

Urban Transportation Center Annual Report 2001-2002

Preamble

Some of the highlights include:

- Hosting a one-day symposium on Urban Sprawl: Transportation and Housing in October 2001.
- Initiated the process to seek sustained funding for a University Transportation Center.
- Recipient of a record number of student awards!!!
- Alumni reception at TRB.
- Development of an extensive student orientation over a period of several weeks.
- Continuation of an Urban Transportation Center (UTC) seminar series that involved speakers from academia, industry and government, as well as student speakers.
- New furniture!
- Redesign and updating the webpage.

This report documents the activities of the center including identifying affiliated faculty, staff, and research assistants, involvement in education, research achievements, activities, self-evaluation of successes and shortfalls for 2001-2002, and development of goals for 2002-2003.

Affiliated Faculty and Staff

Faculty associated with the center:

David Boyce, Professor of Transportation and Regional Science
Kazuya Kawamura, Assistant Professor of Urban Planning and Policy
Peter Nelson, Professor of Computer Science
Anthony Pagano, Associate Professor of Management
Michael Shiffer, Associate Professor of Urban Planning and Policy (on leave Sept 2002)
Vonu Thakuriah, Associate Professor of Urban Planning and Policy

Faculty employed by the center:

Joseph DiJohn, Research Professor, Urban Planning and Policy and Director of METSI
Jung-Taek Lee, Research Assistant Professor of Urban Planning and Public Affairs
Sue McNeil, Director and Professor of Urban Planning and Public Affairs
Paul Metaxatos, Research Assistant Professor of Urban Planning and Public Affairs
Siim Sööt, Research Professor, Geography (emeritus)
P.S. Sriraj, Research Assistant Professor, Urban Planning and Public Affairs

Associates/Visiting Faculty/ Adjunct Faculty:

Steve Schlickman

Post Doctoral Research Associate:

Duck-Hye Yang

Visiting Scholar:

Paisit Herabat

Support Staff:

Karin Allen, Visiting Research Program Transportation Manager
Silvia Becerra, Program Coordinator (began December, 2001)
Gabrielle Brown, Visiting Program Coordinator (began May, 2002)
Rosalva Diaz, Program Coordinator (left October, 2001)
Lise Dirks, Research Transportation Specialist
James Kelly, Assistant Director for Research Programs
Shamus Misek, Visiting Research Program Transportation Manager
George Yanos, Research Programmer

In addition, 34 graduate research assistants and undergraduate students are affiliated with the center as shown in Table 1. These students come from CUPPA, CBA and Engineering.

Education

Center faculty and staff participated in undergraduate and graduate education. They taught core, specialization and elective courses in the Urban Planning Program. One course was cross-listed with Civil and Materials Engineering and an engineering course was taught by one of the research faculty.

Table 2 documents courses taught in the Fall 2001 semester and Table 3 documents courses taught in the Spring 2002 semester. Several research faculty also guest lectured in various courses offered by other UTC and CUPPA faculty.

This year we developed a six-week-long orientation course for our students. The course met on Friday mornings. The schedule is shown in Figure 1. The orientation was well-received and we followed up with a mini-orientation in January.

A record number of students received local and national awards this year. These students are listed in Appendix A. We are very proud of all our students who participated in competitions or made the extra effort to write papers, and made presentations and posters for local and national meetings.

Appendix B lists the graduates affiliated with the center and students advised by affiliated faculty.

Table 1: UTC Supported Students

| Student | Degree | Expected Graduation | Student | Degree | Expected Graduation |
|-------------------------------------|------------|---------------------|--------------------------------------|------------|---------------------|
| Graduate Research Assistants | | | | | |
| Monica Akins | MUPP | May-03 | Saulath Sakina | MUPP | Dec-01 |
| Ying Bao | MS (Civil) | Dec-03 | Anusha Seetharaman | MUPP | May-02 |
| Cecelia Blue | MBA | May-02 | Sudeshna Sen | MUPP | May-03 |
| Don Costello | MUPP | Dec-01 | Hyeon Shic Shin | Ph.D. | May-04 |
| David Fronzak | MUPP | May-03 | Avinash Sinha | MUPP | May-03 |
| Arzmella Hammond | MUPP | Dec-03 | Athreya Sreenivasan | MS(Civil) | Dec-00 |
| Eric Holeman | MUPP | Aug-02 | Vikram Vuppala | MS (ECE) | May-01 |
| David Kralik | MUPP | Dec-02 | Qian (Cherry) Xiong | MS (Civil) | Dec-01 |
| Yihua Liao | MUPP | Dec-02 | Audrey Witteman | MUPP | Dec-03 |
| Shruti Mahajan | MUPP | Dec-03 | Haidong Zhu | MUPP | May-03 |
| Fahim Mohamed | MUPP | Aug-02 | Hourly graduate students | | |
| Victor Mora | MBA | Aug-02 | Krishna Movva | MS (Civil) | Aug-02 |
| Sanya Niumpradit | Ph.D. | May-04 | Srikanth Yellanki | MS | Aug-02 |
| Juan Ortega | Ph.D. | May-03 | Hourly undergraduate students | | |
| Shaumik Pal | MUPP | May-03 | Alicia Morreale | Business | Dec-01 |
| Norma Peña-Rivera | Ph.D. | May-05 | Kate Stanis | Business | |
| Eve Pytel | MUPP | Aug-02 | Rajmonda Sulo | Math | Dec-02 |
| Aravind Rajasekharan | MBA | Dec-02 | Bao-Chuan Wu | ECE | May-02 |

Table 2. Courses Taught Fall 2001

| Course Number | Course Name | Instructor |
|-------------------|---|------------------|
| UPP 561 | Urban Transportation II: Policy and Methods | Vonu Thakuriah |
| UPP 562 | Urban Transportation III: Laboratory | Kazuya Kawamura |
| UPP 565 | Transportation Project Finance | Steve Schlickman |
| UPP 584 | Methods of Policy Analysis | Kazuya Kawamura |
| UPP 594 | Brownfield Development | Sue McNeil |
| UPP 594/ CEMM 594 | Infrastructure Management | Sue McNeil |

Table 3. Courses Taught Spring 2002

| Course Number | Course Name | Instructor |
|---------------|--|-----------------|
| UPP 403 | Urban Planning | Sue McNeil |
| UPP 503 | Data Analysis | Kazuya Kawamura |
| UPP 513 | Data Analysis for Planning and Management II | Vonu Thakuriah |
| UPP 560 | Urban Transportation I: Introduction | Kazuya Kawamura |
| UPP 563 | Transportation Management | Joseph DiJohn |
| CEMM 594 | Traffic Operations | Jung-Taek Lee |

Figure 1. UTC Graduate Student Orientation

Friday, August 17 – UPP Orientation for New Students

Friday, August 24 – UTC Orientation for ALL Students – Great Cities

Conference Room – 418

10:00 a.m. – Welcome and introductions

Faculty, staff and student

10:15 a.m. – Housekeeping – getting paid, making phone calls, security etc.

Rosalva Diaz and Jim Kelly

10:30 a.m. – What is UTC?

What does it mean to be a UTC RA? - Sue McNeil

10:45 a.m. – Transportation, Chicago, and UTC - Eve Pytel and Eric

Holeman

2:00 p.m. – UTC Picnic (Location and directions to be announced during the orientation. Transportation provided, be prepared to go off campus! We will get you back to campus by 5pm).

Friday, August 31 – 10a.m. – Noon – Overview of Computing – George Yanos

– Great Cities Conference Room - 418

Friday September 7 – 9a.m. – Noon – Computing Continued – George Yanos,

An Introduction to Computer Tools Available in UTC –Lise

Dirks

- Room 262

Friday September 14 – 9am – Noon — Skills

(Introduction to ArcView, and Data Analysis) – Lise Dirks

- Room 262

Friday September 21 – 9am – Noon — Skills continued – Lise Dirks

– Great Cities Conference Room - 418

Friday September 28 – 10am – Noon – Data Sources – Paul Metaxatos,

Modeling Tools – Jung Taek Lee

- Room 262

Friday October 5 – 10am – Noon – Overview of Projects – Faculty and Staff

– Great Cities Conference Room - 418

Friday October 12 – 10am – Noon – Overview of Projects – Faculty and Staff

– Great Cities Conference Room - 418

Friday October 19 – 8am – 5pm - Urban Sprawl Symposium – Hyatt University

Village

Research Achievements

Outstanding Contributions

The Urban Transportation Center (UTC) has been working with the Illinois Department of Human Services (IDHS), since October 2000, to provide technical assistance to transportation projects receiving Temporary Assistance to Needy Families (TANF) funding as part of the Job Access and Reverse Commute (JARC) grant awarded to UTC by the Federal Transit Administration (FTA). UTC has provided assistance with funding and sustainability, demand evaluation, efficiency of operations, and other related issues for more than twenty IDHS grantees within the Chicago area and downstate.

In addition, UTC is using its JARC matching funds to develop a statewide JARC application and review process in cooperation with and for the Illinois Department of Transportation (IDOT). Recently released FTA JARC Grant Program regulations/guidelines require state DOTs to institute a formal process. Under the new JARC regulations state DOTs will play a larger administrative related role in application and review process as well as dispersion of JARC provided grant awards.

UTC is also using its match to develop a database of state agency transportation funding outside of the Chicago area, including IDOT and IDHS-funded projects. Data on IDOT and Health and Human Services grantees providing transportation services is to be housed in one database in an effort to facilitate coordination of services and funding. Currently IDOT's Department of Public Transportation (DPT) is considering adopting this product as its in-house database of DPT funding activities.

New Grants and Contracts During 2001-2002

Table 4 shows new grants and contracts awarded during 2001-2002. Continuing grants and contracts are shown in Table 5.

Proposals Submitted

Proposals submitted are shown in Table 6.

Table 4. New Grants and Contracts During 2001-2002

| Principal Investigator | Title | Source | Dates | Amount Requested |
|--|---|--|--------------------------------------|-------------------------|
| Vonu Thakuriah | JARC | FTA | May 11, 2000-May 31, 2002 | \$1,000,000 |
| Joe DiJohn | Discipline Project | IDOT | September 15, 2000-June 30, 2002 | \$40,981 |
| Sue McNeil | Knowledge Discovery | National Science Foundation, Subcontract from Carnegie Mellon University | February 1, 2001 to January 31, 2004 | \$41,275 |
| Sue McNeil and Joe DiJohn | Metropolitan Transportation Support Initiative (METSI) | Illinois Department of Transportation | July 1, 2001 to June 30, 2002 | \$500,000 |
| Sue McNeil and P.S. Sriraj | Evaluation of Near-Transportation Private Sector Asset Management Practices | Midwest Regional University Transportation Center | July 1, 2001 to March 31, 2002 | \$57,808.97 |
| Tony Pagano and Sue McNeil | Best Practices For Linking Strategic Planning To Resource Allocation And Implementation Decisions Using Elements Of A Transportation Asset Management Program | Midwest Regional University Transportation Center | March 2002 – April 2003 | \$75,000 |
| Sue McNeil, Farhad Ansari, and Ming Wang | Evaluation of Bridge Inspection and Assessment in Illinois | Illinois Transportation Research Center | August 21, 2001 - August 20, 2003 | \$180,000 |
| Sue McNeil | Maintenance and Management of Transit Infrastructure | Great Cities University consortium/ University of Alabama at Birmingham | TBD – Duration- 12 months | \$10,000 |
| Joseph DiJohn | Regional Transportation Information Clearinghouse | Regional Transit Authority | July 1,2001 – June 30, 2003 | \$586,610 |
| Kazuya Kawamura and Jung Taek Lee | Analysis of HOV Bypass and Ramp Metering | CATS | July 1, 2001, June 30, 2003 | \$80,000 |
| Kazuya Kawamura | Partnerships for Innovation | National Science Foundation, Subcontract from Northwestern | May 1, 2002-April 30, 2005 | \$10,000 |
| Shamus Misek | Commuter Station Vans | METRA | January 1, 2002-December 31, 2002 | \$10,000 |

Table 5. Continuing Grants and Contracts

| Date Awarded | Principal Investigator | Title | Funding Agency | Amount |
|---------------------|---|---|---|---|
| 9/19/00 | Piyushmita Thakuriah | Development, Testing and Evaluation of Intelligent Database for Motor Carriers | US DOT | \$80,924 |
| 10/01/00 | Joe DiJohn | Job Access Reverse Commute – IDHS | Illinois Department of Human Services | \$300,000 |
| 1/1/00 | Sue McNeil (previously Mike Shiffer) | Making the Chicago Transit Authority more Competitive in the 21 st Century | CTA (18 months) Subcontract to Massachusetts Institute of Technology. | \$141,418, January 1, 2001 – June 30, 2002. |
| 2/01/00 | Joe DiJohn | ITS Technical Assistance | RTA | \$147,000 |
| | Tony Pagano and Paul Metaxatos | Strategic Plan Commuter Aided Scheduling and Dispatch | IDOT-DPT | \$66,601 October, 2000 – June, 2002 |
| | Tony Pagano and Paul Metaxatos | Intercity Bus Strategic Plan | IDOT-DPT | \$71,713 October, 2000 – June, 2002 |
| | Paul Metaxatos, P. S. Sriraj, and Siim Sööt | Grade Crossing Ban | CATS | |

UTC Activities

Conferences and Workshops

- Planned and hosted Urban Sprawl Symposium – Chicago, October 2001
- Planned and hosted Sustainable Transportation Workshop – Chicago, November 2001
- Participation in and planning of 4th International Workshop on Asset Management – Madison, Wisconsin, October, 2001
- Hosting and planning of Freight Planning Workshop – Chicago, April 2002 (Sponsored by MRUTC)
- Participation in IDOT Fall Planning Conference – Springfield, October 2001
- Participation in Transportation Research Board Annual Meeting by faculty, staff and students – Washington DC, January 2002

Presentation of papers at various conferences and workshops

- North American Pavement Management Conference – Seattle, August 2001
- Big Ten University Transportation and Parking Conference -- Chicago, April 2002

- Urban Affairs Association Annual Meeting – March 2002
- North American Tunneling (NAT) 2002 – Seattle, May 2002

Outreach

- Continuation (identification of speakers, planning and advertisement) of UTC seminar series.
Speakers are listed in Figure 2
- Publication of two issues (Dec 2001 and May 2002) of *UTC Connector*
- Redesign of the UTC website

Planning and Evaluation

- Review of reports for 2001 IBHE 8 Year Review of the Center
- Hosted an advisory board meeting
- Continued interaction with Faculty Advisory Committee (FAC)

Publications

UTC faculty completed a variety of reports, peer reviewed journal papers and papers for conference proceedings. Papers and reports are listed in Appendix C and D.

Service

UTC faculty were active participants in University and College committees. In addition, they served on professional committees and local committees:

- Business Leaders in Transportation Freight Planning Committee
- Chicago Area Transportation Study - Intermodal Freight Task Force
- Chicago Area Transportation Study - Private Providers Committee
- Chicago Area Transportation Study, Chicago -Technical Procedures Task Force
- Metropolitan Planning Council - Transportation Committee
- Northeastern Illinois Planning Commission - Forecast Technical Advisory Committee
- Metropolitan Transportation Association – Executive Director
- Community Mobility Task Force
- Greater North Michigan Avenue Association Transportation Committee
- Chicago Area Transportation Modeling Users Group, Chair, monthly meeting

Nationally

Faculty served on committees, review panels, editorial boards and advisory panels including:

- Board on Infrastructure and the Constructed Environment
- National Transit Institute
- National Cooperative Highway Research Council panels
- Transit Cooperative Research Program panels
- Transportation Research Board Committee on Truck Size and Weight Regulation
- American Association of State Highway and Transportation Officials Task Force
- Advisory committees to Federal Transit Administration and the Bureau of Transportation Statistics

- Association for Commuter Transportation
- Council, Regional Science Association International
- Transportation Research Board Committee - Transportation Networks
- TRB Committee A1B06 - Surface Freight Transport Regulation
- TRB Committee A5001– Conduct of Research
- TRB Committee A3A19 – Vehicle-Highway Automation
- TRB Asset Management Task Force
- Editorial Board, *Transportation Research C: Emerging Technologies*
- Associate Editor, *Journal of Infrastructure Systems* ASCE
- Editorial Advisory Board, *Transport Policy*
- Editorial Board, *International Journal of Transport Management*
- Editorial Advisory Board, *Transportation Science*, INFORMS
- Editorial Advisory Board, *Transportation Research*, Elsevier
- Editor, *Transportation and Location Book Series*, Springer-Verlag

Table 6. Proposals Submitted (TO BE COMPLETED)

| Status/ Principal Investigator | Title | Source | Dates | Amount Applied For |
|--|---|---|---|-------------------------------|
| Approved, Contract pending Sue McNeil/ Joe DiJohn | Metropolitan Transportation Support Initiative (METSU) | Illinois Department of Transportation | July 1, 2002 to June 30, 2004 | \$500,000/year |
| Declined/ PS Sriraj and Sue McNeil | Asset Management in the Transit Industry: A Synthesis and Evaluation | Midwest Regional University Transportation Center | 12 months | \$67,690 |
| Declined/ Sue McNeil and PS Sriraj | Synthesis of Best Practices for Development of an Integrated Data and Information Management Approach | Midwest Regional University Transportation Center | 12 months | \$97,223 |
| Declined / P.S. Sriraj and Jung Taek Lee | Developing Best Practices fro Bicycle Trail Construction in Illinois | Illinois Transportation Research Center | 12 months | \$100,000 |
| Approved, Contract pending Tony Pagano/ Paul Metaxatos | Rural Public Transportation Brokerage Research Projects | Illinois Transportation Research Center | August 1, 2002 to January 31, 2004 | \$150,000 |

| Status/ Principal Investigator | Title | Source | Dates | Amount Applied For |
|--|--|--|--------------|-------------------------------|
| Declined/ Kazuya Kawamura | Utility Based Accessibility Measures and Evaluation of Equity in Transportation | NSF CAREER | | \$318,115 |
| Declined/ Vonu Thakuria and Yugo Buy | An Integrated Labor Market and Transportation Model | NSF Partnerships for Innovation | | \$600,000 |
| Declined/ Joseph DiJohn, Kazuya Kawamura, and Jung-Taek Lee | Training Program Entitled Intelligent Transportation Systems for Transit: Solving Real Problems | The National Transit Institute | TBD | TBD |
| Declined / Sue McNeil, Joseph DiJohn, and P.S. Sriraj | Training Program Entitled Systematic Approach to Adopting New Technologies | The National Transit Institute | TBD | TBD |
| Declined / Joseph DiJohn and Siim Sööt | Training Program Entitled Reinventing Transit: Planning Information-Based Transit Services | The National Transit Institute | TBD | TBD |
| Declined / Anthony Pagano Paul Metaxatos and Joseph DiJohn | Training Program Entitled Transit Performance Evaluation: Using Information Based Strategies. | The National Transit Institute | TBD | TBD |
| Pending/ Sue McNeil | Scenario Assessment for the Development of Brownfields vs. Greenfields | National Science Foundation with Carnegie Mellon University | 3 years | \$75,000 |
| Pending/ Sue McNeil | Campus Transportation Plan for the University of Illinois At Chicago | Congestion Mitigation and Air Quality, US DOT | 12 months | \$100,000 |
| Pending/ Sue McNeil | Outer Circumferential | City of Joliet (subcontract to URS) | 18 months | TBD |

| Status/ Principal Investigator | Title | Source | Dates | Amount Applied For |
|---|--------------------------|--|--------------|-------------------------------|
| Pending/ Siim Sööt and Joe DiJohn | Outer Circumferential | City of Joliet (subcontract to Friedman) | 18 months | TBD |

Figure 2. UTC Seminar Speakers for 2001-2002

October 26, 2001, Advanced microscopic traffic modeling: recent developments, Mithilesh Jha, JE Sverdrup.

November 2, 2001, Route Structure of Chicago Regional Network: Comparison between User Optimal Solution and System Optimal Solution, Qiong Xiong, Urban Transportation Center.

November 2, 2001, Historical Context of Environmental Justice, Eve Pytel, Urban Transportation Center.

November 9, 2001, Analyses of the Impact of the Reduced Vertical Separation Minimum (RVSM) Implementation on Airport System Infrastructures with basic runway configurations, Paisit Herabat, Urban Transportation Center.

November 30, 2001, Visualization in Transportation, Arnab Chakraborty, Beth Donahue, Graham Garfield, Adam Rogers, Ramki Srinivasan and Crystal Wilson, Great Cities Urban Data Visualization Laboratory.

December 7, 2001, Chicagoland Speedway Traffic Impact Analysis and Public Transportation Assessment, Don Costello (Kostelec), Urban Transportation Center.

January 26, 2002, Pedaling a Healthier Tomorrow: Implementing Successful Bicycle and Pedestrian Projects, Denise Lea, Urban Planning.

February 8, 2002, Advanced Decision Support Tools in Airline Industry, Amit Mukherjee, United Airlines.

February 22, 2002, A Compendium of Suburban Land Use and Transportation Information: The Chicago Metropolitan Area: 1850-2000, Joseph P. Schwieterman, DePaul University.

March 29, 2002, The design and implementation of Chicago's On-Street Bike Lane Network, Nick Jackson, Director of Planning, Chicagoland Bicycle Federation.

April 19th, 2002, Participatory GIS Theory and Practice: Implications for Transportation Planning and Research, Laxmi Ramasubramanian, Great Cities Urban Data Visualization Laboratory.

April 26, 2002, Robert Gallamore, Will the Midwest Passenger Rail Initiative Share Amtrak's Fate? Northwestern University.

Self-Evaluation

The most important goals for 2000-2001 were to implement the strategic plan and the Illinois Board of Higher Education (IBHE) review recommendations. Additionally, we set administrative goals. The goals are listed followed by a self-evaluation that is included in italics.

Administration

Several administrative goals were identified for 2001-2002. These goals were intended to help us better plan and manage the center, and to facilitate recruitment of high quality graduate students.

1. Fill administrative vacancies.

Throughout most of this year the center has not been fully staffed administratively. We recently hired a Program Coordinator after a year-long search process that involved multiple artificial hurdles created by HR.

2. Develop a proactive budget process that enables us to track the assignment of personnel to projects and project budget commitments.

A great deal of administrative effort was expended on developing yet another response to the state's budget crisis. While our state dollars are critical to the functioning of the center they represent about 10% of our total budget. The need to justify and account for changes of the order of \$2000-\$5000 on a weekly basis provided a distraction from meaningful and significant budget activities.

3. Understand and follow university policies.

IRB practices and policies continue to be a problem for researchers, administrators, and students. Waiting on approvals holds up projects, and creates problems for research sponsors.

We managed not to get OIS mad at least not that we know of.

4. Formalize the informal committee structure in UTC (computing/space, publications, working paper series, FAC, advisory board and others) and introduce processes for easy documentation of center activities.

Internal committees have functioned as needed. The FAC and Advisory Board met regularly.

Internal committees and documentation continue to need work.

5. In conjunction with UPP staff, develop procedures for communicating graduate admissions and support decisions between UPP and UTC.

Seems to be working better. Nonetheless, some issues related to the Ph.D. program are still unresolved.

6. Explore interests in transportation in other parts of the university e.g. public health.

Some initial discussions with the Institute for Environment have occurred. One proposal was submitted with Public Health and UTC has a joint project with External Education. We also worked with Civil Engineering, the university administration and the Green Campus Council to submit the CMAQ proposal. We have initiated an effort to strengthen these relationships through a series of roundtable discussions that will be begin next year.

7. Conduct one-on-one meetings with advisory board members and other constituents.

This is an ongoing process.

8. Revise the faculty and staff development process within UTC.

We worked with the college to institute procedures for promotion of research faculty. The faculty and staff development process still needs work. We plan to develop forms tailored to the organizational structure of UTC and include a more formal mid-year review in the process.

Research

1. Work towards establishing a national transportation research center at UIC.

A request has been submitted to the Congressional Subcommittee on Transportation of the House Appropriations Committee for a University Transportation Center. We will follow this up for continued funding as part of the November 2003 reauthorization of the surface transportation bill.

2. Promote our research capabilities in freight planning and asset management and obtain research support.

We have continued to be visible in both areas and have received modest funding through NorthWestern and the University of Wisconsin Madison. CATS has directly requested funding in freight planning through the unified work program.

Education

1. Develop the Ph.D. program including attracting and recruiting first-rate students.

We have been active participants in this process with little success. We need to develop a focused effort to recruit transportation students. We still need to add promotional materials to our website and promote the programs in the UTC Connector.

2. Review and revise the transportation curriculum in urban planning.

Done. We have reordered the transportation sequence so that entering students can take the first course in the sequence immediately. Additionally we have requested the elimination of courses that have not been taught for many years. We have added a new course on infrastructure management, and we have developed a strategy for delivering Ph.D. courses by leveraging existing resources.

3. Create a formalized internship program for students drawing on the resources of our advisory board.

We have been working on this process. The student resume book and creating a list of contacts were great first steps, however they are not enough. We need to develop contacts within human resources in each of the organizations.

4. Explore opportunities to offer continuing education, short courses and professional development to local transportation executives and mid-level managers.

We submitted an unsuccessful proposal to the National Transit Institute. We have been exploring opportunities with local agencies and plan to formalize something next year.

Promoting the Center

1. Enhance the website.

This process has begun but must be continued. The Great Cities Urban Data Visualization Students redesigned the website. A UTC Program Coordinator is now maintaining the site.

2. Develop one-page descriptions for all active research projects.

Done – needs updating.

Organizational

1. Develop a career track for research faculty.

Done.

2. Restructure administrative positions to match administrative needs of the center.

Done.

3. Reconfigure existing space to make more efficient use of open areas.

Done.

4. Seek additional space in close proximity to existing space.

Done – but not satisfactory.

Recommendations from the IBHE report

The recommendations from the IBHE report are detailed in Appendix E. Major points from both the external and internal review and responses are summarized below:

1. Both groups felt that a balance must be achieved between applied/technical assistance/contract research and basic/fundamental research.

We have attempted to address this issue by more proactively programming METSI funds and matching projects and strategically using our resources from ICR.

2. Career paths of tenure-track and research faculty must be clarified.

College by-laws have been modified to define opportunities for promotion of research faculty. Development and mentoring of junior faculty still needs work.

3. Non-UTC transportation faculty must be reached out to: create advisory committee of deans.

We have a functioning faculty advisory committee. In this year of budget crises deans outside CUPPA are too preoccupied to focus on UTC.

4. Emphasis on new additions to handle volume of work: new, tenured-level faculty and a post-doc program.

We have not been able to institute any formal efforts.

5. Teaching and research programs must be enhanced not only by drawing upon UTC's unique niche as an urban transportation center, concentrating on urban planning and operations for transit and freight as well as social equity type issues, but also by making programs much more interdisciplinary than they currently are.

This issue continues to need work.

6. Space and furniture are ghastly; we deserve better.

With support for the dean and provost, we have new furniture. We also have temporary access to non-contiguous space on the 3rd floor of CUPPA hall. We must continue to lobby for contiguous space.

Goals for 2002-2003

Continues from 2001-2002

1. Develop a proactive budget process that enables us to track the assignment of personnel to projects and project budget commitments.
2. Formalize the informal committee structure in UTC (computing/space, publications, working paper series, FAC, advisory board and others) and introduce processes for easy documentation of center activities.
3. Explore interests in transportation in other parts of the university e.g. public health.
4. Conduct one-on-one meetings with advisory board members and other constituents.
5. Revise the faculty and staff development process within UTC.
6. Create a formalized internship program for students drawing on the resources of our advisory board.

7. Explore opportunities to offer continuing education, short courses and professional development to local transportation executives and mid-level managers.

New Goals

1. Promote UTC locally, nationally and internationally.
2. Recruit graduate students particularly Ph.D. students.
3. Better integrate UTC into the college, and university.
4. Strengthen our relationship with the College of Engineering.
5. Continue to seek long term stable support for the center through funding from the University Transportation Centers program and matching money from local agencies.
6. Develop a case for recruiting additional faculty. Ideally there would be two faculty members in transportation, one in civil engineering, and one in urban planning. One of the faculty in engineering would be at the senior level to serve as an associate director of the center for engineering.

APPENDIX A. Honors and Awards

Students

Anusha Seetharaman - WTS Scholarship, Best Student Projects of the Year (UPP)

Juan Ortega - Eno Transportation Fellowship

Eve Pytel - Chancellor's Student Service Award

Sanya Niumpradit – MCPTR Student Paper Award

Norma Peña-Rivera - Krambles Transportation Scholarship

David Kralik - Second place prize in the APA Transportation Division graduate student paper competition

Faculty

David Boyce became a Fellow of the Regional Science Association International (Inaugural Group), February 2002.

APPENDIX B. Recent Graduates

| Name | Degree | Date | Thesis or project title | Advisor | Employment |
|---------------------|---------------|----------------|---|----------------|-----------------------------------|
| Bennett, Patrick | MUPP | August, 2001 | Feasibility Study for a Proposed Regional Parking Garage at Kimball Avenue and Addison Street in Chicago, Illinois | Kawamura | CTA, Chicago |
| Conlon, Morgan | MUPP | August, 2001 | Accessibility of Child Care for Low-Income Job Seekers in the Chicagoland Region | Thakuriah | CTA, Chicago |
| Gao, Feng | MUPP | August, 2001 | Development and Testing of an Intelligent Transportation System for the University of Illinois at Chicago's Intercampus Shuttle Bus | Thakuriah | |
| Costello, Donald | | December, 2001 | Chicagoland Speedway Traffic Impact Analysis and Public Transportation Assessment | Kawamura | Idaho |
| Sakina, Salauth | MUPP | December, 2001 | Electronic Database for Human Services Transportation Projects | Thakuriah | Washington DC |
| Xiong, Qian | MS | December, 2001 | Comparison of User-Optimal and System-Optimal Traffic Assignments for the Chicago Regional Road Network | David Boyce | TJKM, Pleasanton, CA |
| Seetharaman, Anusha | MUPP | May, 2002 | Assessment of the Economic Impact of Freight Policy: A Study of the Chicago Six County Region | Kawamura | |
| Pytel, Eve | MUPP | August, 2002 | Policy Implications of Trip Definition | McNeil | Transystems Corporation (Chicago) |

APPENDIX C. Papers

TRB Annual Meeting

“Analyses of Impact of Reduced Vertical Separation Minima on Airport System Infrastructure” (02-2776), Paisit Herabat, Carnegie-Mellon University and Sue McNeil, University of Illinois, Chicago

“Analytical Models of Dynamic Traffic Assignment Problem (02-3381)”, David E. Boyce, University of Illinois, Chicago, Der-Horng Lee, National University of Singapore, Bin Ran, University of Wisconsin, Madison

“Combined Model for Time-Dependent Trip Distribution and Traffic Assignment” (02-2986) Yue Li, University of Florida, Athanasios Ziliaskopoulos, Northwestern University, and David E. Boyce, University of Illinois, Chicago

“Data Quality Evaluation of Integrated Data Repository on Motor Carrier Safety” (02-3960) Piyushimita Thakuriah, University of Illinois, Chicago, Jung Taek Lee, University of Illinois, Chicago, and Sanya Niumpradit, University of Illinois at Chicago

“Data Requirements for Truck Project Impact Evaluation” (02-3588) Kazuya Kawamura, University of Illinois, Chicago, and Anusha Seetharaman, Urban Transportation Center

“Impact of Computer-Assisted Scheduling and Dispatching Systems on Paratransit Service Quality” (02-2442), Anthony M. Pagano, University of Illinois, Chicago, Paul Metaxatos, University of Illinois, Chicago and Mark King, Urban Transportation Center

“Public-Private Partnership in Regional Freight Planning: Implications for the Future” (02-3344), Hyeon-Shic Shin, University of Illinois, Chicago, and Kazuya Kawamura, University of Illinois, Chicago

Transportation Research Record

Cowe Falls, Lynne, Ralph Haas, Sue McNeil and Susan Tighe, “Asset Management and Pavement Management: Using Common Elements to Maximize Overall Benefits,” *Transportation Research Record 1769*, 2001.

Kawamura, Kazuya, "Empirical Examination of the Relationship between Firm Location and Transportation Facilities," *Transportation Research Record 1747*, Transportation Research Board, Washington, D.C., [2001]

McNeil, Sue and Anthony Kadlec, “Applying the Government Accounting Standards Board Statement 34: Lessons from the Field,” *Transportation Research Record 1747*, 2001.

Pagano, Anthony M, Metaxatos, Paul, and Mark King, “How Effective Is Computer-Assisted Scheduling and Dispatching in Paratransit? Results from a Survey.” National Research Council, Transportation Research Board, *Transportation Research Record 1760*, pp 100-106.

Other:

Buchheit, Rebecca, James Garrett, Sue McNeil, and Margaret Chalkline, "Automated Procedures for Improving the Accuracy of Sensor Based Monitoring Data," Paper to Appear in the Proceedings of the ASCE Conference on Applications of Advanced Technology in Transportation, Cambridge, August, 2002.

Lange, Deborah, Sue McNeil and Chris Hendrickson, "The Brownfields Center: An Interdisciplinary Center that Links Academia, Practitioners, and the Community," Proceedings AEESP/AEEE Education and Research Conference, University of Toronto, August 10-14, 2002.

Lee, Jung-Taek. *Crash Data Based Freeway Incident Response Time Model*. Applications of Advanced Technology in Transportation 2002, Cambridge, Massachusetts, August 5-7, 2002.

Lee, Jung-Taek, *Modeling Freeway Incident Response Time*. The 9th World Congress on Intelligent Transport Systems, Chicago, Illinois, October 14-18, 2002.

Lee, Jung-Taek and Vonu Thakuriah. *An Evaluation of Alternative Signal Control Strategies*. The 9th World Congress on Intelligent Transport Systems, Chicago, Illinois, October 14-18, 2002.

McNeil, Sue, "Tools to Support Management System Integration for Asset Management," Fifth International Conference on Managing Pavements, Seattle, WA, August, 2001.

McNeil, Sue, David Duggins, Christophe Mertz, Arne Suppé, and Chuck Thorpe, "A Performance Specification for Transit Bus Side Collision Warning System" The 9th World Congress on Intelligent Transport Systems, Chicago, Illinois, October 14-18, 2002.

Pagano, Anthony M. "Factors and Trends Affecting the Parcel Delivery Industry" Journal of the Transportation Research Forum, Vol. 40, No 3. Summer, 2001, pp 123-132.

Pagano, Anthony, Metaxatos, Paul and King, Mark, "Computer Assisted Scheduling and Dispatching Systems in Paratransit for the Elderly and Disabled: Impact on Operations and Quality of Service." TRANSED 2001 Conference Proceedings, July, 2001, pp. 377-386.

Pagano, Anthony M. "The Effects of E-Commerce on the Parcel Delivery Industry," Proceedings of the Transportation Research Forum, 2001, October 2001.

Pagano, Anthony M. "Factors and Trends Affecting the Parcel Delivery Industry" Journal of the Transportation Research Forum, Vol. 40, No 3. Summer, 2001, pp 123-132.

Pagano, Anthony, Metaxatos, Paul and King, Mark, "Computer Assisted Scheduling and Dispatching Systems in Paratransit for the Elderly and Disabled: Impact on Operations and Quality of Service." TRANSED 2001 Conference Proceedings, July, 2001, pp. 377-386.

Pagano, Anthony M. "The Effects of E-Commerce on the Parcel Delivery Industry," Proceedings of the Transportation Research Forum, 2001, October, 2001.

Pytel, Eve, "Entitlement to Public Transportation: An examination of the events that lead to the provision of public transportation in the United States," Urban Affairs Association, Boston, March 2002.

Sunkpho, Jirapon, James Garrett and Sue McNeil, "A Framework for Field Inspection Support Systems Applied to Bridge Inspection," Paper to Appear in the Proceedings of the ASCE Conference on Applications of Advanced Technology in Transportation, Cambridge, August 2002.

Thankuriah, Vonu, Jung-Taek Lee, and Sanya Niumpradit. *Motor Carrier Safety Databases: Strategies for Developing Linkages, Assessing Completeness and Making Imputations*. 2002 International Large Truck and Bus Safety Research and Policy Symposium, Knoxville, Tennessee, April 3-5, 2002

MCPTR June 2002

"Innovative Market Strategy to Capture the Former Welfare Recipient," Arzmella Hammond, University of Illinois at Chicago

"Evaluation of the Transit Check Program," Monica Akins, University of Illinois at Chicago

"HOV Lanes and Transit in Chicago," Eric Holeman, University of Illinois at Chicago

"Economic Benefits of Demand Increase in Trucking Industry" Anusha Seetharaman, University of Illinois at Chicago

"Factors Affecting Collisions at Gated Rail-Highway Crossings" Paul Metaxatos, University of Illinois at Chicago

"Non-traditional Transportation Providers Inventory Building," Norma Peña-Rivera, University of Illinois at Chicago

"Identifying Transit Dependent Rural Populations," Fahim Mohamed, University of Illinois at Chicago

"Transportation Asset Management," Shaumik Pal, University of Illinois at Chicago

APPENDIX D. Reports

“Development of Intercity Bus Strategic Plan and Program” Final Report, Anthony M. Pagano, Paul Metaxatos, Eric A. Holeman, Victor Mora, Alicia Morreale, and Kate Stanis, November 2001.

“Study of 80,000-Pound Limit on Rural Local Highways, STUDY METHODOLOGY AND RESULTS,” Report to Illinois Department of Transportation, Sue McNeil, Kazuya Kawamura, Lise Dirks, George Yanos, Hyeon-Shic Shin, and Farhad Ansari, As a “task order” study under the METSI Program, January 31, 2002.

“Kane County Transit Opportunity Assessment – Report on Existing Conditions,” Joseph DiJohn and Don Costello, Report to Kane County, August 2001.

“I-55 Corridor Growth Study,” Joseph DiJohn and Don Costello, Report to Will County, December 2001.

“Report on Ridership and Trip Characteristics, Springfield Illinois, “ Lise Dirks and Fahim Mohammed, Report to Springfield Community Federation, December 2001.

“State of Illinois Transportation Funding Database,” Lise Dirks and Srikanth Yellanki, Report to Illinois Department of human Services, April 2002.

“Real Time Traveler Information on UIC Shuttle Bus,” Audrey Witteman, Report to UIC Transportation and Parking Administration, May 2002.

APPENDIX E. IBHE Report Recommendations and Responses

Findings of External Reviewers

General observations:

- 1) UTC is playing a major role in transportation planning and operations in the Chicago area and in Illinois. Reviewers viewed the course that UTC has chartered for itself to be “wise” (perhaps in the sense that we are not directly competing with Northwestern) and that UTC has found a niche for itself, which is a well-chosen one.
- 2) A Large part of its work is applied research (later described as “very applied”) supportive of current state and regional problem solving. Becoming known nationally, especially of the work on welfare-to-work.
- 3) Able and ambitious staff with high morale. Close working relationship among UTC members.
- 4) Close working relationship with local agencies; representatives hold UTC high regard; they told reviewers that they prefer to work with UTC in UIC than with Northwestern’s Transportation Center.
- 5) Good external funding growth.
- 6) Dynamic and approachable leader. UTC’s growing reputation is well-deserved and will be enhanced.

Formative/Future Directions:

1. UTC’s current research is too applied and that while it is true that the work we are doing at the moment is good for our local and national clients, there ought to be *much* greater emphasis on basic research. The sentence “... we believe that the reputation of UTC will garner further national prominence only if the faculty contribute original, creative research to the field” is particularly relevant in this context.
2. They seem to view our relationship with the agencies as somewhat of a “vicious cycle.” As we do more and better work for these agencies, they will demand greater applied research from us, placing severe time constraints to developing original, intellectual rigorous research, which is independent of the contract research.
3. Junior faculty must be given an opportunity to pursue original, scholarly research with funding from NSF and other academically rigorous sponsors.
4. Some part of the METSI funding should be set aside to conduct fundamental research.
5. They have encouraged junior faculty to be more involved in GCI’s “engaged research” directions.

6. To enhance interdisciplinary aspects of UTC, appoint an Associate Director of UTC who is an engineering faculty member.
7. Open a “satellite” UTC office in College of Engineering.
8. Director of UTC may report to Deans of several colleges who faculty participates in UTC or to the VC of Research.
9. Build research directions that build on Chicago’s location and concentrate on urban transportation planning and operations and on transportation equity issues. They have urged us to pay serious attention to the doctoral program. They think the niche for a doctoral program is to market ourselves as an urban transportation program and to set aside funding (either from research funding or from the provost or dean’s offices) to award attractive fellowships. We may also pursue named fellowships.
10. For ITS activities, the College of Engineering should definitely be involved.
11. Asset management should be a focus area.
12. Roles, responsibilities and criteria for evaluation and promotion of junior non-tenure track faculty are not clearly specified and they should urgently be. Particularly, they raised the point whether research faculty should focus on applied research whereas tenure-track faculty should pursue basic research. They were somewhat concerned that the roles of research faculty versus tenure-track faculty should be far more concretized before “complications arise in the future.”
13. UTC should/may consider adding one or two tenured faculty members in the coming few years, with Siim retired and Boyce about to do so.
14. Space.
15. The library could be improved “virtually” as well as special advisement of UC Berkeley Transportation Library and NU Library staff.

Findings of Internal Reviewers:

1. One of the main findings these folks had is that, with the “crisis of the mid-‘90s” over, UTC is at a unique position to choose (I) whether it goes in the direction of academically challenging research or (II) technical assistance type research or (III) whether it makes a good balance between the two (they seem to think we are doing the last). There is a need to make this decision sooner rather than later. Retain focus on “urban transportation” and on the mix of basic and applied research. There should also be attempts to wrangle out scholarly research from the technical assistance work.
2. There is a need to clarify the career paths of the young researchers in the center and mentoring must continue to be strong. Clarify hiring procedures especially w.r.t. the post-doc program. Monitor work of research faculty to insure quality.
3. We should continue to seek opportunities with our advisory board, the MUPP program and the new doctorate in planning. UTC needs more Ph.D. students; our recent efforts have been

good. Interdisciplinary Ph.D. program must be pursued. Post-doc fellowships may be explored and the research culture must be nurtured.

4. New dean must provide the leadership necessary to further UTC.
5. UTC's location inside CUPPA is a threat to everyone because it pits transportation faculty in different colleges against each other; this structural problem must be attended to. The reviewers felt that the transportation faculty recognizes this and that the new Faculty Advisory Committee is a good thing and the move to re-cross list courses is very positive. Non-UTC transportation faculty must be engaged in UTC activities as much as possible. Campus-wide mission of UTC must be highlighted.
6. A campus-wide advisory committee of deans from the relevant colleges may be created.
7. Staff may be involved in management by creating a committee approach.