Relief Mechanisms*, in *THE LAW OF TRANSNATIONAL BUSINESS TRANSACTIONS* 12-1 (V. Nanda ed., 1981); Paul Dempsey, *The Experience of Deregulation: Erosion of the Common Carrier System*, in *13 TRANSPORTATION LAW INSTITUTE* 121 (1980); Paul Dempsey, *Airport Landing Slots: Barriers to*

Program has been expanding rapidly to match the vigorous development of law and economic regulation in this field, and now consists of five major components:

1. The Transportation Law Institute
2. The Academic Program
3. Transportation Law Journal
4. The Transportation Law Society
5. The Transportation Scholarship Fund

3.1 THE TRANSPORTATION LAW INSTITUTE

The concept of a continuing legal education program for attorneys specializing in transportation originated with members of the TLA. They initially envisioned an intensive educational experience for attorneys and practitioners in the field of motor carrier economic regulation by the Interstate Commerce Commission. The University of Denver, as an entity with broad experience in continuing legal education, was approached as a

Entry and Impediments to Competition, in 16 AIR & SPACE L. 20 (2001); Paul Dempsey, *The Law of Intermodal Transportation: What It Was, What It Is, What It Should Be*, 27 TRANSP. L.J. 367 (2000); Paul Dempsey, *Trade & Transport Policy In Inclement Skies – The Conflict Between Sustainable Air Transportation and Neo-Classical Economics*, 65 J. AIR L. & COM. 639 (2000); Paul Dempsey, *Pennies From Heaven: Breaking Through the Liability Limitations of Warsaw*, 22 ANNALS AIR & SPACE L. 267 (1997); Paul Dempsey, *Taxi Industry Regulation, Deregulation & Reregulation: The Paradox of Market Failure*, 24 TRANSP. L.J. 73 (1996); Paul Dempsey, *Airlines in Turbulence: Strategies for Survival*, 23 TRANSP. L.J. 15 (1995); Paul Dempsey, *The Prospectus for Survival and Growth in Commercial Aviation*, 19 ANNALS AIR & SPACE L. 163 (1994); Paul Dempsey, *Must the Airline Industry Collapse?*, JURISCONSULTUS 59 (1994); Paul Dempsey & William Mahoney, *The U.S. Short Line Railroad Phenomenon: The Other Side of the Tracks*, U. TOL. L. REV. 425 (1993); reprinted in 21 TRANSP. L.J. 383 (1994); Robert Hardaway & Paul Dempsey, *Airlines, Airports and Antitrust: A Proposed Strategy for Enhanced Competition*, 85 J. AIR L. & COM. 455 (1992); Paul Dempsey, *Interstate Trucking: The Collision of Textbook Theory and Empirical Reality*, 20 TRANSP. L.J. 185 (1992); Paul Dempsey, *Airline Deregulation in the United States: Competition, Concentration, and Market Darwinism*, 17 ANNALS AIR & SPACE L. 199 (1992); Paul Dempsey, *European Aviation Regulation: Flying Through the Liberalization Labyrinth*, 15 B.C. INT'L & COMP. L. REV. 311 (1992); Paul Dempsey, *The Disintegration of the U.S. Airline Industry*, 20 TRANSP. L.J. 9 (1991); Paul Dempsey, *Running on Empty: Trucking Deregulation and Economic Theory*, 43 ADMIN. L. REV. 253 (1991); Paul Dempsey, *The Civil Rights of the Handicapped in Transportation: The Americans With Disabilities Act and Related Legislation*, 19 TRANSP. L.J. 309 (1991); Paul Dempsey, *Canadian Transport Deregulation: Rolling Across the Great White North*, 19 TRANSP. L.J. 113 (1991) (with Prof. William Thoms and Sonja Clapp); Paul Dempsey, *Airline Deregulation and Laissez Faire Mythology: Economic Theory in Turbulence*, 56 J. AIR L. & COM. 305 (1990); Paul Dempsey, *Robber Barons in the Cockpit: The Airline Industry in Turbulent Skies*, 18 TRANSP. L.J. 133 (1990); Paul Dempsey, *The Americans With Disabilities Act: The Transportation Provisions*, 9 PREVENTIVE L. REP. 12 (1990). Professor Murray Blumenthal was also engaged in the preparation of workshops for judges on traffic law under a project funded by the National Highway Transportation Safety Administration of the U.S. Department of Transportation.

potential cosponsor. This union has since produced a plethora of excellent educational programs.

After several decades of growth and development, the annual Transportation Law Institute has established itself as among the premier programs in the University of Denver's continuing education schedule. The Institute, begun in 1968, is a joint effort of the College of Law and the Transportation Lawyers Association.

The concept of a continuing legal education program in transportation originated with members of the Motor Carrier Lawyers Association.¹¹ They envisioned an intensive educational experience that would offer training to attorneys and practitioners in the burgeoning area of motor carrier regulation. Implementation of such a program required the expertise of an entity experienced in continuing legal education. The University of Denver College of Law was approached as a potential cosponsor. From this initial meeting has come a union that has produced many excellent educational programs.

Prior to 1980, the subject matter emphasis of the Transportation Law Institute rotated on an annual basis, usually devoting an entire program to the issue of motor carrier entry, ratemaking, finance transactions or liability for loss and damage. With the challenges posed by deregulation in the contemporary era, the educational program was expanded to include the emerging legal problems in the fields of bankruptcy, labor-law, antitrust, environmental, and safety regulation, as well as intermodal and rail transportation issues.

The site of the Transportation Law Institute was at the University of Denver for its first seven years, followed by TLIs in the summer Rocky Mountain resorts of Colorado and Utah. The American Bar Association and the Association of Transportation Law, Logistics & Policy became co-sponsors of the TLI in the 1980s. The TLI then began to be held at locations throughout the United States, such as Scottsdale, Washington, D.C., San Francisco, and San Antonio.¹²

11. In particular, John Thompson, Al Meiklejohn, Jr., and then-MCLA President, Ewell Muse, Jr. LOUIS SMITH & RICHARD CHAMPLIN, *THE MILLENNIUM HISTORY OF THE TRANSPORTATION LAWYERS ASSOCIATION* (2000).

12. In 1987, Dean Edward Dauer negotiated with the Association of Transportation Practitioners (ATP) for joint sponsorship of the TLI, starting with the conference in 1988. This agreement was announced to the TLA executive committee by then-president Richard H. Champlin in a memo on 14 December 1987. This co-sponsorship split the costs and profits between DU and ATP. In 1999, new protocols were agreed to on the joint sponsorship of the TLI between DU, TLA, the Association for Transportation Law, Logistics and Policy [ATLLP] and the ABA. For a history of the TLI, see LOUIS SMITH & RICHARD CHAMPLIN, *THE MILLENNIUM HISTORY OF THE TRANSPORTATION LAWYERS ASSOCIATION* (2000).

3.2 THE ACADEMIC PROGRAM

The University of Denver offers an advanced academic program in transportation law, including introductory courses, seminars, independent study, and clinical internships. In the aggregate, this educational structure provides a comprehensive review of the legal, regulatory, and economic problems confronting transportation. The courses include, but are not limited to, a review of the economic regulation of each mode of transportation (i.e., rail, motor, pipeline, maritime, and air carriers) by the relevant regulatory agencies (i.e., the U.S. DOT, the Federal Maritime Commission, the Surface Transportation Board, and to some extent the Departments of State, Energy and Justice). These courses also provide a review of the regulation of international transportation by the United States and foreign governments pursuant to a wide range of bilateral and multilateral agreements. Of course, within this broad framework, students are exposed to issues in urban mass transit, highway development, contracts of carriage, insurance and liability for loss and damage in transit, and the plethora of environmental, energy, antitrust and labor law issues which regularly arise in transportation.

In addition to the introductory courses, which review the economic regulation of rail, motor, water, air, and pipeline transportation, and the liability, environmental, and energy problems associated therewith, the Program also offers advanced courses and seminars in the fields of Aviation Law, Admiralty, and International and Intermodal Transportation. The law school also has offered a wide range of related courses, including Administrative Law, Administrative Practice, Antitrust Law, Labor and Employment Law, Law and Economics, Public Utility Law, and Regulated Industries.

The heart of any educational program is its curriculum. The University of Denver College of Law offers its students the opportunity to focus their education in one of several areas of specialization, including advocacy skills, business planning, international law, natural resources, tax and transportation. All J.D. candidates are required first to fulfill the educational obligations of the required curriculum, which consumes more than half of a student's legal education at our law school. Included within the required curriculum are courses that serve as a foundation for that which follows, including the electives they may take in the various fields of government regulation. Among these is Administrative Law, a required course that offers a comprehensive overview of the practice and procedure of government agencies, with a particular emphasis on the ins and outs of the Administrative Procedure Act. Also of manifest importance is the required course of Constitutional Law.

The University of Denver offers a comprehensive academic program

in Transportation Law with a wide spectrum of introductory and advanced courses and seminars, as well as independent study and internship opportunities. These attempt to provide educational exposure to the legal, regulatory, economic and political developments in transportation.

The curriculum of the Transportation Law Program begins with the basic course in Transportation Law. This course offers the student an overview of all aspects of law and regulation of each of the several domestic transport modes (i.e., air, motor, rail and water carriers, pipelines, transit, freight forwarders and brokers). It also provides students with a survey of liability issues surrounding loss and damage to freight in transit, labor law issues in transportation, antitrust, safety regulation, environmental regulation, and the government's role in providing transport services (e.g., Amtrak, Conrail and urban mass transit).

Beyond the basic course in Transportation Law, students are free to take electives in Admiralty, Airline Business & Law, Antitrust, Aviation Law, Environmental Law, Labor & Employment Law, Law & Economics, Public Utilities Law, Space Law and Regulated Industries, as well as seminars in International Transportation Law.

Students in the Transportation Law Program have the opportunity to participate in externships in federal regulatory agencies or major transportation businesses. The University of Denver recognizes the educational value of this "hands-on" experience, and extends academic credit for it.

Students at the University of Denver also have the opportunity to develop their legal research and writing skills by participating as members of the Staff and Editorial Board of the nation's leading periodical in its field—the *Transportation Law Journal*. Ordinarily, students join the TLJ during their second year of law school. They perform one academic quarter as a candidate, during which they are given an examination that tests their familiarity with the "blue book" system of law review citation. They are also given a series of traditional law journal staff assignments, including "spading and critiquing" a manuscript submitted for publication, and "citing and sourcing" or "blue booking" footnotes. Upon successful completion of these tasks, at the end of the candidacy quarter, the student is elected to Staff.

Staff members are eligible to earn academic credit for their work on the Journal. They are expected to contribute 30 hours of work for each hour of academic credit earned. During their final year of law studies at the University of Denver, students may elect to serve as an Editor on the periodical. They must first submit a piece of scholarly research of publishable quality to the Faculty Editor of the Journal. If it is approved, the existing editors decide who shall be elected to fill vacancies on the Editorial Board. Editors are eligible to receive up to three hours of academic

credit per quarter. Again, students are expected to put in 30 hours of work for each hour of academic credit earned. An overall ceiling of 6 hours of credit is imposed on Journal activities.

The DU law students who serve as editors and staff members of the TLJ review and edit a wide range of scholarly literary products submitted by attorneys, economists and government officials. They also have an opportunity to publish their own literary contributions as Notes, Comments, or Recent Decisions. The Journal works closely with all student authors in an effort to develop legal research and writing skills. Since the legal profession is, predominantly, a literary profession, the development of such skills is absolutely essential to the successful practice of law.

3.3 TRANSPORTATION LAW JOURNAL

Because the legislative and regulatory events of the past several decades have been so significant,¹³ much of the legal literature in the field of transportation has been rendered virtually obsolete. As a result of the controversy surrounding the issue of regulatory reform in transportation, and the increased attention given this lively issue by the President, the Congress, the regulatory agencies themselves, and the media, the *Journal* has become an increasingly important forum for continuing debate, an important means of disseminating information, and an invaluable research tool for attorneys and practitioners attempting to comprehend the rapidly evolving regulatory structure.

From the subscribers' perspective, a legal periodical serves two primary functions: (1) as source of information; and (2) as a forum for the contemporary debate over pertinent legal, economic, and political issues. Many of the *Journal's* articles have surveyed the revolutionary developments in transportation.¹⁴ In addition, several distinguished attorneys,

13. For example, the Airline Deregulation Act of 1978, Pub. L. No. 95-504, 92 Stat. 1705 (1978), promulgated in October of 1978, is probably the most significant piece of legislation in the past 40 years of regulation, for it effectively reversed the traditional course of entry and pricing controls for domestic passenger transportation, and promises to abolish the Civil Aeronautics Board by 1985. Similarly, the Air Cargo Deregulation Act, Pub. L. No. 95-163, 92 Stat. 1278 (1977), created virtually unlimited pricing and entry freedom for air carriers engaged in the domestic transportation of commodities. See 49 U.S.C. § 1388 (1979). The Motor Carrier Act of 1980, Pub. L. No. 96-296, 94 Stat. 793, and the ICC Termination Act of 1995, Pub. L. No. 104-88, 109 Stat. 803, were also significant deregulation bills. Likewise, in rail transportation, fundamental changes in the traditional regulatory structure were made by the Railroad Revitalization and Regulatory Reform Act, Pub. L. No. 94-210, 90 Stat. 147 (1976), and the Rail Passenger Service Act, Pub. L. No. 95-42 1, the former attempting to improve the poor financial health of the rail freight industry (e.g., Conrail), and the latter establishing Amtrak as a corporation to provide national rail passenger service.

14. See, e.g., Miller, *An Economic Analysis of Airline Fair Deregulation: The Civil Aeronautics Board's Proposal*, 10 *TRANSP. L.J.* 15 (1978); Frye, *Recent Developments in the Transportation of Hazardous Materials*, 10 *TRANSP. L.J.* 97 (1978); Baker & Greene, *Commercial Zones and*

economists, and public officials have employed the Journal as a means of debating the strengths and weaknesses of the regulatory reform movements before a national audience of 'subscribers who will be directly affected by the outcome.'¹⁵ Considering the magnitude of the legislative and regulatory proposals now before the Congress and the pertinent federal agencies, the events of the next decade will accentuate the importance of these two functions.

From the publisher's perspective, a legal periodical performs two separate functions: (1) to provide law students with an opportunity to enhance their essential literary skills; and (2) to improve the national notoriety and prestige of the educational facility or bar organization with which it is affiliated. The law students of the University of Denver who serve as editors and staff of the *Journal* have an opportunity to review and edit a wide range of scholarly literary products submitted by distinguished attorneys, economists, and public officials, and thereby to explore an exceptionally energetic and fascinating area of the law. Moreover, the students also have abundant opportunities to publish their own literary contributions as Notes, Comments, or Recent Decisions, in a highly respected legal journal.

The *Journal* reaches a vast national and international audience, with subscribers located throughout the United States, Canada, Europe, Japan, and Australia. The *Journal* is the only legal periodical that offers a comprehensive review of all aspects and modes of transportation.¹⁶ For

Terminal Areas: History, Development, Expansion, Deregulation, 10 *TRANSP. L.J.* 171 (1978); McFarland, *Work in Progress - The Latest Solution to the Small Shipment Problem*, 10 *TRANSP. L.J.* 201 (1978); Straszheim, *The Scheduling and Route Impacts on Increased Fare Flexibility*, 10 *TRANSP. L.J.* 269 (1978); O'Neal, *Price Competition and the Role of Rate Bureaus in the Motor Carrier Industry*, 10 *TRANSP. L.J.* 309 (1978); Erenberg & Kasson, *The Case-in-Chief - Reform as Yet Unfulfilled*, 9 *TRANSP. L.J.* 37 (1977); Gillick, *Recent Developments in Airline Tariff Regulation: Procedural Due Process and Regulatory Reform*, 9 *TRANSP. L.J.* 67 (1977); Rippley, *Highway Rights of Way on Public Lands*, 9 *TRANSP. L.J.* 121 (1977); Bober, *Elimination of Gateways in Section 5(2) and 212(b) Proceedings*, 9 *TRANSP. L.J.* 257 (1977).

15. See, e.g., Friedman, *Collective Ratemaking by Motor Common Carriers: Economic and Public Policy Considerations*, 10 *TRANSP. L.J.* 33 (1978); Joe Sims, *Inedible Tallow, the Maximum Charge Rule, and Other Fables: Motor Carrier Regulation by the ICC*, 10 *TRANSP. L.J.* 55 (1978); William H. Borghesani, *Motor Carrier Regulatory Reform and its Impact on Private Carriers*, 10 *TRANSP. L.J.* 389 (1978); Dupre, *A Thinking Person's Guide to Entry/Exit Deregulation in the Airline Industry*, 9 *TRANSP. L.J.* 273 (1977); Richard D. Gritta, *A Review and Critique of the CAB's Domestic Passenger-Fare Investigation: Docket No. 21866-8, the Rate of Return*, 9 *TRANSP. L.J.* 309 (1977); Rose, *Surface Transportation and the Antitrust Laws: Let's Give Competition A Chance*, 8 *TRANSP. L.J.* 1 (1976); Webb, *Legislative and Regulatory History of Entry Controls on Motor Carriers of Passengers*, 8 *TRANSP. L.J.* 91 (1976).

16. See, e.g., Hart, *The Antitrust Aspects of Oil Company Ownership of Deepwater Ports*, 10 *TRANSP. L.J.* 67 (1978); Lorentzen, *Coal Slurry Pipelines: A Railroad Perspective*, 10 *TRANSP. L.J.* 153 (1978); Sims, *International Air Transportation: The Effect of the Airline Deregulation Act of 1978 and the Bermuda II Agreement*, 10 *TRANSP. L.J.* 239 (1978); Price & Berardino, *Defining Economic Terms Used in the Railroad Revitalization and Regulatory Reform Act*, 9 *TRANSP. L.J.*

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that reason, and because this is such a rapidly developing area of the law, its audience is growing rapidly, and increasingly relying on the *Journal* as an essential research tool. As such, it strives to provide its national readership with the highest caliber of writing. It is a major source of information for the practicing bar as well as for scholars.

The substantive focus that defines the *Journal's* scope is diverse and includes all areas of transportation law. The following is a partial list of topics which have been dealt with in the past: land-use planning, labor law, commercial law, corporate law, civil rights, anti-trust and trade regulation, air, motor and rail carrier regulation, airport noise regulation, highway planning, auto emissions, coal slurry pipelines, shipping and deepwater ports, the transportation of hazardous materials, and environmental regulation.

Over the years, the *Journal* has been a lively forum for the debate over contemporary legal, political and economic issues confronting the industry. Major symposium issues have addressed the following topics:

- International and Intermodal Transportation—Vol. 12(1)
- Urban Mass Transportation—Vol. 12(2)
- Transportation Regulation: Past, Present and Future—Vol. 13(1)
- Transportation Deregulation—Vol. 13(2)
- Intrastate Regulation—Vol. 14(2)
- The ICC: The First 100 Years—Vol. 16(1)
- Regulation of Intrastate Motor Carriers—Vol. 17(2)
- Airlines & the Future of Aviation—Vol. 20(1)
- International Transportation Law—Vol. 23(3)
- Airline Safety & Security—Vol. 25(2)
- North American Intermodal Transportation Summit—Vol. 25(3)
- The State of the Law in the Railroad Industry—Vol. 26(3)
- Intermodal Transportation—Vol. 27(3)
- Aviation Issues in the Law—Vol. 28(2)
- Intermodal Founding Fathers—Vol. 28(3)¹⁷

133 (1977); Pansius, *Plotting the Return of Isbrandtsen: The Illegality of Interconference Pate Agreements*, 9 *TRANSP. L.J.* 337 (1977); Adams, *Contractual Negotiation of a Statutory Obligation - A Modern Anomaly*, 9 *TRANSP. L.J.* 371 (1977); Note, *Transit Funding Under the Urban Mass Transportation Act*, 9 *TRANSP. L.J.* 391 (1977); Donin, *Safety Regulation of the Concorde Supersonic Transport: Realistic Confinement of the National Environmental Policy Act*, 8 *TRANSP. L.J.* 47 (1976); Brewes, *Liability Insurance Coverage of Leased Trucks*, 8 *TRANSP. L.J.* 107 (1976); Lipowski, *Featherbedding on the Railroads: by Law and by Agreement*, 8 *TRANSP. L.J.* 141 (1976).

17. Beyond these significant symposia, the *Journal* has served as a soap box from which individuals have debated the virtues and sins of regulation and deregulation. On two occasions, vigorous debates on the wisdom of motor carrier ratemaking antitrust immunity were conducted between Washington transportation consultant Jesse J. Friedman and AEI Resident Scholar

The *Journal* has become a significant means of disseminating information and an important forum for the public policy debate over regulation and deregulation. It has an international audience of subscribers—from Canada to Yugoslavia, from Norway to Australia, from New Guinea to Japan, and from Tanzania to Thailand. Today, more than 1,500 individuals, law firms, government agencies, and libraries subscribe to the *Journal*. All members of the Transportation Lawyers Association receive the periodical as one of the perquisites of their membership.

The *Journal* was inaugurated in Fall 1968 under the direction of Professor David J. Baum of Osgood Hall University Law School of York University (Toronto, Canada), who published the *Journal* in conjunction with the Motor Carrier Lawyer's Association (now the TLA) Board of Governors.¹⁸ Since 1976, it has been published by the University of Denver College of Law.

3.4 THE TRANSPORTATION LAW SOCIETY

The Transportation Law Society is a student organization which provides a regular series of debates, speeches, and lectures on current issues in transportation. It was established in order to satisfy student interest in the exploration of current legal and economic issues in transportation, and to expand contact between students and outstanding authorities in the field of transportation. A number of distinguished individuals have spoken on topics as diverse as the "Airline Deregulation Act of 1978", the "Rock Island Bankruptcy", "Amtrak in the 1980s", "The Future of U.S. Urban Mass Transit", "Airline Labor Law", "Predation and Competition in the Airline Industry," and "Proposals for Legislative Reform of Surface Transport Regulation."¹⁹

James C. Miller, in volumes 10(1) and 11(2) of the *Journal*. Mr. Miller went on to become President Reagan's FTC Chairman, and David Stockman's successor as Director of the Office of Management and Budget. And one will recall the infamous debate between Professors Dempsey and Hardaway in volumes 13(2) and 14(1) of the TLJ—the one in which Hardaway got it all wrong and Dempsey got it all right.

18. Over the years, the TLA Board of Governors has been chaired by a number of prominent transportation lawyers, including David Sutherland, Les Kehl, Rod Macdonald, and Mark Andrews.

19. Prior speakers have included Samuel Freeman (Vice President & General Counsel of the Rio Grande Railway), David Bricton (Vice President & General Counsel of Frontier Airlines), William Thorns (Professor of Law, the University of North Dakota), Howard Beck (Executive Director of Denver's urban mass transit administration, RTD), Randy Babbitt (President of the Air Line Pilots Association), Robert Britton (Vice President of American Airlines), Jim DeLong (Director of Denver International Airport), Jeff Potter (President and CEO of Frontier Airlines), Charles Hunnicut (U.S. DOT Assistant Secretary), and Michael Erenberg (Deputy Director of the Office of Proceedings, Interstate Commerce Commission).

3.5 THE TRANSPORTATION SCHOLARSHIP FUND

The Marion F. Jones Scholarship and the TLA Scholarship were established at the University of Denver for students who seek to specialize in transportation law.²⁰

3.6 CONCLUSION

Because this is such a rapidly developing field, it offers a marvelous opportunity for law students who would like to have a significant influence on the law early in their careers, for the regulators are grasping for innovative young attorneys to justify the application of regulatory philosophies which are radically different from those which have traditionally been applied. The unique educational opportunities available at the University of Denver in transportation law also enable students to gain exposure to administrative law and economic regulation, a field that now plays a significant role in virtually all of this nation's commercial activity. Attorneys and practitioners in this exciting area of the law seeking new associates, as well as transportation corporations seeking house counsel, recognizing the need for legal specialists to confront prudently the myriad of revolutionary regulatory demands imposed and opportunities offered by the Washington bureaucratic labyrinth, are recruiting our graduates.²¹

Before 1983, the College of Law was in downtown Denver, across the street from the City & County Building (city hall) and the art mu-

20. Among the requirements of this scholarship are:

(1) Any law student to be benefited shall have demonstrated financial need to the satisfaction of the Financial Assistance Committee; and (2) preference shall be given to junior and senior law students who have demonstrated past interest in Transportation Law, including such activities as participation on the Transportation Law Journal, past academic work, employment, writing, and current academic performance demonstrated by high scholastic achievement in Transportation Law courses.

21. The Placement Office of the University of Denver College of Law has compiled resumes and credentials on the students who are participating in the Transportation Law Program. As these students approach the end of their law school careers, we hope to have a specialized placement service for them. This service will only be of use if you, the potential employer, notify us of your needs in advance. We have several students who are interested in the practice of law in the transportation area as a fulltime profession. Additionally, we have a number of students who would be interested in working in the capacity of a law clerk or research assistant during our summer session. We also have the capacity to create internships in various private and public offices, and would be interested in knowing if you would like to have a transportation law clerk or intern working with you. Compensation and academic credit are arranged on an individual basis. Additional information concerning recruitment of the students in the Transportation Law Program may be obtained from:

Director of Placement
College of Law
University of Denver
1900 Olive St.
Denver, CO 80220

seum. That year, it moved to a campus east of downtown, which had formerly been the Colorado Women's College. As part of a massive redevelopment of the University's main campus at University and Evans Boulevards (south of downtown Denver), in 2001 the University of Denver broke ground on a new building to house the College of Law. The site of the new law center is in the heart of the University campus. When the law school moves to this new site in the summer of 2003, it will bring all the elements of the University of Denver together on a single campus for the first time. The University's investment in this new center will be in excess of \$60 million, signifying the importance the University places on the future of the College of Law and on legal education. The movement of the College of Law to the main campus will much enhance its ability to engage in multidisciplinary education and research.

This is also a time of great opportunity and advantage for all the programs at the College of Law, particularly the Transportation Law Program. This move will enhance the numerous opportunities for interdisciplinary scholarship and teaching in every area. While the law school is active in taking advantage of the synergies available across the university, the move will make these more accessible to the students as well. Given that the practice of law is becoming increasingly multi-disciplinary and that successful attorneys have more than one specialty, this move will improve the training of our students to help them become more adept at the many different facets of legal practice, and the way the law impacts business.

We stand on the threshold of a new and exciting era, one that will confront an evolving regulatory structure in transportation different from anything that has preceded it. It promises to be a volatile and active period for all who take an interest in the fundamental relationship between government and business. It is our hope that these legislative and regulatory activities will be debated, discussed, analyzed, and criticized with some vigor in these pages of the *Journal*, and that as a result, our national transportation policy will evolve in a prudent and responsible manner.

4. THE INTERMODAL TRANSPORTATION INSTITUTE

The Intermodal Transportation Institute (ITI) was originally established in 1991 as the University of Denver's Center for Transportation Studies to promote the vision of sustainable transportation systems worldwide. The Center brought together faculty members from international studies, geography, law, education, and business that were teaching and conducting research in the transportation field. It was felt that by providing an interdisciplinary umbrella organization for faculty and students interested in transportation, a critical mass could be attained, re-

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sulting in a larger presence within and outside the University. This would give rise to more opportunities for expanded education and research. Much of the early focus was on aviation, security, and railroad safety, evidenced by faculty research projects, specific courses in transportation, and several conferences sponsored by the Center in the early and mid-1990s.²²

In 1996, the name of the Center was changed to the Intermodal Transportation Institute to reflect more specifically its recognition of the close relationship between sustainable development and intermodal transportation—an integrated system that builds upon the strengths of each mode so that it is as efficient, environmentally benign and safe and secure as possible. It must incorporate new technologies, be subject to sound policies that recognize the interests of the different stakeholders, and be based on principles of equity and social justice. For us, intermodalism is the logical next step in the development of transportation.

The Intermodal Transportation Institute has filled a special niche. It met a local need because Denver lacked a comprehensive center of transportation studies. Nationally, many universities across the United States had established transportation centers but none focused on intermodalism and sustainable development. Each of these programs possessed considerable strengths but the great majority reflected either an engineering or a business/logistics orientation and had little interaction with other relevant disciplines or interest in the international dimensions of the subject (apart from supply chains). The ITI on the other hand, was committed to an interdisciplinary and international orientation from the outset, for its founding faculty recognized the degree to which globalization was transforming transportation networks, the importance of developments in other countries, and the degree to which the realization of an intermodal vision required insights and expertise from many disciplines.

Accordingly, ITI's faculty is truly interdisciplinary in terms of expertise and backgrounds. ITI is strongly linked to other academic units at the University of Denver including the Graduate School of International Studies, the Daniels College of Business, the Department of Geography

22. In 1991, the University sponsored two new major aviation conferences. The University's Graduate School of International Studies (GSIS), in cooperation with the Drug Enforcement Administration, sponsored a Conference on Drug Trafficking, Terrorism, and International Air Transportation. A second major transportation related conference, "Airlines and the Future of Aviation," was organized by the College of Law, with help from the Westinghouse Corporation. Both were highly successful. In 1992, another major conference on "Airlines, Airports and Aviation," cosponsored with the Smithsonian Institution's Air & Space Museum, was held in Washington, D.C. In 1993, the College of Law sponsored a major airport conference at the Denver Convention Center attended by several hundred experts from around the world. In 1996, a conference on Railroad Safety was held at the University, wherein former FRA Administrator Gil Carmichael delivered the keynote address.

with its GIS lab, the School of Education, the Department of Chemistry, and the College of Law which provides the only multimodal, and perhaps the most comprehensive, program in transportation law in the United States.

Given the critical role that infrastructure plays in transportation, ITI decided that, since its strengths lay in the social sciences, it should add to its expertise and enhance its impact by teaming with an institution that possessed strong engineering and computer resources. Accordingly, ITI partnered with Mississippi State University to form the National Center for Intermodal Transportation under the University Transportation Centers (UTC) Program of the U.S. DOT. The University of Denver and Mississippi State University were named as a center of excellence for Intermodal Transportation Systems Planning and Assessment in the 1998 Transportation Equity Act for the 21st Century (TEA-21).

From the outset, ITI was conceived as a "think and do" tank, committed to education, research, and service programs. Accordingly it established, under the leadership of Gilbert H. Carmichael, a former Federal Railroad Administrator and currently the Chair of the Amtrak Reform Council, a strong and effective Board of Directors whose members, leaders and pioneers in the intermodal transportation industry, passenger and freight, share an intermodal vision and are committed to building ITI into a national and international resource.

ITI has consistently been a leader in innovative thinking about transportation issues. Over a decade ago, it recognized the need for enhanced transportation security. It sponsored a workshop on this topic in the early 1990s and engaged in discussions with representatives of the U.S. DOT about the ways in which transportation education should be amended to include a security dimension. Subsequently ITI faculty participated in several meetings for that purpose, published papers dealing with national security, and helped organize workshops dealing with homeland defense and the role of transportation therein at the National Defense University and locally with the Denver Council on Foreign Relations.

Furthermore, ITI has taken the initiative in attempting to promote the concept of an ethical transportation system. At present there is no field of "transportation ethics" and few educational materials are available dealing with this issue, even though many transportation organizations have their own codes of ethics.²³

ITI has also moved vigorously to promote its vision of an intermodal transportation system through its outreach, teaching and research activi-

23. In order to promote the concept, ITI faculty chaired panels at TRB and elsewhere on transportation ethics and ITI has consistently stressed this issue in all its activities.

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ties. Most recently it published a “White Paper” entitled, “A New Transportation Agenda for America,” which summarized the lessons of 11 September 2001. It outlines the principles that should guide the transportation agenda and developed a framework for thinking about transportation, including twelve specific recommendations. This document was disseminated to the members of the Senate and House of Representatives, governors, government and state officials, and other interested parties.

The Faculty of the Intermodal Transportation Institute has identified the principal objectives of the Institute as follows:

1) to develop and implement significant research projects in the area of transportation involving students, faculty, and other professionals;

2) to develop and implement teaching programs at the graduate and undergraduate levels for students planning professional careers involving transportation;

3) to provide information to the local community about major issues in transportation through conferences, workshops, and other outreach activities;

4) to act as a focal point for transportation research, education, and communication in the region by identifying individual and group expertise, establishing coordinating mechanisms to enrich existing activities, and developing cooperative programs;

5) to provide a vehicle for dissemination of existing knowledge and new research findings to industry and government through consulting, conferences, seminars, and short courses for practitioners; and

6) to assist in the development of coherent transportation policies at local and national levels, both in the U.S. and abroad.

Such efforts are indicative of the many significant activities that ITI has undertaken in its effort to help bring a new kind of transportation system into being. Other teaching, research, and outreach activities that also deserve mention include:

1. Outreach

Recognizing the need to preserve the rich history of intermodalism should be preserved for posterity, research and educational purposes, ITI has sponsored two major activities. First, ITI collaborates with the National Freight Transportation Library to preserve personal and corporate collections. To date it has acquired the 60,000 volume historical collection of the ICC Library, the 3,500 volume U.S. Railway Association Collection, and the Stanton P. Sender Collection of Transportation

Legislative History.²⁴ Second, ITI hosted the Intermodal Founding Fathers of North America Conference in July 1999. This historic conference provided an opportunity for over 40 industry pioneers to be interviewed as part of an oral history program. The proceedings of the Conference were published in the *Transportation Law Journal* (Summer 2001); the transcribed oral history interviews and the audio and video recordings are on deposit in the ITI Transportation Library Collections.

In keeping with its international orientation, ITI convened the first North American Intermodal Transportation Summit in October 1997. The U.S. Secretary of Transportation, the Secretary of Communications and Transportation of Mexico, and the Canadian Minister of Transport gathered to discuss intermodal transportation issues. They were joined by a roster of transportation executives from some of the preeminent companies of North America as well as leading academics. The *Proceedings of the North American Intermodal Transportation Summit* has been published by ITI as a separate volume and in the *Transportation Law Journal* (Summer 2000). Its success led to the organization of a second North American Summit but the events of 11 September and the 2002

24. The Penrose Library is a member of the Colorado Alliance of Research Libraries, a consortium of greater Denver and Front Range libraries, including Auraria Library, Regis University, Colorado School of Mines, University of Colorado at Boulder, Colorado State University, University of Colorado Health Sciences Center, Denver Public Library, University of Northern Colorado, University of Wyoming, and the University of Denver College of Law. The Penrose Library houses 2.8 million volumes of material, including books, periodicals, and microform titles:

- Volumes—1,141,714
- Periodical subscriptions—5,878
- Bound periodical volumes—1,098,483
- Government documents—802,656
- Microfilm titles—50,167
- Microfiche—903,236
- Video and audio titles—2,000**

ITI has acquired library resources that are housed and maintained by Penrose Library. ITI has received three grants to augment the library's holdings in the field of transportation. And, ITI acquired the 60,000-volume, unique, historical collection of the Interstate Commerce Commission (ICC) Library in August 1996. The nation's oldest regulatory agency, the ICC regulated the railroad, motor, bus, pipeline, and domestic water carrier industries from 1887-1995. The majority of the volumes in the collection pertain to the railroad industry, but the collection also contains important information on the history of the other modes as well. ITI also received the 3,500-volume US Railway Association Collection from Northwestern University in October 1997.

ITI has an alliance with the National Freight Transportation Library, Inc. (NFTL), whose mission is to preserve the archival, personal, and corporate collections of the freight and passenger transportation industries. With the assistance of NFTL, the ICC and US Railway collections were relocated to Denver with donated transportation and storage facilities.

The Transportation Law Institute library resources are housed in Westminster Law Library at the University of Denver College of Law; the law library contains 271,000 volumes and 765 law journals.

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U.S. Congressional elections forced its postponement to a Spring 2003 date.

ITI has also developed a close working relationship with the Chinese Academy of Transportation Sciences. Representatives of our organizations have exchanged several visits. An ITI delegation visited Beijing in 2000 and participated in the First Sino-American Intermodal Policy and Planning Symposium. This event attracted a large audience and involved meetings with high-level Chinese transportation officials. In June 2002, a CATS delegation paid a return visit to Denver and participated in the ITI/CATS Transportation Systems Conference which included speakers from academia, industry, and government officials, including representatives of the U.S. DOT.

2. Teaching

Following extensive research on the needed intermodal skills and content developed through several workshops involving its Board of Directors, ITI faculty established a rigorous, new, interdisciplinary Master of Science degree program in Intermodal Transportation Systems in Fall, 1999. The University of Denver thus became the first university to offer a graduate-level program specifically in intermodal transportation. The program embodies a global perspective, emphasizes an intermodal orientation, and actively involves Board members and industry professionals in its educational activities. Travel courses to visit intermodal facilities, such as in the Los Angeles/Long Beach area and the New York/New Jersey area, are important features of the curriculum. A capstone research project is required to complete the degree. Students have performed very well within this program (which will be discussed in greater detail below), and have obtained important positions within the intermodal industry. In 2000, a team of ITI students entered a national debate competition and won the first-place award.

Recognizing the need to provide professionals with distance learning opportunities, ITI has now redesigned this graduate program into an innovative interdisciplinary executive development program. This degree will be delivered through a combination of a concentrated onsite residency and an offsite delivery method to mid-level managers and executives.

ITI has also been concerned with the need to introduce high school students to intermodal transportation and the career potential. Accordingly, ITI, in cooperation with the Colorado Transportation Community, sponsored a career fair for high school and college students. It also organized and administered three tours in April 2001 at the Higher Education and Advanced Technologies Center in Denver; 65 students from three different high schools participated.

3. Research:

Numerous research projects have been conducted by ITI faculty and students. The following are highlighted to indicate the type of research that ITI has produced:

Metropolitan Planning Organizations: An Assessment of the Transportation Planning Process. This study was commissioned by the U.S. Congress in 1997 to improve the effectiveness of MPOs in meeting regional transportation needs. It examined transportation planning in Denver, Dallas/Ft. Worth, Phoenix and Seattle, focusing on such issues as need satisfaction, project prioritization, fiscal allocation, and equity and fairness of the MPO decisional process. A three-volume report was submitted to the U.S. Congress in March 2000.

Identification of Needed Intermodal Skills and Development of Required Training Programs. This comprehensive study was commissioned by Asia Pacific Economic Cooperation in January 2000. It involved workshops in Long Beach and Singapore, analyses of public and private sector skill requirements for intermodalism, and field research in Australia, Malaysia, and Japan including interviews with government officials, transportation professionals and academics. The final report was approved by the Asia Pacific Economic Cooperation (APEC) organization and published on its website. A summary was published in the *Transportation Law Journal*. On the basis of this work, the team was asked to conduct a workshop on intermodal skills at the APEC Transportation Working Group's meeting in Manila, Philippines, March 2002.

Treatise on Intermodal Passenger Transportation. Generally speaking, there is a limited literature dealing with intermodalism. Although the freight side of intermodalism is covered in a useful volume, there is no similar work dealing with the passenger aspects. Accordingly research is presently underway to produce a volume that will be a useful text for students and a valuable reference for planners, industry executives, and public officials.

Assessing Intermodal Transportation Planning in State Departments of Transportation. Despite the growing concern with the need to create an intermodal system and the explicit legislative mandates contained in the Intermodal Surface Transportation Efficiency Act (ISTEA) and TEA-21 legislation that call for implementing intermodal planning initiatives, we presently have little information as to the degree to which the key agencies, i.e., the state DOTs, have moved in that direction. This project represents a preliminary effort to evaluate the progress that has been achieved in the ten years since ISTEA was enacted.

Intermodal Transportation: Selected Essays. Concerned with the need for educational reference materials dealing with intermodalism, ITI

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faculty and other scholars joined to produce a volume dealing with important aspects of intermodalism including its problems and potentials, historical development, economic significance, and its legal dimensions. It was published by the NCIT as a separate volume in 2001 as well as in a special issue of the *Transportation Law Journal* (Summer 2000).

5. THE NATIONAL CENTER FOR INTERMODAL TRANSPORTATION

TEA-21 created the National Center for Intermodal Transportation (NCIT), a partnership of DU and Mississippi State University (MSU). NCIT is among the youngest and least well funded of the University Transportation Centers (UTCs). Yet, by focusing its modest resources on an exceptionally important issue, we have achieved significant accomplishments in a remarkably short period of time.

Like the ITI, the NCIT's focus on intermodal transportation reflects a primary policy objective of the nation's transportation policy, as articulated by Congress in both the ISTEA of 1991 and the TEA-21 of 1998.²⁵ The objective of both Congress and NCIT is to create a transportation environment that integrates all modes of transportation into a seamless, interconnected system, thereby relieving congestion and environmental pollution, while facilitating the expeditious, efficient, and economical movement of people and goods domestically and globally. If you consider the productivity improvements and the economic opportunities that have been created by the integration of the communications infrastructure via the internet, imagine the implications of integrating the nation's transportation infrastructure. Working closely with ITI and its faculty, the NCIT has funded, at least in part, a wide range of ITI's educational, research and outreach activities.²⁶

5.1 NCIT'S EDUCATIONAL ACTIVITIES

NCIT seeks to establish viable education programs in intermodal transportation that incorporate its multidisciplinary nature, draw upon the resources of each university, utilize distance learning and other mod-

25. ISTEA signaled the beginning of a new era in transportation policy and planning through its explicit use of the word "intermodal" in the title. This usage was intended to "bring the need for intermodalism to the forefront of the nation's transportation and economic debate."

26. For example, in July 2000, NCIT was honored to invite industry and academic leaders to the University of Denver campus to participate in the FHWA vision session on "Transportation in the Year 2025" with USDOT FHWA Administrator Kenneth R. Wykle and FHWA Colorado Division Administrator Jim Daves. FHWA Administrator Wykle was holding "Visioning Sessions for Transportation 2025" in a number of states at the request of USDOT Secretary Rodney E. Slater and invited NCIT to organize a session in Denver. NCIT Director Dempsey chaired the session, which was joined by other DU transportation faculty.

ern technologies, and graduate effective professionals in intermodal transportation.

MASTER OF SCIENCE IN INTERMODAL TRANSPORTATION SYSTEMS

NCIT was instrumental in the development of the interdisciplinary curriculum for the new graduate degree at the University of Denver within the ITI—the Master of Science in Intermodal Transportation Systems. The designation of DU and MSU as a National University Transportation Center in the 1998 TEA-21 legislation brought the anticipation of grant support and provided ITI with the opportunity to accelerate the research and the development of the innovative, intermodal transportation curriculum.

Faculty from the DU Daniels College of Business, College of Law, Department of Geography, College of Education, and Graduate School of International Studies came together to research and to develop nine new courses and to modify six existing courses. Faculty held curriculum workshops with industry leaders and professionals representing both the passenger and freight systems, met in several faculty seminars, and made onsite visits to major transportation hubs. In developing the curriculum, the DU faculty consulted the ITI Board of Directors, comprised of “captains of industry” from all modes of transportation.²⁷ The board provides a “reality check” for many NCIT activities. In addition, a survey assessing the needs in the transportation industry was prepared and administered.

With NCIT support, and working with industry executives and professionals in both freight and passenger transportation, the faculty developed this first-of-its-kind transportation graduate program that promotes a global, seamless intermodal transportation system that is ethical, safe,

27. The ITI Board of Directors is, in effect, a “Who’s Who in Intermodal Transportation.” It is comprised of Senior Chairman Gil Carmichael (Amtrak Reform Council), Chairman Thomas Finkbiner (Quality Distribution), Vice Chairman-Education Clifford Hardt (Federal Express), Vice Chairman-Development Jeff McMorris (JEFFTAM Investments), Vice Chairman-Intermodal Passenger George Warrington (Amtrak), Vice Chairman-Intermodal Freight Ted Prince (Optimization Alternatives Limited, Inc.), Vice Chair Donna Wilson (DU), Samuel Addoms (Frontier Airlines), William Augello (Transportation Consumer Protection Council), Brooks Bentz (Accenture), William Berry (Canadian National Railway), John Betz (National Freight Transportation Library), Joanne Casey (Intermodal Association of North America), Jerry Davis (Retired, Union Pacific Railroad), Edward Hamberger (Association of American Railroad), Thomas Hardin (Hub Group), Dwight Johnson (OmniTRAX), Lawrence Kaufman (Transportation Writer), Peter Keller (NYK Line [North America] Inc.), Jack Lanigan, Sr. (Mi-Jack Products), Craig Lentzsch (Greyhound Group), Alan Lindsey (Burlington Northern Santa Fe Corp.), William Millar (American Public Transportation Association), John Nussrallah (Retired, Trinity Industries), Craig Philip (Ingram Barge Company), Charles Rowland (Retired, Cavanaugh Port Authority), Emilio Roy (Alstom Transporte S.A. de C.V.), Alan Stone (Stone Container Corp.), and George Woodward (Retired, ALK Technologies, Inc.).

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secure, efficient, and environmentally benign. The courses embody a global perspective, emphasize an intermodal orientation, and integrate cutting-edge software technology applications.

ITI EXECUTIVE MASTER'S PROGRAM IN INTERMODAL
TRANSPORTATION MANAGEMENT

NCIT is supporting curriculum development for the ITI Executive Master's Program in Intermodal Transportation Management; this graduate program is a redesign of the DU Master of Science in Intermodal Transportation Systems and will be delivered through a combination of a concentrated onsite residency and an offsite distance-delivery method, such as Blackboard. The new delivery method will accommodate the full-time working professional and will enable major transportation companies to send mid-level managers and executives to the program. The first class is tentatively scheduled to begin the program in Fall, 2002.

NCIT SUPPORT FOR STUDENTS

NCIT has provided various forms of support for students enrolled in transportation programs at DU. NCIT has awarded tuition scholarships to students pursuing the DU Master of Science in Intermodal Transportation Systems degree. A strategic goal of NCIT is to encourage students to participate in conferences related to intermodal transportation studies, and NCIT provided small grant awards to students to support their academic research in intermodal transportation and professional development toward a transportation career. Also, NCIT provided awards for Outstanding Student of the Year to ITI students.

FACULTY PARTICIPATION IN EDUCATIONAL CONFERENCES

ITI and NCIT faculty regularly participate in conferences devoted to transportation education, such as the Transportation Research Board (TRB) Annual Forum on Transportation Education and Training.²⁸ They

28. NCIT faculty organized, chaired, and participated on two sessions at the 79th TRB Annual Meeting in January 2000. DU Associate Professor Andrew R. Goetz and NCIT Director Paul Dempsey participated on a panel on metropolitan transportation planning at which they disseminated the preliminary findings of the three-volume study, "Metropolitan Planning Organizations: An Assessment of the Transportation Planning Process." Former NCIT Director Joseph Szyliowicz organized and chaired a TRB Session on Ethics in Transportation, which was well attended and commended as an area that needs greater attention from TRB.

At the 80th TRB Annual Meeting in January 2001, NCIT Director Paul Dempsey organized a session, "Intermodal Access at US Airports: Planning, Financing, and Policy Impediments". NCIT Director Dempsey moderated the session and the panel of experts included Gilbert E. Carmichael, former FRA Administrator, Chairman of the Amtrak Reform Council, and Senior Chairman of the Board of Directors of the DU Intermodal Transportation Institute; Craig R. Lentzsch, President and CEO of Greyhound Group; and Stephen Van Beek, PhD, Director of

are also active participants in the education panels of the TRB Annual Meetings, and testify before legislative bodies.²⁹ Partly because of their previous work and involvement with intermodal education, Professors (and former ITI and NCIT Director) Joseph Szyliowicz and Patrick Sherry were commissioned by APEC to develop two workshops, one held in Long Beach, California, the other in Singapore, which were attended by public and private-sector transportation professionals who helped define the specific skills that are required for intermodalism. These were supplemented by analyses of transportation professional requirements and field research in Australia, Malaysia, and Japan, involving interviews with government officials, transportation professionals, and academics. The final report was approved by APEC and published on its website. On the basis of this work, the team was asked to hold a workshop on intermodalism at the APEC meeting in Manila, Philippines, in March 2002.³⁰

the USDOT Office of Intermodalism. This session attempted to analyze the financial, planning, institutional, and policy barriers to achieving seamless intermodalism at airports. It examined the role of the FHWA, Federal Transit Administration (FTA), Federal Aviation Administration (FAA), Federal Railroad Administration (FRA), Amtrak, state and local governments, and transit providers in the promotion of seamless transportation. Though ISTEA and TEA-21 mandated a federal policy of promoting seamless intermodalism, relatively little has been done to connect airports with surface modes other than the automobile. Better intermodal access could improve airfield congestion and alleviate the demand for new and expensive highways as well as new airport runways.

29. NCIT Director Paul Stephen Dempsey testified at the following hearings:

“The Social and Economic Consequences of Taxicab Deregulation,” Hearings before the Colorado House of Representatives Transportation Committee, Denver, Colorado;

“Airport Monopolization: Barriers to Entry and Impediments to Competition,” Hearings on the State of Competition in the Airline Industry before the Judiciary Committee of the US House of Representatives, Washington DC; and

“Airport Monopolization and MegacARRIER Predation: Barriers to Entry and Impediments to Competition,” Hearings before the Transportation Committee of the US House of Representatives, Washington DC.

30. In collaboration with the MSU College of Engineering and MSU College of Business and Industry, NCIT was honored to present Gilbert (Gil) E. Carmichael as the first speaker of the NCIT Lecture Series on Intermodal Transportation on 3 November 1999. Carmichael is a leading international authority on railroad and intermodal transportation policy. He served as the US DOT Federal Railroad Administrator in the administration of President George Bush from 1989 to 1993 and is currently Chairman of the Amtrak Reform Council. In the daylong visit to MSU, Carmichael met with students, faculty, and administrators to discuss intermodal transportation in North America. More than 60 attended the afternoon lecture and heard Carmichael’s views on how the national economy of the 21st century will greatly depend on an efficient and reliable intermodal transportation infrastructure.

NCIT was also honored to present George A. Gates as the second speaker of the NCIT Lecture Series on Intermodal Transportation on 28 November 2000. Gates is director of the Supply Chain Group at Transentric. In a two-day visit at MSU, Gates met with students, faculty, and administrators to discuss intermodal transportation in North America. More than 45 attended his lectures and learned how he is using simulation to model transportation systems to help his clients save millions in transportation costs.

5.2 NCIT OUTREACH ACTIVITIES

NCIT SEEKS TO ENHANCE THE PUBLIC'S AWARENESS, UNDERSTANDING, AND APPRECIATION OF INTERMODALISM AND ITS ROLE IN THE MODERN WORLD, INCLUDING CAREER OPPORTUNITIES IN THE FIELD.

NCIT joins key transportation organizations as one of the major sponsors of the ITI Second North American Intermodal Transportation Summit. U.S. DOT Secretary Norman Y. Mineta, Canadian Minister of Transport David M. Collenette, and Mexican Secretary of Communications and Transportation Pedro Cerisola y Weber as well as a number of prominent government and industry leaders accepted the invitation to participate in the summit at the University of Denver on 18 and 19 October 2001. Unfortunately, the tragic events of 11 September made it necessary to reschedule the summit until Spring, 2003. Such meetings with North American transportation leaders are far more important with the implementation of the North American Free Trade Agreement (NAFTA), and NCIT is proud to assist ITI and participate in hosting these events. NAFTA has been a significant stimulant for the transport sector, and NCIT is dedicated to facilitating the seamless flow of goods and people across borders.

NCIT WORKSHOP ON THE "IMPACT OF AN ECONOMIC SLOWDOWN ON THE TRANSPORTATION INDUSTRY"

NCIT cosponsored a luncheon and workshop for the Colorado transportation community on 16 May 2001 in celebration of National Transportation Week.³¹ The workshop included NCIT faculty and industry leaders.³²

In collaboration with ITI and the DU Environment Institute, NCIT hosted Daniel Klein at an April 2001 brown-bag seminar on "Fencing the Airshed: Using Remote Sensing to Police Auto Emissions." Daniel Klein has worked on urban transit, toll roads, and auto emissions as an associate professor of economics at Santa Clara University. He co-authored *Curb Rights: A Foundation for Free Enterprise in Urban Transit*, which proposes the privatization of bus stops and curb zones to create a property-rights foundation for free-enterprise transit. Klein's emphasis on property rights is seen also in his work on auto emissions. He argues that, by using remote-sensing technologies developed by DU Professor of Chemistry Donald Stedman and others, the airshed can be safeguarded as a form of public property.

31. Nearly 70 transportation and logistics professionals, students, and faculty attended the four-hour event. NCIT hosted the event with four transportation organizations: The American Society of Transportation and Logistics, Delta Nu Alpha Transportation Fraternity, the Denver Transportation Club, and the Council of Logistics Management. These transportation organizations awarded their annual scholarships and recognized outstanding individuals for service in the transportation community.

32. The workshop, "Impact of an Economic Slowdown on the Transportation Industry," was moderated by Carol Johnson, PhD, Assistant Professor in the DU Daniels College of Business; panelists included Samuel Addoms, President and CEO of Frontier Airlines, Inc.; Larry Kaufman, transportation writer and former rail industry executive; Stephanie McMahon, man-

TRANSPORTATION SYSTEMS CONFERENCE

NCIT joined several transportation industry companies as a sponsor of the ITI/CATS Transportation Systems Conference on 20-21 June 2001. Speakers included academic, industry, and governmental leaders, including representatives of the U.S. DOT.³³

NCIT WORKSHOPS AND CAREER EXPOSITIONS

In collaboration with the Colorado transportation community, NCIT has sponsored career fairs for high school and college students attended by nearly 200 students as well as many adults.³⁴ Students representing seven area high schools and community colleges attended the first career fair. Following the NCIT Career Exposition, more than 60 members of the transportation community attended a NCIT luncheon³⁵ and subsequent workshop³⁶ that addressed the issues of ethics in the transportation

ager of product development of BAX Global; Natalie Mullis, economist with the Colorado Legislative Council; and Bill Weide, division sales manager with Consolidated Freightways.

33. Moderated by NCIT Director Paul Dempsey, speakers included: NCIT Director Dempsey; Joseph S. Szyliowicz (Founder of ITI, former Director of NCIT, Professor in the DU Graduate School of International Studies); Andrew R. Goetz (Associate Professor, DU Department of Geography); Donald Stedman (Professor, DU Department of Chemistry); Wang Yutian (Engineer, Soft Science Research Division, China Academy of Transportation Sciences (CATS), Ministry of Communications (MOC); Yang Hongyi (Deputy Director, CATS, specializing in research on transport policy, transport management system reform, and ship design); Zhou Xiaohang (Director and Associate Research Professor, CATS Soft Science Research Division, focusing on naval architecture and offshore engineering research); Pan Fengming (Engineer and Junior Research Fellow, CATS, focusing on statistical information analysis and management information systems); Xu Ping (Deputy Director and Associate Research Professor, CATS Soft Science Research Division); Ashish K. Sen, PhD (Director, U.S. DOT Bureau of Transportation Statistics (BTS), responsible for data collection programs to promote the effective use of transportation resources; Heinz (Ted) Krohn (Director, International Policy Staff of the U.S. DOT FRA, specializing in management analysis and information technology); Douglas Bennett (Assistant Division Administrator, Colorado Division, U.S. DOT FHWA); Richard M. Biter (Acting Associate Deputy Secretary, U.S. DOT Office of Intermodalism, serves as co-chair of the Intermodal Freight Technology Working Group, and participates on the intermodal panels of the OECD and the APEC); Steven R. Ditmeyer (Director, U.S. DOT FRA Office of Research and Development); and Maria P. Boilé, PhD (Assistant Professor, Civil and Environmental Engineering Department, Rutgers University).

34. Twenty-six exhibitors, including FHWA and the Colorado Department of Transportation and many common carriers and community colleges, participated.

35. Former Colorado Governor Richard "Dick" D. Lamm challenged the audience during the luncheon with his speech on "Every Driver in a Traffic Jam Pleads Not Guilty." Lamm is the Director of the DU Center for Public Policy and Contemporary Issues.

36. The ethics workshop was moderated by John Betz (Betz and Associates, transport development coordinator for TRANSFORM (Transportation for the Relief of Mankind), member of the ITI Board of Directors, and Vice President of the National Freight Transportation Library, Inc.). Panelists included Andrew R. Goetz, PhD (Associate Professor, DU Department of Geography), Jenyce W. Houg-Brown (President and owner of Houg Enterprises, Inc.), Michelle M. Meyer (Program Manager, IBM's World Wide Distribution Group), Nick Nguyen

workplace.

Cooperating again with the Colorado transportation community, NCIT organized and presented a workshop on the intermodal supply chain at Colorado's 19th annual transportation forum, Operation Stimulus: Challenging Your Link in the Supply Chain Process.³⁷ This is one of several conferences in which NCIT has participated.³⁸ NCIT also provides a number of educational programs for students not yet enrolled in college.³⁹

(Automation and Release Manager, American President Line), Gary D. Nichols (Director of Dedicated Fleet Services for Contract Freighters, Inc.), Patrick Sherry, PhD (DU Associate Professor of Counseling Psychology), Clifford D. Smith (Senior Vice President, DLT Transportation Services, Inc.) and Chet Whitehouse (Manager of rail and intermodal transportation of Tate & Lyle North American Sugars, Inc., Western Sugar and Domino Sugar Divisions).

37. With NCIT Director Paul Dempsey as moderator, speakers included Brian K. Avery (Vice President-Rail Relations, Hub Group), Edward M. Emmett (President and COO, The National Industrial Transportation League), George G. Baima (Vice President, Central States Trucking Company), and Joseph P. Sievert (Vice President, Quality Terminal Services, LLC). Attendance at Operation Stimulus is usually between 400 and 500 and consists of the full range of transportation and logistics professionals and up to 75 students from universities across the Americas as well as outstanding Colorado high school students who are interested in logistics and transportation for careers.

Of particular note is that the team of students from the new DU Master of Science in Intermodal Transportation Systems program participated in the Operation Stimulus college debate and won the 2000 Jerry R. Foster Annual Collegiate Logistics Competition, which was awarded to the University of Colorado at Boulder the previous two years. Also at this conference, the Colorado transportation community honored NCIT Director Paul Dempsey and ITI Founder and former NCIT Director Joseph Szyliowicz as "Educators of the Year" for their work in advancing transportation education in the region.

38. On 27 August 2001, NCIT participated in a teleconference on "North American Freight Transportation Issues and Trends: A Midcontinent Perspective," organized by the Upper Great Plains Transportation Institute, with papers presented by the professors of the several participating universities. Papers were presented on "Free Trade But Not Free Transport: The Mexican Standoff," by NCIT Director Paul Dempsey, "Economics of Congestion at a Border Gateway: The Case of Laredo," by Barry Prentice (University of Manitoba Transportation Institute), "Criteria and Design of a Model Border Crossing," by Bill Stockton (Southwest University Transportation Center at Texas A&M University), "Barbarians at the Gate? The Issue of Mexican Truck Safety and the NAFTA," by Rob Harrison (University of Texas and Southwest University Transportation Center), "Ensuring the Safety of North American Motor Carrier Operations," by Brenda Lantz, (Upper Great Plains Transportation Institute at North Dakota State University), and "Canadian-US Rail Freight Flows Since NAFTA," by Denver Tolliver (Upper Great Plains Transportation Institute at North Dakota State University).

39. Lynda Siegel, NCIT Outreach Coordinator, organized and administered three tours in April 2001 at the Higher Education and Advanced Technologies (HEAT) Center at Lowry in Denver, Colorado, for high-school students to enhance awareness of technology in transportation and of career opportunities in the transportation field. While touring the Manufacturing Academy at the HEAT Center, students were exposed to many of the skills required in the manufacturing process. It was impressed upon the students that a complex combination of trucks, trains, planes, and ships working together—intermodal transportation—brings together all of the materials necessary for the manufacturing process and provides the logistics of shipping a finished product to the customer. Sixty-five students from three different high schools participated.

NCIT OUTREACH STEERING COMMITTEE

NCIT invited leaders in transportation from the public and the private sectors to participate on an NCIT Outreach Steering Committee to plan and implement programs and activities to facilitate the discussion of intermodal transportation issues and to enhance the general awareness of K-12 students of the business of intermodal transportation and the career opportunities in the transportation profession.⁴⁰

5.3 NCIT RESEARCH ACTIVITIES

NCIT has sponsored basic and applied research that addresses a variety of key intermodal transportation issues, making a substantial contribution to the body of knowledge and assisting both industry and government. NCIT also instituted a systematic process for engaging the academic community, transportation industry experts, and governmental officials in the evaluation and review of the merits of proposals requesting NCIT funding to conduct research to enhance the intermodal passen-

40. Among the participants are the Regional Transportation District (Denver area transit agency), Denver International Airport, the AAR Transportation Technology Center, Inc., Federal Transit Administration, Fed Ex, Denver Regional Council of Governments (Denver area MPO), Jefferson County Public School District, Pueblo High School, Navajo Express, IBM, Colorado Division FHWA, Colorado Department of Transportation, Burlington Northern and Santa Fe Railway, Smith Railway Consulting, and the Colorado representative of the Garrett A. Morgan Program.

The committee organized the following NCIT activities:

17 October 2001: NCIT booth at DU Career Fair on campus.

31 January-1 February 2002: Transportation training workshop for secondary education teachers at Denver's Adams Mark Hotel. NCIT booth during "Operation Stimulus" transportation conference at the Adams Mark Hotel.

25 February 2002: NCIT booth at the State DECA Conference in Colorado Springs. The booth was staffed with transportation industry professionals discussing with students intermodal transportation and the career opportunities in the transportation field.

24 April 2002: "Colorado Intermodal Day" at Union Terminal Station. The display included such items as locomotives, container flat cars, containers, trailers, RTD's light rail equipment, track riding equipment, an Air Force flight simulator, APL's Boomerang Box, and much more. This event was open to the public free of charge. School districts were encouraged to participate.

8 May 2002: "Intermodal Champion Day" at Starkville Mississippi Elementary Public School System. The activities include a skit designed to introduce elementary students and teachers to intermodal transportation, illustrating how true champions work together for improved transportation.

14 May 2002: National Transportation Week luncheon/workshop at the DU Phipps Mansion.

Secondary Education Tours: For teachers interested in transportation and distribution, tours were scheduled for the Heat Center at Lowery, Coors Brewing Company, FedEx, and DIA.

Internship Opportunity: in collaboration with the Colorado Transportation and Logistics Community, NCIT seeks to support an internship position with CDOT/TREX or RTD.

Transportation Opportunities Information Brochure: The NCIT Outreach Steering Committee is exploring the possibility of printing a brochure identifying the job and internship opportunities in transportation and providing resources and contact information, for general distribution.

ger and freight system.⁴¹

A number of projects have been approved by the NCIT research selection process and are underway,⁴² and several more have been com-

41. An NCIT Research Advisory Committee was established that currently includes the following members:

Mr. Gilbert E. Carmichael

Senior Chairman, ITI Board of Directors, and Chairman, Amtrak Reform Council

Mr. Marlin D. Collier, Jr.

Director, Mississippi Department of Transportation Office of Intermodal Planning

Mr. Tom Norton

Executive Director, Colorado Department of Transportation

Dr. G. Don Taylor

Professor of Industrial Engineering, University of Louisville, Kentucky

Dr. Stephen D. Van Beek

Senior Vice President, Airports Council International-North America

Mr. William M. Wood

Transportation Specialist, USDOT Office of Intermodalism

42. **“Treatise on Intermodal Passenger Transportation.”** Principal Investigators: Paul S. Dempsey, DCL, DU; Royce O. Bowden, Jr., PhD, MSU. This project will produce a book on intermodal passenger transportation with chapters on law and policy, finance, planning, design, safety and security, marketing and management, and best practices. Though a book has been published on *Intermodal Freight Transportation* by the ENO Foundation and the Intermodal Association of North America (IANA), there has never before been a book published on intermodal passenger transportation. Hence, the book will be an invaluable reference for planners, industry executives, government officials, and a useful text for students.

“Assessing Intermodal Transportation Planning at State Departments of Transportation.” Principal Investigators: Andrew R. Goetz, PhD, DU; G. Stephen Taylor, PhD, MSU; Joseph S. Szyliowicz, PhD, DU; Patrick Sherry, PhD, DU; Paul S. Dempsey, DCL, DU; Timothy M. Vowles, PhD, DU. This project represents a preliminary effort to evaluate the progress that state Departments of Transportation (state DOTs) have achieved in implementing intermodal planning initiatives called for in the ISTEA and TEA-21 legislation. ISTEA introduced several innovations into transportation planning practices including: increasing flexibility for state and local governments to redirect highway funds to accommodate other modes and modal connections, directly linking transportation planning with air quality planning, enhancing the role of metropolitan planning organizations in regional transportation planning, broadening the goals for transportation planning, and increasing the number and variety of stakeholders that should be involved in the transportation planning process. ISTEA also called for state DOTs to adopt an intermodal approach to transportation planning, as reflected by their long-range and short-range plans, their resource allocations, and the characteristics of their planning processes. This project represents a first step in identifying best practices among state DOTs in implementing intermodal initiatives.

The importance of examining the progress that state DOTs have made in implementing intermodal planning initiatives became apparent during the process of conducting the earlier ITI study on Metropolitan Planning Organizations (MPOs). NCIT faculty members were principal investigators in the congressionally mandated study of MPOs. The study, completed in March 2000, produced a three-volume work, “Metropolitan Planning Organizations: An Assessment of the Transportation Planning Process,” that evaluated the transportation planning process in seven, large, fast-growing metropolitan areas. The MPOs studied were in the Charlotte, Denver, Dallas/Fort Worth, Miami, Phoenix, Seattle, and Tampa urbanized areas. The study was written by NCIT Director Paul Dempsey and DU faculty members Andrew Goetz, PhD, and Carl Larson, PhD. It was submitted to Congress. This study is publicly available at <http://www.du.edu/>

pleted.⁴³ NCIT faculty have been actively promoting and teaching intermodalism at their institutions and across the nation by writing and

transportation/MPO/index.html and http://www.ie.msstate.edu/ncit/NCIT_WEB_UPDATE/MPO.htm.

“Intermodal Freight Transportation Planning Using Commodity Flow Data.” Principal Investigators: Yunlong Zhang, PhD, PE, MSU; Royce O. Bowden, Jr., PhD, MSU; Albert J Allen, PhD, MSU. There are pressing needs to research and develop systematic intermodal freight transportation planning procedures and methodologies to model freight flows on transportation networks, to identify and prioritize transportation improvement needs, to meet the federal requirements such as TEA-21, and to enhance the competitiveness of the economy at all levels. This project aims at developing intermodal freight transportation planning procedures and methodologies and will have two main focus areas: (1) Intermodal Freight Demand Forecasting Using Commodity Flow Data; and (2) Simulation of the Intermodal Network.

“Individual Fatigue Countermeasures in Intermodal Passenger Transportation.” Principal Investigator: Patrick Sherry, PhD, DU. The project will test the application of feedback and knowledge of results, both key principles of behavior change established in many other studies of individual behavior change, as the essential ingredients of an individualized fatigue management program, using Actigraph technology, to a population of vehicle operators in the intermodal industry.

“Planning for Intermodal Facilities and Infrastructure Changes to Enhance Traffic Flows in the Mississippi Gulf Coast Area.” Principal Investigators: Warren Couvillon, PhD, Albert Allen, PhD, and David Parrish, MSU. This project will provide policy makers on the Gulf Coast information on potential locations of intermodal facilities. It will use a combination of remote sensing data and information gathered from visits to intermodal facilities to determine spatial needs for different sizes and functions of intermodal yards. Spatially oriented software packages will be used to identify the pros and cons of alternative sites.

“Cost of Ownership Modeling for Support Equipment at Intermodal Transportation Terminals.” Principal Investigators: C. Richard Cassady, PhD, University of Arkansas, and Stephen A. LeMay, PhD, MSU. MPOs depend on many types of support equipment to operate intermodal freight and/or passenger terminals. Through an industrial survey and a literature review, the authors intend to explore the types of support equipment used in intermodal terminals and the reliability and maintainability (R&M) characteristics of such equipment to develop an equipment retirement decision support tool.

This tool would use an economic model of the cost of ownership for an equipment fleet in determining an appropriate retirement age for units within the fleet.

Ongoing Research Projects

“Improving the Operation of Overnight Intermodal Cargo Terminals Using Simulation and Optimization.” Principal Investigator: Royce Bowden, Jr., PhD, MSU.

“Chicago Cross Town Management [XTMS].” Principal Investigators: Andrew R. Goetz, PhD, DU; Yunlong Zhang, PhD, MSU; and Theodore Prince, Transgistics LLC.

43. *Completed Research Projects*

“The Law of Intermodal Transportation: What It Was, What It Is, What It Should Be.” Principal Investigator: Paul Dempsey, DCL, DU. Published in the *Transportation Law Journal*, 27:3 (Summer 2000). Reprinted in NCIT *Intermodal Transportation: Selected Essays* (2001).

“Developing a Standard Definition for Intermodal Transportation.” Principal Investigators: C. Richard Cassady, PhD, and Royce Bowden, PhD, MSU. Published in the *Transportation Law Journal*, 27:3 (Summer 2000). Reprinted in NCIT *Intermodal Transportation: Selected Essays* (2001).

“Progress in Intermodal Passenger Transportation: Private Sector Initiatives.” Principal Investigators: Andrew R. Goetz, PhD, and Timothy M. Vowles, PhD, DU. Published in the *Transportation Law Journal*, 27:3 (Summer 2000). Reprinted in NCIT *Intermodal Transportation: Selected Essays* (2001).

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presenting papers and designing new courses. As an example, the NCIT organized and sponsored a special peer-reviewed “Symposium on Intermodal Transportation,” published in the *Transportation Law Journal* 27:3 (Summer 2000) issue and comprised of a comprehensive array of scholarly articles by distinguished academics from a variety of universities (including DU and MSU).⁴⁴

NCIT is funded at the lowest level of any UTC. Therefore, NCIT engages in entrepreneurial efforts to encourage and solicit actively outside funding or in-kind contributions to perform research beyond that which would be possible on its U.S. DOT grants and local match—to further the NCIT research agenda and mission. The fact that DU and MSU was designated a UTC focused on intermodal transportation has helped create outside funding commitments beyond that provided by U.S. DOT.⁴⁵

“Tracking and Positioning Software: A Market Need, Value, and Cost Analysis.” Principal Investigators: Stephen A. LeMay, PhD, and C. Richard Cassady, PhD, MSU.

“The Use of Intermodal Information Technologies by Intermodal Ports and Terminals Serving Agriculture in Mississippi.” Principal Investigators: Albert J. Allen, PhD, and Warren C. Couvillion, PhD, MSU.

“Technical Performance of Mississippi’s Industrial Gulf Ports.” Principal Investigators: Warren C. Couvillion, PhD, and Albert J. Allen, PhD, MSU. The findings and conclusions for each of the aforementioned studies can be found at <http://www.ie.msstate.edu/ncit/RESEARCH.html>

44. The more than 200-page symposium issue was coordinated by former NCIT Director Joseph S. Szyliowicz under an NCIT grant and includes the following articles:

“Symposium on Intermodal Transportation,” by Joseph S. Szyliowicz, PhD, and Paul Stephen Dempsey, DCL;

“Intermodalism: The Challenge and the Promise,” by Joseph S. Szyliowicz, PhD;

“Intermodal Transportation in Historical Perspective,” by Arthur Donovan, PhD;

“Developing a Standard Definition of Intermodal Transportation,” by W. Brad Jones, C. Richard Cassady, PhD, and Royce O. Bowden, Jr., PhD;

“Modeling Intermodal Transportation Systems: Establishing a Common Language,” by D. Wesley Graham, PhD, C. Richard Cassady, PhD, Royce O. Bowden, Jr., PhD, and Stephen A. LeMay, PhD;

“The Law of Intermodal Transportation: What It Was, What It Is, What It Should Be,” by Paul Stephen Dempsey, DCL;

“Intermodal Education in Comparative Perspective,” by Jonathan B.L.K. Jervell III, Anthony Perl, PhD, Patrick Sherry, PhD, and Joseph S. Szyliowicz, PhD;

“Measuring Economic Benefits of Intermodal Transportation,” by Yuri V. Yevdokomov, PhD;

“New York Regional Intermodal Freight Transportation Planning: Institutional Challenges,” by José Holguín-Veras, PhD, and Robert E. Paaswell, PhD;

“Progress in Intermodal Passenger Transportation: Private Sector Initiatives,” by Andrew R. Goetz, PhD, and Timothy M. Vowles, PhD.

45. Examples include the following:

NCIT Director Dempsey received a major grant from the Transit Cooperative Research Program (TCRP) in Fall 2000 for the production of a treatise on transit law. The book is to be completed in 2002 and the project is well underway. It includes chapters on governmental institutions, transportation planning, environmental law, transit funding and finance, procurement, ethics, safety, operational requirements, labor law, civil rights, and carrier liability. Though there is an established treatise addressing highways (*Selected Studies on*

NCIT faculty disseminated their research and facilitated the exchange of ideas through their presentations at numerous conferences,⁴⁶

Highway Law), there is no such book on transit law. The fact that Professor Dempsey is its sole author will give NCIT enhanced visibility among transit providers and transit lawyers nationwide.

NCIT Deputy Director Bowden and Richard Cassidy received a grant from the Delta and Pine Land Company (D&PL) to research and develop methodologies for optimizing a portion of D&PL's transportation and distribution system. With the help of NCIT researchers, D&PL's focus on its transportation and distribution processes resulted in significant financial savings and a fourteen percent reduction in its finished goods move ratio.

Former NCIT Director Joseph Szyliowicz received an NCIT grant to solicit articles from distinguished academics for the NCIT Symposium on Intermodal Transportation (described below), published by the *Transportation Law Journal*. This resulted in significant in-kind contributions of research by faculty beyond the UTC funding assistance:

"Intermodal Transportation in Historical Perspective," by Arthur Donovan, PhD;

"Measuring Economic Benefits of Intermodal Transportation," by Yuri V. Yevdokomov, PhD;

"New York Regional Intermodal Freight Transportation Planning: Institutional Challenges," by José Holguín-Veras, PhD, and Robert E. Paaswell, PhD; and

"Intermodalism: The Challenge and the Promise," by Joseph S. Szyliowicz, PhD.

NCIT entrepreneurial efforts continue as NCIT Education Coordinator Yunlong Zhang recently submitted a proposal to the National Cooperative Highway Research Program seeking to extend the methodologies that NCIT is currently developing, in collaboration with the Mississippi DOT, for forecasting statewide intermodal freight movements.

NCIT has initiated several programs that provided the opportunity for the exchange of ideas, for the discussion of research findings, for the dissemination of transportation education information, and for publicizing careers and jobs in the transportation profession. In addition, NCIT created and continues to develop and improve its website, which is located at <http://www.ie.msstate.edu/ncit>.

46. Allen, Albert J., PhD, presented the paper "The Use of Intermodal Information Technologies by Intermodal Ports and Terminals Serving Agricultural and Food Product Firms in Mississippi" at the Food Distribution Research Society Annual Meeting in Roanoke, Virginia, 15-18 October 2000.

Allen, Albert J., PhD, Warren C. Couvillion, PhD, Scot Avis, and David Parrish presented the paper "An Analysis of the Use, Adoption, and Benefits of Global Position Systems (GPS) by Agriculture Trucking Firms in Mississippi" at the 58th Annual Professional Agricultural Workers Conference (PAWC), Tuskegee University, Tuskegee, Alabama, 3-5 December 2000.

Allen, Albert J., PhD, Warren C. Couvillion, PhD, Fen Qui, and Rong Huang presented the paper "Changes in the Impact of NAFTA on Transborder Ports in the United States: A Surface Modal Share Analysis," at the Southwestern Economics Association Meeting held in Fort Worth, Texas, 14-18 March 2001.

Allen, Albert J., PhD, Warren C. Couvillion, PhD, Fen Qui, and Rong Huang presented the paper "Modal Competition in the Mississippi International Trade Market with Canada and Mexico: A Post-NAFTA Analysis," at the Southwestern Economics Association Meeting held in Fort Worth, Texas, 14-18 March 2001.

Dempsey, Paul Stephen, DCL, Andrew R. Goetz, PhD, and Carl Larson, PhD, presented a paper on "Transportation Planning in the Denver and Comparable Sunbelt Metropolitan Planning Organizations," at the Denver Regional Council of Governments, Denver, Colorado.

Dempsey, Paul Stephen, DCL, presented the following papers:

"Intermodal Transport Law," NCIT Conference on Technology, Innovation, and Law, Denver, Colorado;

and scholarly publications.⁴⁷

5.4 CONCLUSION

NCIT is a national center, devoted to addressing and solving some of the most critical transportation issues that face the nation. Facilitating intermodal transportation became a national priority in ISTEA and TEA-21 and offers promising solutions to congestion and pollution, while facilitating productivity and national economic growth.

NCIT has demonstrated that interdisciplinary collaboration between diverse faculties at two universities can be rewarding, stimulating, productive, and highly successful.

"Free Trade But Not Free Transport? The Mexican Stand Off," at the University of Denver Conference on NAFTA—Unresolved Issues, Dispute Resolution, Environment, Labor and Transportation, Denver, Colorado;

"The National Center for Intermodal Transportation," First Annual FHWA Transportation/Academic Research Forum, Washington DC;

"The Perils, Problems, and the Benefits of New Entrants," American Bar Association Forum on Air and Space Law Annual Meeting, Dallas, Texas.

Goetz, Andrew R., PhD, presented the following papers:

"Deregulation, Competition, and Antitrust Issues in the US Airline Industry," the Annual Douglas K. Fleming Lecture in Transportation Geography, Annual Meeting of the Association of American Geographers, New York. It is published in the *Journal of Transport Geography* in Volume 7, March 2002;

"Metropolitan Planning Organizations: Findings and Recommendations to Improve Transportation Planning," Annual Meeting of the Association of American Geographers; (co-authored with DU Professors Dempsey and Larson, the paper is published in *Publius: The Journal of Federalism*, 2002).

LeMay, Stephen A., PhD, presented the following papers:

"Developing Transportation Personnel," Mississippi Transportation Conference;

"Controlling Turnover and Developing Drivers," J.J. Keller's Driver Retention Summit, Chicago, Illinois.

Zhang, Yunlong, PhD, presented the following papers:

"Control Delay in CORSIM," Transportation Research Board Annual Meeting, Washington DC;

"Modeling Intersection Control Delay," Proceedings of the ITS Conference, 2000.

47. Brady, T.F., and Royce O. Bowden, PhD. "The Effectiveness of Generic Optimization Modules in Computer Simulations Languages." *Proceedings of the Tenth Annual Industrial Engineering Research Conference* (2000) CD-ROM.

Dempsey, Paul Stephen, DCL:

Airport Landing Slots: Barriers to Entry and Impediments to Competition, 16 AIR & SPACE LAW 20-48 (2001);

Trade & Transport Policy in Inclement Skies: The Conflict between Sustainable Air Transportation and Neo-Classical Economics, 65 J. OF AIR LAW & COM. 639-93 (2000);

"Predation in the Air: Competition and Antitrust Law in Commercial Aviation." *International Deregulation and Privatization*, edited by Christian Campbell, 123-89. (Transnational, 2000).

Owen, L.E., Yunlong Zhang, L. Rao, and Gene McHale. "Traffic Flow Simulation Using CORSIM." *Proceedings of the 2000 Winter Simulation Conference* (2000): 1143-47.

Zhang, Yunlong, PhD. "Color Night Vision for Navigation and Surveillance." *Transportation Research Records*, No. 1708.

NCIT has completed an impressive array of research and educational activities in the field of intermodal transportation, in a manner consonant with the goals of the UTC, RSPA, and national policy.

NCIT has completed all of the activities discussed in a little more than two grant years and at the lowest funding levels of any UTC.

NCIT, though embryonic, is highly motivated and energetic and has devised an agenda going forward that builds upon the solid foundation laid.

6. THE UNIVERSITY OF DENVER'S EFFORTS TO PROVIDE LEADERSHIP
IN MAKING NATIONAL AND REGIONAL CONTRIBUTIONS TO
THE SOLUTION OF IMMEDIATE AND LONG-TERM
TRANSPORTATION PROBLEMS

In all of its transportation programs, the University of Denver is committed to making substantive contributions in helping to solve current and future transportation problems. Both ITI and NCIT are concerned specifically with the assessment, planning, and design of the nation's intermodal transportation system with a focus on improving the safety for both passengers and freight. ITI and NCIT seek to identify ways to better utilize the strengths of the individual modes and to integrate them into a seamless transportation system. The fundamental objective of intermodalism is not to optimize a single mode of transportation but to integrate the modes into an optimal, sustainable, and ethical system. Such a system should promote efficiency, safety, mobility, economic growth and trade, national security, protection of the natural environment, and enhancement of human welfare. The tragic events of 11 September 2001 put these objectives in crisper perspective, for they revealed that the transportation security umbrella is porous, that the nation is excessively reliant on a single mode of transportation for intercity travel, and that multimodal and intermodal alternatives are poor or nonexistent. As a consequence, the nation has suffered undue economic harm.

ITI and NCIT focus on the most important transportation issues facing this generation. As a fundamental component of the infrastructure upon which economic growth is built—the veins and arteries of commerce, communications, and national defense—a healthy transportation system serving the public's needs for ubiquitous service at reasonable prices is vitally important to the region and the nation it serves. An expeditious, efficient, and economical transportation network, seamlessly integrated into an intermodal system, will facilitate the public's need for mobility and will advance economic productivity and growth. Conversely, a deteriorating and disconnected transportation infrastructure

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will produce sluggishness in national productivity and retard economic growth.

Land use, congestion, and pollution have become chronic problems in many areas of the United States. By integrating the separate transportation modes into a seamless, unified intermodal network, transportation can not only meet the economic and mobility needs of the society, but it can also alleviate the problems of pollution, congestion, safety, and energy consumption. ITI and NCIT have focused on identifying the strengths and weaknesses of each mode, on developing the means to minimize negative impacts and maximize strengths, and on establishing an efficient and integrated transportation system that is consonant with the goal of sustainable development. To take advantage of the inherent advantages of alternative modes of transportation, each must be available to users, and each should be seamlessly connected to one another.

Congress has declared that among the transportation policies of the United States is “to encourage and promote development of a national intermodal transportation system . . . to move people and goods in an energy-efficient manner, provide the foundation for improved productivity growth, strengthen the Nation’s ability to compete in the global economy, and obtain the optimum yield from the Nation’s transportation resources.”⁴⁸ Congress created the U.S. DOT to “make easier the development and improvement of coordinated transportation service”⁴⁹ In ISTEA, Congress set forth a detailed national policy to establish a National Intermodal Transportation System “that is economically efficient and environmentally sound, provides the foundation for the United States to compete in the global economy, and will move individuals and property in an energy efficient way.”⁵⁰

48. 49 U.S.C. § 302 (e) (2000). Congress has decreed that, “A national intermodal transportation system is a coordinated, flexible network of diverse but complimentary forms of transportation that transports passengers and property in the most efficient manner. By reducing transportation costs, these intermodal systems will enhance the ability of the industry of the United States to compete in the global marketplace.” 49 U.S.C. § 47101(b)(3) (2000). Further, Congress has recognized that, “An intermodal transportation system consists of transportation hubs that connect different forms of appropriate transportation and provides users with the most efficient means of transportation and with access to commercial centers, business locations, population centers, and the vast rural areas of the United States, as well as providing links to other forms of transportation and intercity connections.” 49 U.S.C. § 47101(b)(5) (2000). Congress also has decided that the US “must make a national commitment to rebuild its infrastructure through development of a national intermodal transportation system.” 49 U.S.C. § 47171(b)(8) (2000).

49. 49 U.S.C. § 101(b)(2) (2000). The Secretary of Transportation is required to coordinate federal policy on intermodal transportation, and promote creation and maintenance of an efficient U.S. intermodal transportation system. 49 U.S.C. § 301(3) (2000). The Secretary is also obliged to consult with the heads of other federal agencies to establish policies “consistent with maintaining a coordinated transportation system” 49 U.S.C. § 301(7) (2000).

50. 49 U.S.C. § 5501(a) (2000). The National Intermodal Transportation System shall:

ISTEA required that the state and the MPO planning process include consideration of facilitating intermodal transportation.⁵¹ TEA-21⁵² reaffirms and retains the planning provisions and MPO structure of ISTEA, with its emphasis on federal-state-local cooperation and public participation, though significant changes were made in funding levels. TEA-21 replaced ISTEA's fifteen factors to be considered in TIP preparation with seven, one of which is to "Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight."⁵³ Moreover, long before it became fashionable, ITI and NCIT were focused on creating a *safe, secure, and ethical* intermodal transportation system. Creating alternative modal choices will ensure that the nation does not suffer the catastrophic consequences of reliance on a single mode for intercity transportation, revealed by the shutdown of the commercial aviation industry after the tragic World Trade Center attack on 11 September.

This is the agenda to which ITI and NCIT are dedicated. As described above, leadership in this area is reflected in the following:

Establishing additional transportation degree options and supporting the curriculum development of the first graduate degree in intermodal transportation sciences in the world;

"consist of all forms of transportation in a unified, interconnected manner . . . to reduce energy consumption and air pollution while promoting economic development and supporting the United States' preeminent position in international commerce";

include the Interstate Highway System and the principal arterial roads;

include public transportation;

provide improved access to seaports and airports;

give special emphasis to the role of transportation in increasing productivity growth;

give "increased attention to the concepts of innovation, competition, energy efficiency, productivity, growth and accountability";

be adapted to new technologies wherever feasible and economical, giving special emphasis to safety considerations; and

be the centerpiece of a national investment commitment to create new national wealth.

49 U.S.C. § 5501(b)(8) (2000). All U.S. DOT employees are required to be given a copy of the National Intermodal Transportation System Policy, and it is required to be posted prominently in all offices of the U.S. DOT. 49 U.S.C. § 5501(c) (2000).

51. Intermodal Surface Transportation Efficiency Act of 1991, Conference Report, H.R. No. 102-404, 102nd Cong., (Nov. 27, 1991) [emphasis supplied].

52. Pub. L. No. 105-178.

53. MPOs are required to develop transportation systems and facilities "that will function as an intermodal transportation system for the metropolitan area and as an integral part of the intermodal transportation system for the state and the United States." 23 U.S.C. § 134(a)(3); 49 U.S.C. § 5303(a)(2) (2000). State plans and programs must do the same. 23 U.S.C. § 135(a)(3) (2000). The states' long-range 20-year transportation plan must provide for the development and implementation of the intermodal transportation system of the state. 23 U.S.C. § 135 (2000). The Secretary of Transportation shall make grants to the states to develop model state intermodal transportation plans, which shall include systems for collecting data related to intermodal transportation. 49 U.S.C. § 5504(a) (2000).

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Sponsoring, supporting, and leading panels at national and regional conferences on intermodal transportation issues;

Leading DU to recruit transportation/logistics faculty;

Introducing K-12 students to the concept of intermodal transportation at an early age;

Conducting research and facilitating numerous publications on intermodal transportation; and

Using previous successes to acquire funding from additional sources to expand the ITI/NCIT agenda.

7. CONCLUSION

Transportation will continue to be a critical element of our local, regional, national, and international economy. The University of Denver finds itself uniquely and favorably positioned to contribute to a greater understanding of this vital activity.

A great university dedicates its physical, human and intellectual resources to serving its community, providing information, education and reasoned policy analysis. We are committed to making such a contribution. We have the opportunity to make a significant contribution to education in one of the world's most important industries. We do so with enthusiasm and dedication.

Well before the tragic events of 11 September 2001, highlighted the need for a new kind of transportation system, the University of Denver was working actively to help sow the seeds for such a system not only in the United States but throughout the world. The significance of a system that better utilizes the individual modes and integrates them into a seamless intermodal system cannot be underestimated. It would not only contribute to the resolution of the many chronic problems—land use, congestion, pollution, lack of choice, more costly logistic services, dependence on foreign oil, an aging population, and safety—but also provide a healthy infrastructure for the growth of regional and national economies as well as international trade. The University of Denver remains committed to the achievement of such a vision. Future generations deserve no less.

