

**OREGON MODELING STEERING COMMITTEE**  
**ODOT Human Resource Center, Suite A**  
**2775 19th Street SE (near Airport), Salem, OR**  
**Wednesday, December 15, 2004**  
**1:00-4:00 p.m.**

**MINUTES**

**ATTENDANCE**

Richard Walker, Chair	Portland Metro
Richard Bjelland	OR Department of Housing & Community Services
Bill Upton	OR Department of Transportation
Jerri Bohard	OR Department of Transportation
Jennifer John	Portland Metro
Mike Jaffe	Mid-Willamette Valley Council of Governments
Bud Reiff	Lane Council of Governments
Ali Bonakdar	Corvallis Area Council of Governments
Shinwon Kim	Regional Transportation Council
Rob Bertini	Portland State University
Robin Katz	Port of Portland
Michal Wert	MW Consulting

**Guests**

Carolyn Gassaway	OR Department of Transportation
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**INTRODUCTIONS**

Dick Walker asked for self-introductions for the benefit of new members.

**SUBCOMMITTEE REPORTS**

**Technical Services Subcommittee – Bill Upton, Chair**

Bill Upton stated that the first generation of the statewide model (Gen1) was developed as a “proof of concept” exercise. This is the largest integrated model in the country, with 144 zones and 2000 links. The model provided good information for the Willamette Valley Forum, Central Oregon freeway access study, and the Economic & Bridge Options Study.

A second generation model (Gen2) is intended to be a fully disaggregated model. To meet short term needs, however, a Transitional Model (TM) was developed. All the modules of the TM are done and it is being calibrated to make sure that it runs through

time. There are 18 validation criteria and the model is moving through the calibration with no major surprises. Some debugging is expected.

Bill briefly reviewed a comparison of Gen1 and the TM that were mailed with the agenda. This comparison was prepared for the Oregon Transportation Plan Update (OTP) project to allow the OTP project team to see the capabilities of both models. The biggest difference is that the TM is much more aggregated than Gen1.

There are two drawbacks to the TM. It is taking longer to calibrate than hoped but should be complete and ready for applications in April or May 2005. It is first stepping through time in a known period (1990-2000) to be compared with known results. Networks may be modified for scenario testing, but once calibration is done, it is ready to use. It takes 4-5 days to do a single run through the 30-year time period, compared to Gen1 which takes about 7 hours.

Bill stated that no decision has been made on whether to continue development of Gen2. A Request for Proposal will be published next week and the contract will be on a work order basis instead of a single large contract to allow maximum flexibility. Mike Jaffe stated that it is important to consider methods to easily pull performance measures information from the model.

Dick stated that Gen1 was good for proof of concept but that Metro is looking forward to the TM for several projects. The TM will provide better information on traffic and freight flows between cities. Metro is doing an evaluation of the Metro 2040 plan, called "The Big Look", to see how policies in the plan are working and to identify areas that need modification. The Metro model will be used for allocations but it is recognized that Metro policies have statewide impact and it is important to look at the ripple effects of Metro policies throughout the state. The TM will be an important tool for this project.

Mike stated that MWVCOG is conducting a third bridge study and they would like to use the TM for better land use analysis.

Bill stated that Gen1 results cannot be easily compared with MPO results because there is such a disparity in detail. The TM should be able to bring results closer together.

Ali Bonakdar asked if the TM can do scenario analyses for smaller areas. Bill stated that it depends on the project. There needs to be some level of significance or the data gets lost. The TM is not intended to replace MPO models.

### **Performance Measures Subcommittee – Bud Reiff, Chair**

Bud Reiff stated that a summary of performance measures was circulated to members prior to the meeting. The Texas Transportation Institute (TTI) performance measures published earlier were very helpful. The performance measures for development and testing in the next tasks include:

- **Measure 1** - Policy: Provide for the Efficient Movement of People and Goods

Performance Measures: Urban Mobility Measures

- Travel Time Index (Percent additional time for peak trip)
- Total Delay (Sum of difference peak – free flow travel time)
- Avg. Delay / Peak Period Trip
- Total Congestion Cost
- Buffer Index (Additional time needed to budget to ensure arriving on time 95% of the time)
- **Measure 2** - Policy: Provide an accessible, affordable transportation system (all plans)  
Performance Measure: Transportation Price Index (TPI)
- **Measure 3** - Policy: Reduce Automobile Dependence (Oregon TPR)  
Performance Measure: Percent of “market basket” trips that can be accomplished by non-auto modes
- **Measure 4** - Policy: Reduce Automobile Dependence (Oregon TPR)  
Performance Measure: Auto-Dependence Ratio - the Ratio of TPI for non-automobile modes to TPI for automobile
- **Measure 5** - Policy: Support Economic Vitality  
Performance Measure: Freight Network Travel Delay and Delay Costs
- **Measure 6** (Deleted-for future research) - *Percent of Households within 4-Minute Fire/EMS response times. This is **highly dependent upon the number and location of planned EMS stations, which lie outside the realm of transportation planning policy.***
- **Measure 7** - Policy: Develop a Secure Transportation System; Policy: Develop a Balanced Transportation System  
Performance Measure: Road Network Travel Concentration Index
- **Measure 8** (Tentative) - Policy: Develop a safe transportation system  
Performance Measure: Expected Crashes by Type, Cost of Crashes
- **Measure 9** (Not for Testing in Tasks 3 and 4) - Policy: Develop a Balanced Transportation System  
Performance Measure: Ongoing measures of “fit” between Transportation Plan assumptions and forecasts, and observed conditions. (Not “modelable” - serves as “real-world” checks on model input assumptions and model output.)

Bud noted that Measure 2 is the most unique. He and Brian Gregor/ODOT are attempting to develop something similar to a consumer price index for transportation. This will be a comparative measure because the most accessible location will be identified and everything else will be measured relative to that location. The intent is to define a performance measure that the public can relate to. He noted that Measures 3 and 4, reducing auto reliance dependence, are measures of what other mode options are available whether or not they are used.

An expert panel has been advising and reviewing materials and will be convened as soon as methods of measurement are defined. Rob Bertini stated that he wrote a paper titled *Congestion and Its Extent*, discussing current definitions of metropolitan traffic congestion and ways it is measured. It can be viewed at [http://www.its.pdx.edu/bertini\\_congestion.pdf](http://www.its.pdx.edu/bertini_congestion.pdf). He noted that Ken Deuker no longer lives

in Oregon and expressed interest in being added to the expert panel as the representative of Portland State University.

Bud stated that the project includes implementing these measures in the Jem-in-R model and documenting findings on how well they perform. The first two tasks are completed and documented. These include the literature search and examination of OR plans and existing performance measures, and winnowing down the measures.

Several suggestions were offered on how to get maximum exposure of research results:

- OMSC recommend to ODOT Research that findings be circulated beyond the Technical Advisory Committee
- The ODOT Research site lists all projects and this list is shared with libraries
- Prepare an article for ODOT Research Notes and Research Newsletter
- Consider using in the next Metro Regional Transportation Plan update
- Presentation as a PSU Friday Seminar
- Give presentation to MPO transit group which meets quarterly (also a good forum for a presentation on the statewide Transitional Model)
- TRB state newsletter

Michal asked if this information is being shared with DLCD during its update of the Transportation Planning Rule (TPR). Jerri Bohard stated that a subcommittee of LCDC and ODOT Commission members is working on the TPR update. However, DLCD is currently focused on rule-making for OR Administrative Rule 660-012-0060 to address the *Jaqua* decision.

### **Continuous Survey Modeling for Oregon (COSMO)**

Bill circulated a summary of the COSMO project, schedule and budget. The contract is underway to conduct a pilot survey and it will be conducted in the Portland 97201 zip code area. There will be 300 people in the survey, with 100 each surveyed by diary, global position system (GPS), and a combination of the two. Quotes from local leaders are being included in a brochure that will be sent to survey candidates, describing the program and requesting their participation. Rob noted that the President of PSU just submitted a quote to be used for the brochure.

Some concern has been raised about the personal nature of some of the questions, especially with the pilot survey being conducted during a legislative session. A meeting will be held with ODOT managers on Friday to review the survey and determine whether the survey can go forward on its current schedule or whether it should be held until after the session.

**Modeling Program Coordination (MPC) - Mike Jaffe, Chair** – The MPC met the morning before the OMSC meeting and discussed COSMO and the OTP. Discussions from the MPC are reported under those topics.

## **PROGRAM UPDATES**

### **Oregon Transportation Plan (OTP) Update**

Carolyn Gassaway stated that background information is available on the ODOT website at <http://www.odot.state.or.us/tdb/planning/OTPUpdate/>. Three policy committees were formed to work with the Steering Committee and draft policies were prepared. OMSC member representation on the Steering Committee includes Pat Egan/Port of Portland, Tom Schwetz/LCOG, and Rex Burkholder/Metro.

At its November meeting, the Steering Committee reviewed modeling results from the Willamette Valley Forum and they felt that this information was useful to help define alternative scenarios. Since the TM model is not ready for application, it was decided to use the Gen1 model for policy analysis. The Steering Committee considered alternative scenarios at its November meeting and provided direction for modifications. Carolyn reviewed the scenarios defined in the handout circulated with the agenda. These will be considered at the January meeting of the Steering Committee for decision on what to take forward for analysis. Model results will be presented for the reference scenario in March and for alternative scenarios in June.

Robin Katz asked if the Steering Committee talked about the trade-offs of using the Gen1 instead of the TM. Carolyn stated that several Steering Committee members are concerned about the length of the schedule and the Chair decided not to bring the discussion to the Committee but to move forward with Gen1 so that the project is not delayed. The OTP is a policy and investment plan and will not be at a project-specific level. HERS will provide much of the information needed, and ODOT will work with the MPOs to provide additional information.

Dick stated that Gen1 will not be able to provide the level of detail of the TM and expressed caution that the burden of providing information not be shifted to the MPOs. Jerri noted that the Gen1 model is recognized nationally and will provide useful information. Although the estimate for completion of the TM is 3-4 months, there is no guarantee that it will be ready and it is difficult to manage the OTP schedule with this uncertainty. The Bike/Ped and Safety Plans need to be updated and are waiting for completion of the OTP.

Carolyn noted that it was originally anticipated to update the OTP in 6-8 years but it has been 12 years since the OTP was adopted.

Rob asked what kinds of issues are being discussed for operations. A major operations focus will require a culture change in a large agency. Carolyn stated that the Steering Committee was briefed by Steve Lockwood on operations issues. One of the alternative scenarios is maximum operations investments and there is a lot of discussion on what this means. This scenario will likely be developed outside the Gen1 model. Carolyn will provide a copy of a draft white paper on operations to Michal to forward to OMSC members.

Rob noted that there is a large void in law enforcement in operations. Some states have requirements to clear wrecks quickly, even if it means simply pushing the wreck off the road to clear travel lanes even before crash investigations occur. This is a risk assessment, liability and cooperation issue that should be addressed in the OTP.

Richard Bjelland stated that he is serving on a Goal 9 Subcommittee and there appears to be a disconnect between economic development, the TPR and the current OTP. It is important that economic development be integrated into the OTP update. For example, if the Governor puts an emphasis on economic development, many of the constraints for this development are transportation infrastructure. While there may be the same goal for economic development, there are issues that are not compatible and the OTP needs to balance these conflicting goals. Carolyn noted that there was an Economic Vitality and Mobility Subcommittee for the OTP update and there are several freight interests on the Steering Committee.

Robin asked how a model will inform the Steering Committee. Carolyn stated that it will provide information on policy tradeoffs. For example, will pricing actually make a difference, or what impact will higher oil prices have. There is not concern about discrepancies or non-compatibility between the Gen1 and MPO models because the Steering Committee will consider tendencies and directions at a high level and will not consider details.

Jerri stated that the Steering Committee has been clear that mobility and accessibility are different issues. They are also concerned about mobility and accessibility in both urban and rural areas and these are very different. The Steering Committee has many questions and Gen1 provides more flexibility to be responsive because model runs can be done in a matter of hours, not days as required by the TM.

Dick stated that the challenge will be to keep discussion at the same sketch level that analysis will be done. When detailed questions are asked, it will be important to respond to questions in a sketch-level manner and not get into details.

Jerri noted that many states prepare statewide transportation plans and do not use models. Even though it would be nice to use the TM, Oregon is still ahead of many other states by using Gen1.

**TRANSIMS**– No report

### **Research Projects**

Rob stated that PSU will be submitting several research applications to the ODOT Research Program. These include a ramp metering research proposal, use of bike/ped crash data, and use of green light data to build an OR/WA database on truck use of I-5. Rob will provide a list of PSU research topics for consideration for OMSC support.

Jerri stated that only 35 research problem statements have been received so far and no planning-type statements have been received. She noted that freight does fit neatly into any category so it will probably be duplicated in more than one category. Selections will be made at the end of February.

## **ANNOUNCEMENTS**

### **TRB Planning Application Conference Update**

Dick gave a slide presentation that was prepared for the TRB Planning Applications Conference Committee. Information on the conference is available at [www.trb-portland-05.com](http://www.trb-portland-05.com). Michal will circulate a list of sponsors and exhibitors committed to support the conference and OMSC members are requested to make additional contacts within the next two weeks to get as many sponsors/exhibitors as possible to help defray the cost of the conference. Dick stated that one of the reasons for bringing this conference to Oregon is so that more Oregonians could attend without out-of-state travel. He requested members to encourage others to attend to ensure a good Oregon participation.

## **MISSION, GOALS & OBJECTIVES**

Dick stated that the OMSC mission, goals and objectives were adopted in 1998. It is timely to review these materials to ensure they are current and relevant to OMSC members. Michal reviewed background on development of the goals and objectives and facilitated a brainstorming of the purpose and mission of the OMSC, and the value of the OMSC to members. Information from this meeting will be used to prepare draft mission, goals and objectives for consideration at the March meeting. Following are the ideas and suggestions flip-charted during the discussion.

### **OMSC Mission**

- The OMSC has a primarily highway focus.
  - Need to consider other modes.
  - Consider investments in rail/shortlines.
- How to model and coordinate with private sector transportation providers, i.e., railroads?
- Communications – how do we link to all groups?
  - How useful is modeling to members?
  - Balance expectations with delivery capabilities.
- OMSC members need to clearly know their roles and responsibilities.
- What is the connection between OMSC to local agencies?
- Understand model(s) capabilities.
  - What questions need to be answered?
  - What do users want/need?
  - How can models respond?
- Value of research & development vs. implementation.
- OMSC membership is focused on urban but the largest part of OR is non-urban.
- Need to define user needs to be responsive.

- Doing good job advocating for/informing about the statewide model but not doing much for small cities.
- OMSC members understanding the value of modeling. Small cities and consultants do not, especially with TSPs.
- Case studies are useful to show value of models for investments and policies, especially at local level and for ACTs.
  - Case studies should cover all models, not just the statewide model.
- How to get small cities to do modeling given limited funding (TGM grants)?
- Mission says what to do, not who to do it for.
- Website would be useful as an archive of work done/testimonials
  - Use students
  - Use technology smarter – PSU webcasts

### **Value of OMSC to Member Agencies**

- Save money in efficiency and knowledge sharing/learning
- Compatible efforts for modeling data and structure
- Issue and policy discussions
- Technical information sharing
- Technology advocacy – challenge rules (support MPOs for alternative TPR measures)
- Learn about modeling activities and resources available at state and peer level
- Strategic thinking – what needs to be done, how to get there (these are not reflected in the goals)
- Linkages with other state agencies
- Coordinate activities
- Leverage dollars
- Share resources
- Forum for different perspectives to reach consensus

### **Suggestions**

- One-day conference on modeling
  - User friendly
  - ‘Modeling for Dummies’
- Prioritize goals
- Gen1 addresses state and MPO models but need to include local governments
- Should the OMSC be a resource center or a ‘model salesman’?
- Advocacy for using models is good but do not advocate if not needed
- Quality and consistency support group

### **NEXT MEETING/AGENDA**

Dick requested that the next meeting be moved a week earlier to accommodate schedule conflicts. The next meeting will be held on Wednesday, March 9, 2005, from 9:00 am-noon in Salem.

Agenda items include:

- Subcommittee Reports

- Technical Services
- Performance Measures
- Modeling Program Coordination
- COSMO
- Program Updates
  - Oregon Transportation Plan
  - Research Projects
- Announcements
  - 2005 TRB Planning Methods Conference
- Draft Mission, Goals & Objectives
- Annual Report/Annual Work Program

The meeting adjourned at 4:20 p.m.

### **MEETING HANDOUTS**

The following handout materials were provided at the OMSC meeting. For copies or more information, please contact the link provided or email Michal Wert at [mwert@teleport.com](mailto:mwert@teleport.com):

- Transportation Plan Performance Measures Research - Performance Measures for Development and Testing in Tasks 3 and 4
- Comparison of Gen1 and Transitional Model for OTP Update
- OTP Update, available at [www.odot.state.or.us/tdb/planning/OTPUupdate](http://www.odot.state.or.us/tdb/planning/OTPUupdate)
  - Tasks and Schedule for the OTP Update project
  - Draft Performance Measures and Analysis Methodologies
  - OTP Update Proposed Scenarios
- Continuous Survey for Modeling in Oregon (COSMO) Update
- OMSC Mission, Goals and Objectives - <http://www.odot.state.or.us/tddtpau/modeling>