

CALL FOR PAPERS

Innovations in Travel Modeling 2008

A Transportation Research Board Conference

June 22 to 24, 2008 in Portland, Oregon

Jointly sponsored by the Transportation Research Board, Federal Highway Administration, Federal Transit Administration, Oregon Department of Transportation, Portland Metro, and Portland State University

This conference will build on the highly successful ITM06 conference in Austin, examining innovative and promising advances in travel modeling, with an emphasis on moving state-of-the-art research into practice. The conference will focus on an open exchange of ideas between researchers and practitioners regarding recent advances in travel modeling, opportunities and challenges related to implementation, and directions for further research and development. Transportation professionals involved in the research, teaching, implementation, and use of travel models will find this conference timely and informative.

The conference will include *tracks* focusing on **activity-based models, linking demand and dynamic network models, communicating forecasts, policy and pricing analyses, and freight modeling**. *Workshops* on **activity-based models** and **climate change modeling** are slated for Sunday afternoon before the conference. All sessions will be structured to permit audience participation in the conference.

Some of the program will consist of invited presentations, while other parts will be based on responses to this call for papers. Submissions on the following themes are invited:

Linking Demand and Dynamic Network Models

Recent methodological advances and technological innovation have increased the relevance of dynamic traffic assignment within the travel demand modeling arena. However, currently there are few examples that integrate demand models with the supply side network models with an approach that takes advantage of the complexity and sensitivity of each side. We solicit papers related to methodological advances and practical applications of linking travel demand and dynamic network models. This includes, but is not limited to, linking activity-based travel demand models with dynamic traffic assignment. Topics of particular interest include:

- Practical applications of linking travel demand and dynamic network models, and
- Methodological advances in the integration of travel demand and dynamic network models

Approaches to Modeling Traveler Response to Road Pricing

- The objective of this call is to stimulate discourse on innovative methods for modeling traveler response to demand management policies in general, with an emphasis on road pricing policy scenarios. While it is widely recognized that the classical trip-based travel demand model is ill-suited to represent either the demand management stimuli or the traveler response, there is a clear lack of consensus on how to specify a model that would be well-suited for such analysis. While the call is open to the general subject of improving the response fidelity of models to demand management policies, the description below is deliberately oriented toward pricing policy scenarios to provide context regarding the objectives of the call, which include:
- Incorporating model sensitivity to variable pricing schemes, based on either time-of-day or congestion levels;
- Intra-personal variability in the implicit value of time for different activity contexts or decision elements (e.g., route, mode, destination, frequency, trip or activity purpose);
- Incorporating reliability as an attribute of road pricing alternatives;
- Inter-personal variability in response to road pricing by traditional socio-economic attributes, or hybrid lifestyle groupings;
- Information and communication technology impacts on road pricing response;
- Employer or institutional effects on road pricing response; and
- Long-term responses to road pricing as reflected in land development patterns, household and workplace locations, or auto ownership.

Climate Change Modeling

Increased emphasis on climate change is putting new demands on transportation policy and travel demand modeling. We seek papers that address these challenges, for example work integrating travel demand, land use, air quality, and climate change models or emphasizing the necessary modifications of these models. Papers focusing on methodological issues, innovative applications, and/or more general think pieces are welcome.

Communicating Forecasts

How do transportation professionals reconcile increasingly sophisticated travel demand forecasting models with strengthened requirements for meaningful public involvement? Although efforts to advance modeling practices over the last decade are beginning to pay off, little attention has been given to improving methods for communicating the forecasts made from these models. Finding more effective ways for communication is critical to elevating the quality of public involvement programs and ultimately the quality of transportation planning decisions. More sophisticated modeling techniques, including activity-based models and micro-simulation, magnify the communication challenges but also offer new opportunities.

Transportation professionals face two key challenges with respect to communicating forecasts:

- How to explain travel demand forecasting models so that the public can understand them. Often described as a “black box,” the inner workings of these models are mysterious to the public, decision makers, even professionals not directly involved in modeling. Poor understanding of models can lead to their over-use, under-use, and general misuse in the planning process.
- How to present the forecasts produced by these models so that the public can understand them. Models produce reams of data that must be summarized in ways that help the public and decision makers understand the differences between plan alternatives or the effectiveness of proposed projects in meeting performance goals. The quality of the presentation of forecasts can itself significantly influence the planning process.

The organizing committee seeks proposals for papers or posters or demonstrations on these communication issues. Potential submissions include but are not limited to:

- Good descriptions of the modeling process (potentially reports, books, or graphics),
- Model results reports that are well written for the public,
- Good graphics illustrating model results,
- Good public presentation materials,
- Thought pieces on how to communicate, and
- Thought pieces on criteria for effective communication.

SUBMISSIONS

The organizing committee seeks high quality three to five page white papers addressing these themes, with a limit of two submissions per individual as the primary author. The submissions must be submitted by Wednesday, January 9, 2008. Late submissions will not be accepted. Submissions should be made in electronic format to Rick Donnelly at donnellyr@pbworld.com.

A conference prospectus will be available shortly at <http://www.trb-forecasting.org>. Additional information can be obtained from Kim Fisher at TRB at 202-334-2968 or kfisher@nas.edu. Hotel and conference registration information will be available in January 2008.