Conference Prospectus

INNOVATIONS IN TRAVEL MODELING 2006

A TRANSPORTATION RESEARCH BOARD CONFERENCE

The Transportation Research Board (TRB), along with the Federal Highway Administration, Federal Transit Administration, Capitol Metropolitan Transportation Authority, and the Central Texas Regional Mobility Authority, will sponsor an Innovations in Travel Modeling 2006 conference to be held at the Hyatt Hotel in Austin, Texas, May 21-23, 2006. This international conference will showcase the state of the art in travel demand forecasting techniques and the state-of-the-art in survey data collection strategies, emphasizing activity and tour-based methods. The conference will seek to address complex questions that span a variety of decision-making horizons and contexts, including:

- Short-term operational improvements
- Medium term planning (e.g., homeland security)
- New facilities and services
- Time-of-day pricing strategies
- Demographic and social shifts in the population
- Technology evolution
- Fundamental travel decisions and how they can be affected
- The linkages between economic competitiveness, social equity and welfare, transportation and air quality
- The estimation of market demand and revenue from toll facilities and other infrastructure financing options

Goals and Objectives

Relatively little research and almost no practical implementations of activity-based travel models—and their integration with economic, demographic, and network models—had taken place when the last major specialized travel demand forecasting conference took place in 1996. In the intervening time, a considerable amount of research and several promising applications have been completed. Such models are on the verge of broad professional acceptance and widespread implementation. They represent one of the most important advances in travel modeling in several decades. These advances have been chronicled in professional journals and briefly described in larger conferences such as TRB's annual meeting. However, such forums have not allowed for the in-depth presentation and discussions necessary for the wider profession to evaluate them. At the same time that the modeling methods have advanced, the data needs to support the analysis of the relevant policy issues have also changed. Thus, advances and requirements for survey and other data collection methods to obtain activity-travel data require dissemination and discussion. This conference will focus on an exchange between academics and practitioners regarding recent advances in travel modeling, opportunities for, and challenges of, implementation, and directions for further research and development.

Intended Audience

Transportation professionals who are involved in the research and practice of travel demand modeling will contribute, and learn, techniques associated with innovative and improved (1) survey data collection methods; (2) travel demand modeling techniques, with an emphasis on the state-of-the-art and state-of-the-practice of activity-based and tour-based travel modeling; and (3) transportation policy analysis methods. Researchers and practitioners will share knowledge and experiences, particularly advances in the integrated context of the social, demographic, land-use, economic, transportation supply and technological characteristics of the activity-travel environment. The conference is intended to foster discussions and exchange of ideas between academics and practitioners. It is expected that a wide cross-section of academics and practitioners from the transportation planning community who are active in travel model development and applications, and in the collection of data to support these models, will attend the conference. The practitioners may include individuals from consulting agencies, and federal, regional, and local transportation and air quality agencies.

Conference Venue

The conference will be held at The Hyatt in Austin with abundant meeting room space, spacious guest rooms, and an extensive business center. The hotel is within walking distance of downtown entertainment and restaurants.

The conference site offers many attractions in and around downtown Austin. For example, the Congress Avenue Bridge Bats, the red granite Texas State Capitol, the Texas State History Museum, the Austin Lyric Opera, and the Zilker Botanical Gardens are just some of the many attractions the Austin area provides its visitors.

The city of Austin is located along the Colorado River in central Texas. In addition to being a hub of culture, government, and industry, Austin is considered the “live music capital of the world.” Austin is accessible via major highway corridors and airlines.

Conference Format

The conference will include three types of sessions: workshop tutorial sessions, traditional presentation-oriented sessions, and interactive sessions designed to facilitate discussion among conference participants. The workshop tutorial and traditional presentation-oriented sessions will be comprised of invited presentations, while the interactive sessions will be based on responses to the recently issued Call for Papers.

The organizing committee seeks high quality 3 to 5 page white paper submissions addressing the themes of the interactive sessions, with a limit of two submissions per individual as the primary author. Please indicate the theme to which the submission is being directed.

Paper Themes

- Data needs to support activity-based and land use microsimulation models
- Innovations in survey data collection to support travel demand forecasting

- Population and household synthesis
- Validation and assessment of activity-based travel models
- Implementation of activity-based models
- Emerging traffic microsimulation applications
- Innovations in traffic assignment and improvements of forecast speeds
- Institutional, monetary, staff, data, hardware and training resources needed to move innovative approaches to practice
- The role of models in decision making in contemporary decision making context.

The submissions must be received no later than January 17, 2006. Submissions should be made in electronic format to **Kim Fisher at kfisher@nas.edu.**

The conference will include traditional presentation-oriented sessions covering other themes with invited papers. These other themes may include a primer on activity-based travel modeling; lessons and experiences from tour-based models; FTA experience with probing model output; collection and use of geospatial data in innovative models; new developments in activity-based microsimulation models; innovative approaches to transportation and pricing analysis; integrated modeling—connecting land use, activity-travel demand, and traffic networks; the future of travel demand and the role of technology; and demographic and societal dynamics.

TRB Staff Member: Kim Fisher

Conference Committee:

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