

OREGON MODELING STEERING COMMITTEE
ODOT Human Resource Center, 2775 19th Street SE, Salem, OR
Wednesday, January 23, 2008
1:00 p.m.-4:00 p.m.

MINUTES

ATTENDANCE

Bill Upton, Chair	OR Department of Transportation
Dave Nordberg	OR Department of Environmental Quality
Brian Dunn	OR Department of Transportation
Shinwon Kim	Regional Transportation Council
Dick Walker	Portland Metro
Bud Reiff	Lane Council of Governments
Ray Jackson	Mid-Willamette Valley Council of Governments
Satvinder Sandhu	Federal Highway Administration
John Gliebe	Portland State University
Michal Wert	MW Consulting

INTRODUCTIONS – Self-introductions.

ELECTION OF OFFICERS

A slate of officers was recommended by the Long Range Strategy (LRS) Subcommittee and accepted by the OMSC. Officers for 2008 are:

- Bill Upton/ODOT, Chair
- Dave Nordberg/ODEQ, Vice-chair
- Bud Reiff/LCOG, Applications Subcommittee Chair
- Ray Jackson/MWVCOG, Professional Development Subcommittee Chair
- Dick Walker/Metro, Modeling Program Coordination Subcommittee Chair

Bill Upton stated that the LRS Subcommittee will recommend next year that election of officers occurs every other year. There is interest in expanding the leadership of the OMSC and members interested in a position as an officer or subcommittee chair are encouraged to become involved.

SUBCOMMITTEE REPORTS

Long-Range Strategy Subcommittee

Bill stated that the OMSC annual report and work programs have been shifted to a fiscal year instead of a calendar year basis to make them more useful for work planning for OMSC members. The annual report and work programs for FY2007-08 will be recommended by the LRS to the full OMSC at its April meeting.

Professional Development Subcommittee – Ray Jackson, Chair

Ray Jackson stated that there was no meeting of the OR Modeling Users Group (OMUG) in December. The next meeting will be March 13 from 9-noon in the ODOT Human Resources Center. The Metro dynamic-tour model will be discussed at the meeting and other topics are being solicited.

Many people are not able to attend the Transportation Research Board (TRB) annual meeting but are interested in reading papers that were presented. Ray is investigating how to make these papers broadly available and will discuss this at the March OMUG meeting. John Gliebe offered that he has all CDs for the last ten years, including this year, and will make them available. Ray noted that the papers are not catalogued consistently year to year and it is often difficult to find topics. He will contact TRB and see if they have a way for people to easily access information.

Applications Subcommittee – Bud Reiff, Chair

Bud Reiff reported that the peer review of the Corvallis transportation model was held in late October in Salem. The model was built on the JEMNR model, using 1994-95 household data. This was the first peer review done for the JEMNR model. Documentation was provided before the meeting so people had an opportunity for formulate questions beforehand. The peer panel included Bud Reiff/LCOG, Rich Arnold/ODOT, John Gliebe/PSU, Ray Jackson/MWVCOG, Kyung-Hwa Kim/Metro, Lei Zhang/OSU, and Keith Lawton/KLC Consulting. The model was presented by Bob Schulte/DKS Associates and Sam Ayash/ODOT.

The finding of the peer review panel was that the model is consistent with OR Best Practice Guidelines and is suitable for most forecasting purposes. There were 17 recommendations and other comments pertaining to the model. Use of JEMNR for transit purposes would need more work on transit network coding. There were also recommendations for changes to the documentation, especially those that were prepared specifically for CAMPO. It is a sophisticated model, especially for an MPO the size of CAMPO and TPAU and DKS are running the model for the MPO. A copy of the findings and recommendations of the peer panel will be added to the ODOT website.

TPAU is working on the documentation for other models and additional peer reviews should be scheduled in 2008. Bud noted that there is a lot of material to cover, but it difficult to gather together a panel for more than a day at a time. A day is reasonable for future peer review panel meetings.

Modeling Program Coordination (MPC) – Dick Walker, Chair

Dick Walker stated that the MPC met earlier in the day and talked about several items. The MPC is working collectively toward conducting a household survey for the state and has started the thought process of “what will we do after the data is collected?” There was discussion about PSU serving as a repository for the survey data if they are agreeable and the value of such a centralized repository. Confidentiality is a question to be addressed wherever data is stored. Once data is collected, what model updates are

desirable? There is interest in moving toward an activity/tour-based model in the Metro area and there may be interest in using this model around the state.

PROGRAM UPDATES

OR Household Activity Survey (OHAS)

Bill provided a status report on the OHAS project. Money to pay for start-up costs continues to be an issue. ODOT Region 2 has some money but it is not clear that this is enough to get start the survey this fall or next spring. ODOT is working internally to try to find the funds to cover start-up costs. A meeting of the OHAS Subcommittee will be scheduled to develop a schedule considering funding resources.

There was a meeting of several OMSC and OR Transportation Research and Education Consortium (OTREC) members about possible research opportunities related to OHAS, especially for using GPS for data collection. Matching funds could cover part of the cost of a grant but not all of it. There is a call for NCHRP topics for research and this may be a resource for additional funds to evaluate GPS.

Dave Nordberg asked what lead time is needed to get results that can be used in the models. Bill stated that LCOG and MWVCOG want to begin their surveys this fall so that data will be available for the next update of the Regional Transportation Plan. It takes a couple years to collect and process the data.

2008 Conferences

Bill stated that a number of transportation conferences will be held in Oregon next year and these will be regularly listed on the OMSC agenda. These include:

- February 5-7, Northwest Transportation Conference, Corvallis
- June 19-20, 5th OR Symposium on Integrated Land Use-Transport Models, Portland
- June 22-24, TRB Innovations in Transportation Modeling (ITM), Portland
- September 17-19, Transport Planning for Small to Medium Cities, Portland

The Modeling Symposium and TRB ITM conferences will be held at the PSU campus. The Symposium is centered on applications that made a difference. Day 1 will focus on success stories, where integrated models were applied and influenced a policy or a decision. Day 2 will look at how economic modeling is important to transportation. Through development of the statewide model, it was found that economics made a major impact in modeling and this is a new paradigm in the modeling world. The afternoon of Day 2 will focus on successful economic applications.

John stated that the TRB ITM agenda includes three workshops on activity-based models to cover a representative sample of what is being done. Other sessions include:

- Communicating models and model results
- Policy and pricing
- Integrating dynamic networks and demand
- Greenhouse gas emissions and global climate change

- Investment banking industry speakers to talk about how they use travel demand models and what they need from models (invited)

Bill stated that information should be posted in the next week or two on the Symposium and the ITM. Not all speakers are confirmed, but most of the agenda is defined. Plans & Action is working on the website and it will be linked to TLUMIP.org. The location for information on the conferences will be emailed to OMSC members.

Bud stated that 20 papers on modeling were submitted for the September conference. Transport Planning for Small to Medium Cities is a subcommittee of TRB.

Transitional Model Update

Bill stated that the Transitional Model (TM) is now called the Statewide Integrated Model (SIM). The calibration process is finished and validation is underway. The model is scheduled for delivery to TPAU by the end of January. TPAU will be doing sensitivity testing similar to what was done for the first generation of the statewide model – holding the urban growth boundary tight, pricing, and other scenarios. This testing will continue through the spring and then the model will be applied to projects, such as attracting more population to Central Oregon, Central OR freeway, to consider reasonableness of output. It is intended to hold a Peer Review Panel meeting in May, before the Symposium, so that the Panel can see the results of model applications and make recommendations on what to present at the Symposium. The MPC requested a presentation to the OMSC before the Peer Review Panel meeting, possibly at the April OMSC meeting.

Brian Dunn stated that there may be applications for the SIM for the next legislative session. The OR Freight Plan is underway and the Oregon Transportation Commission may recommend some projects. There is also opportunity to use the SIM with the JEMNR model being applied in Deschutes County. There will not be a lot of modernization projects in the future because the cost of building highways is so high. How to address operational system improvements at a planning level is an important area. Once the SIM is operational, its availability as an analysis tool will be discussed with decision-makers.

Dick stated that Metro would like to update its external flows as a SIM application. Dave Nordberg stated that the Governor wants to have a focus on transportation in the next legislative session and the SIM may be a good tool to support this discussion. Bill stated that Oregon now has models that can do analysis from macro to micro levels.

OMSC RESEARCH INTERESTS & OPPORTUNITIES

Bud Reiff stated that, at the last OMSC meeting, a list of research projects of interest to the OMSC was developed. These included:

- The Salem area has a plethora of new traffic data. Many signal controllers are now equipped with hardware and software to transmit vehicle classification counts to a central location. There are also GPS travel time runs for many of the major corridors.

Mid- Willamette Valley COG would like to know how best to store, analyze, and apply these data.

- RVCOG would like new research into the effects of residential, commercial, and employment density on transit ridership.
- OMSC members would like more research into metropolitan freight planning.
- There is interest in research into the area of model route choice and dynamic assignment techniques. LCOG is interested in research into multi-level assignment models, where the equilibrium/deterministic regional assignment is supplemented by corridor-specific ‘mesoscopic’ simulation. ‘Mesoscopic’ is planning-level simulation that takes into account elements such as dynamic loading of the network, queuing, intersection capacity, difficult site access conditions, and conflicts between pedestrian, bike, bus, auto, and truck modes, but which can be accomplished in a more simplified manner without the immense data requirements and time needed to prepare an engineering-level microsimulation.
- There is interest in research into decision support systems which can use model output and other data and apply objective criteria and evaluation tools for project and policy analysis that can be more useful to decision-makers.
- Metro and LCOG intend to use data from PSU Professor Jennifer Dill’s current research into bicycle use and route choice in Portland to develop improvements to mode choice and route choice models for the bike mode. A Metro Councilor may commit funds to this research, and those funds could potentially be leveraged on a 1:1 basis with OTREC or ODOT federal funding.

Since the last meeting, ODOT Research Unit solicited projects for FY2009. There were several proposals by OMSC members that went through Stage 1 screening. These included:

- Lei Zhang/OSU – GPS applications in the upcoming Oregon Household Activity Survey.
- John Gliebe/PSU – Integration of regional planning models and traffic simulation for urban corridor studies.
- Brian Gregor/ODOT – Feasibility study of a web-based household activity planner to reduce household vehicle travel and improve transportation service provision (selected for Stage 2).

OTREC selected 36 projects in September for funding through the Federal FY2007-08. These include, among others:

- Dynamic activity-based travel forecasting system
- Options for integrating urban land use and travel demand models
- Value of reliability
- Assessment and refinement of real-time algorithms for use in practice
- No more freeways: urban land use-transportation dynamics without freeway capacity expansion
- Using archived ITS data to measure the operational benefits of a system-wide adaptive ramp metering system
- Freight performance measures

OTREC solicits for projects once a year. Abstracts must be submitted by February 15, 2008 and full proposals are due March 14. In late June-early July, research projects are selected and funding is available in October.

Discussion:

- Dick asked at what point do we exceed our capacity to do research? John stated that new graduate students are being trained to do research and there is a learning curve. Productivity will increase as faculty and students learn the system and gain research experience. The capacity limitation is getting enough graduate students to take on more work.
- Satvinder stated that OTREC funding is a 50-50 match. A partner with matching funds is as important as the research proposal. OTREC requires yearly reapplication for multi-year projects which causes uncertainty.
- Ray suggested that small planning projects not time sensitive could be suggested for faculty to work on with students.
- Dick stated that it would be good to identify questions for OHAS and add them to the OMSC list of research interests.
- Bill suggested that those proposing research of interest could be invited to speak at future OMSC meetings. This could include:
 - Miquel Figgilozzi/PSU, a civil engineer interested in freight issues.
 - Rob Bertini/PSU to discuss research on the value of reliability.

TRANSPORTATION RESEARCH BOARD (TRB) REPORTS

Several OMSC members attended the annual TRB meeting in Washington DC on January 13-17. They shared what they learned at TRB:

- Dick Walker - a workshop panel discussed their reaction to Special Report 288 on the state of the practice of MPO Travel Forecasting Procedures around the country:
 - Funding for data collection and investment in models has greatly diminished over time and not enough money is being directed to improve tools and gather data.
 - Some of the tools and techniques being used need upgraded/improved.
 - Perhaps a percentage of funds from all MPOs could be pooled and a national steering committee established to define model improvement/data collection projects.
 - There could be consideration of restructuring funding formulas during SAFETEA-LU reauthorization.
- Bill Upton – Economics was not generally part of the discussions on transportation and land use. Oregon found that land use and transportation do not interact directly but they interact indirectly through economics. Production of services drives use of land and production of trips.
- Dick Walker – A TRB subcommittee on moving modeling activities into practice talked about activity models:
 - There are different schools of thought - many agreed that things are moving into practice and many are in practice now, and others felt that activity models have yet to be proven. This is an evolving process.

- There are several academic models that work fine but are too much to apply to projects.
- A better job needs to be done on communicating what models are, how they are used, and their value to decision-makers.
- Ohio DOT did a survey, built an activity model, and hired a consultant to update its trip-based model so that they can compare results.
- The theme for the next annual meeting of TRB will be greenhouse gas and carbon footprints.

OTHER ISSUES/AGENDA TOPICS

Shinwon Kim stated that RTC purchased VISUM software two years ago but is not using it fully. Dick stated that Metro uses VISUM for autos but it is still working on the transit network. Metro hopes to complete the transition to VISUM in the next quarter but will not change software for projects in process.

Dave Nordberg stated that EPA is close to releasing a preliminary version of the **MO**tor **V**ehicle **E**mission **S**imulator (MOVES) modeling system. When fully implemented, it will replace MOBILE6. There is no information on how emissions compare with MOBILE6 for air quality budgets and conformity. EPA usually allows two years to transition to a new modeling system. Greenhouse gas emissions may require more work than was required for CO2 and there is discussion on greenhouse gas conformity for land use as well as transportation.

NEXT MEETING/AGENDA

The next quarterly OMSC meeting will be on Wednesday, April 16, 2008, from 1:00-4:00 p.m. in Salem. Agenda items include:

- OMSC FY2007-08 Annual Report
- OMSC FY2008-09 Work Program
- Subcommittee Reports
 - Applications - Reiff
 - Modeling Program Coordination – Walker
 - Professional Development - Jackson
- Program Updates
 - Oregon Household Activity Survey – Upton
 - Statewide Integrated Model – Upton
- Miquel Figgilozzi or Rob Bertini to discuss research projects

The meeting adjourned at 3:45 p.m.

MEETING REFERENCES

The following links are for topics discussed at the OMSC meeting:

- Findings of the peer review panel on the Corvallis Area model will be posted at <http://www.oregon.gov/ODOT/TD/TP/OMSC.shtml>

- Information on the Northwest Transportation Conference, to be held in Corvallis, OR on February 5-7, 2008 is available at <http://Kiewit.oregonstate.edu/nwtc>
- Information on the 5th Oregon Modeling Symposium to be held in Portland, OR on June 19-20, 2008, is available at <http://www.oregon.gov/ODOT/TD/TPAU/docs/Symposiums/Fifth/Flyer.pdf>
- The call for papers for TRB Innovations in Transportation Modeling Conference to be held in Portland, OR on June 22-24,, 2008, is available at http://www.trb.org/conferences/ITM08_Call_For_Paper.pdf
- Information on the Transportation Planning for Small to Medium Cities Conference, to be held in Portland, OR on September 17-19, 2008, is available at www.toolsofthetrade.org
- Information on the OTREC research program and submitted research proposals is available at <http://otrec.us/content/>
- Information on the ODOT Research Unit problem statements is available at http://www.oregon.gov/ODOT/TD/TP_RES/2009StageOneProblemStatements.shtml
- Information on the U.S. Environmental Protection Agency **MO**tor **V**ehicle **E**mission Simulator (MOVES) is available at <http://www.epa.gov/otaq/ngm.htm>.