

OREGON MODELING STEERING COMMITTEE
ODOT Human Resource Center, 2775 19th Street SE, Salem, OR
Wednesday, July 18, 2007
1:00 p.m.-4:00 p.m.

MINUTES

ATTENDANCE

Bill Upton, Chair	OR Department of Transportation
Richard Bjelland, Vice-chair	OR Department of Housing & Community Services
Dave Nordberg	OR Department of Environmental Quality
Matt Crall	OR Department of Land Conservation & Dev
Dick Walker	Metro
Bud Reiff	Lane Council of Governments
Susan Payne	Lane Council of Governments
Ray Jackson	Mid-Willamette Valley Council of Governments
Matt Hermen	Rogue Valley Council of Governments
Shinwon Kim	SW Washington Region Transportation Council
Michal Wert	MW Consulting
<u>Guests</u>	
Jennifer Dill	Portland State University

INTRODUCTIONS – Self-introductions.

SUBCOMMITTEE REPORTS

Professional Development Subcommittee – Ray Jackson, Chair

Ray stated that the Oregon Modeling Users Group (OMUG) met in June and about 15 people attended. A good mix of public agencies and 4-5 consultants attended. Topics included the Salem and Columbia River crossings and the software program SQLite. John Gliebe/PSU gave an overview of what is being taught in modeling classes at PSU and requested feedback on the curriculum. He is currently teaching many topics and OMUG recommended that he reduce the topics and focus on the theory of modeling.

Topics for the September meeting include:

- Transit modeling and VISUM
- Presentation on multi-class assignment work in Washington County
- Summary of presentations at the workshop for SUMMIT and FTA user benefits

Applications Subcommittee – Bud Reiff, Chair – No report

Modeling Program Coordination (MPC) – Dick Walker, Chair

Dick stated that the MPC met in the morning and covered a broad variety of topics.

- Progress on the Transitional Model (TM) is continuing. Calibration of the individual modules of the TM should be completed this summer. Integration of the model with MPO models has been set aside in the short term to focus on completion of the TM.
- The OR Household Activity Survey (OHAS) was discussed. See OMSC discussion.
- RVCOG has lost several staff and has a lot of work to do. MPC brainstormed on resources and other sources of help until additional staff can be hired.
- Traffic assignments are typically equilibrium assignments. Dynamic assignments provide more complete information and have good potential as a routing tool.
- Developers and consultants often want to use travel demand models and information produced by public agencies. The MPC discussed how to make sure information is used properly and as intended.

PROGRAM UPDATES

OR Household Activity Survey (OHAS)

Bill stated that a two-day kickoff meeting was held with the consultant team. Participants discussed the process, what is wanted from the survey, and sampling techniques. With this information, the consultant team will develop a work program on how to proceed. The consultant is on a flexible services contract and each project will require a work order contract (WOC). The first WOC is to prepare the instrument and sampling plan for the survey. This should be complete soon and surveys should be able to start this fall. The consultant team includes NuStats as the lead, DataSource, GeoStats, Dirk Zumkeller, Mark Bradley, Keith Lawton, PB, and PTV America.

Dick stated that OMSC has been talking about surveys for some time and we know the issues. We have done surveys before and the consultant team has a lot of experience so this should be a good and focused effort.

Richard stated that the team is working to finalize sample selection and identifying how to reach people. They will be pursuing testing among regions to determine whether the recommended approach will reach the target households. They intend to use address-based sampling. A problem is getting people to respond by phone or email. The issue of land lines vs. cell phones is significant and the number of people with no land line is expected to double by 2010. The team is also exploring incentive plans and what is permitted under OR law.

Metropolitan Travel Forecasting: Current Practice and Future Direction

Dick served on a Transportation Research Board (TRB) committee that is documenting the “state of the practice” of MPO Travel Forecasting Procedures around the country. A consultant was hired to conduct a web survey of all MPOs in the country to determine their approach and capability for transport modeling. A summary of the report was presented at the last OMSC meeting. A report is now available that brings together information from the web-based survey and draws on the experience of TRB committee members and the consultant team.

A major finding of the report is that there are a lot of different kinds of modeling practices. Some large MPOs are doing good work, some small MPOs do more than is required, and others are not doing as much. Another major finding is that there is a strong encouragement to move to best practices. It encourages TRB to think about preparing a national modelers manual similar to the federal highways manual.

The report is not intended to be judgmental and it recognizes that it is important to define needs to determine the most appropriate modeling approach. It talks about activity-based modeling but recognizes that if there are no air quality problems or no FTA NewStarts, modeling needs are less. This report is not strongly technical and individual MPOs are not identified.

Question: Can we point to this document if a model gets challenged? The Washington DC model was peer reviewed and there were some critical comments. This study resulted because there was no way to know what others are doing and the state of the practice.

The TRB Special Report 288 - "Metropolitan Travel Forecasting: Current Practice and Future Direction" is available at: http://www.trb.org/news/blurb_detail.asp?id=7821

2008 OR Modeling Symposium/TRB Conference

Bill stated that the Fifth OR Modeling Symposium will be held Thursday-Friday, June 19-20, 2008. The TRB Innovations in Travel Modeling Conference will follow on Sunday-Tuesday, June 21-23. Both conferences will be held on the Portland State University campus and OTREC will be a major sponsor. Previously, blocks of rooms were reserved and catered meals were provided for the Symposium. There will be a registration fee for the Symposium, but everyone will be responsible for his/her own rooms and meals.

Rick Donnelly/PB is the co-chair of the TRB conference and is coordinating the Modeling Symposium with OTREC. This should ensure that topics are supporting and not redundant. It was suggested that the opportunity to register for both conferences at the same time be provided.

UNDERSTANDING AND MEASURE BICYCLING BEHAVIOR: IMPLICATIONS FOR URBAN PLANNING, HEALTH AND RESEARCH

Jennifer Dill, Director of the PSU Center for Transportation Studies, gave a presentation on her research project, funded by the Active Living Research Program of the Robert Wood Johnson foundation and OTREC. The original research question was: How does the built environment influence bicycling behavior? Research was conducted in two phases – a random telephone survey and GPS.

The random telephone survey was conducted in November 2005 and included 566 adults, 23 percent of eligible phone numbers. Of these, 508 gave addresses or intersections that could be geo-coded. The target area was within the Portland urban growth boundary.

Different questions were asked depending on whether the respondent is physically able to ride a bike and the type of cyclist (never, occasional, regular). It was a long survey and took up to half-an-hour in some cases. It did not include questions beyond the physical environment, i.e., weather. Questions included:

- Bicycling activity in past summer and non-summer months
- Information on up to four trips on the most recent day – purpose, start-end, alone or ride with others
- Experiences and attitudes about all forms of mobility – rode bike as a kid?
Perceptions of the environment for biking?
- Demographics and home location – when did you move to your current home and how important was biking to this choice?

The demographic profile was weighted for age, sex and college degree. Some demographic findings:

- The sample was too small to draw conclusions on race/ethnicity.
- Cycling generally declines with age but recreational biking increases with age
- Recreation only cycling rises with income. There is a less clear relationship for utilitarian cycling.
- Half of utilitarian cyclists had a college degree vs. 30% of the general population

Preliminary findings for utilitarian cycling include:

- No clear relationship with bike lane density. There is a lot of biking in SE Portland which does not have many bike lanes but has many quiet streets – concept of bicycle boulevards. There also appears to be a conflict between what people say and what they do – they say that lack of bike lanes makes a difference but performance does not show this. Would bike lanes make a bigger difference outside the urban area?
- Positive relationship with proximity to regional trails – perhaps because of Springwater Trail?
- Positive correlation with street connectivity and closer to downtown
- Negative relationship with slope
- Multivariate analysis is necessary
- Objective measures of the environment for mixed use and retail density so far do not show increased biking.
- The negative of more traffic has more influence on biking than the positive of quiet streets
- The volume of traffic seems to have a greater effect on biking than speed of traffic

Research objectives for the GPS phase included testing whether an off-the-shelf GPS device could accurately measure bicycle activity, route choice behavior, and health benefits. About 130 people were given GPS units for seven days and requested to take them on all bike trips. Bike messengers and bike police were excluded. This is not a representative sample but there are nearly 1500 trips recorded so far for processing. A follow up on-line survey is conducted to confirm accuracy of routes, route choice decisions, and to fill in missing data. Data after processing included total distance and time by type of facility, speed, elevation changes, time not moving, and time spent on transit.

There were several technical issues to address:

- GPS signal downtown
- How to safely attach the GPS unit to the bicycles
- Antenna needs to be exposed
- Many people put the unit on their backpack
- Most GPS units are designed to be in a car, not on a bumpy bicycle
- There is a delay from the time the GPS is turned on until it connects so start is not always accurate
- If a bike crossed a bridge, sometimes the analysis puts the bike below the bridge on a cross street.

To use the GPS unit, a graduate student meets with the volunteer, provides instruction on how to use the GPS, and attaches the GPS unit to the bike. Within a day of submitting data, the volunteer receives a map of trips on the website so they can review and make corrections.

The Oregonian ran a small article on this research project and about 500 people responded with an interest. They were asked to complete a survey, recognizing that this is not a random sampling but very pro bicycling.

The project has about 20 GPS units. The next phase is funded by OTREC and will test new GPS units, recruit more infrequent cyclists, and compare travel times to motor vehicles. The five new units, provided by Prof. Stoufer, are smaller than a cell phone and have a long battery life.

Discussion:

- Dick - Metro has logit mode choice models. One mode is a bicycle and Metro would like to move to a bike path route algorithm that measures things like tree canopy vs. grade vs. bike lane. Hopefully this would allow calculation of best routes that can then be maximized.
- Bud - Eugene 1994 data was analyzed to look at total uphill slope. The more significant issue was proximity to an off-street path.
- Jennifer - responses depend on the type of cyclist. How important were items in choosing route? Whether they have a child with them? There was not enough analysis to say that bike lanes do not make a difference. Perhaps people do not use bike lanes because they are on arterials with high traffic flows and high speed.
- Bud – it would be interesting to see how far out of direction people will go for a better bike environment
- Ray – is the type of cyclist influenced by where they live? Jennifer - SW Portland is more likely to be recreational and SE Portland more utilitarian.
- Richard – it would be useful to determine tenure characteristics. Renters are more likely to be bikers than home owners. Utilitarian riders are more likely to be renters.
- Jennifer – very few respondents said cycling environment influenced where they chose to live.

- Jennifer - for ride pooling, people were asked if a child or anyone else rode with them. Getting feedback that people want to bike together and want wider bike lanes.
- MattC – is there information on places where bikes routes connect but cars do not? Jennifer – the survey looked at node connections, including cul-de-sacs. GPS data is showing some links that perhaps should be included in the networks.
- Dave – Are any policy recommendations emerging? Jennifer - Quiet low volume streets and connectivity is an attractive environment.
- Jennifer – Geo-coding will provide an idea of how far people go for different trips. Right now there does not seem to be a connection between density and biking.

Jennifer stated that funding was not difficult to obtain because this is a topic of interest with little existing research. The City of Portland is redoing its bike plan and want to be a “Platinum” bicycle city, so are interested in the results of this research. There is a variety of biking interests throughout the region and it would be useful to look at characteristics for a broader area.

Jennifer’s full slide presentation can be accessed on the OMSC website at <http://www.oregon.gov/ODOT/TD/TP/OMSC.shtml>.

OTREC UPDATE

Jennifer gave an update on recent activities of the Oregon Transportation Research & Education Consortium (OTREC). The three OTREC themes are integrated land use and transportation modeling, healthy communities, and advanced technology. OTREC is looking at adding capacity to do research. Good research projects will attract graduate students and will help grow the program.

For the 2006-2007 funding year, there was about \$1 million available. Of the 54 submittals, 22 were selected for funding. The list of 2006-2007 projects can be viewed at http://www.otrec.us/main/2007_projects.php. Research topics had to be research, education or technology transfer. The 2007-2008 solicitation is about \$3 million. Projects were due at the end of April and are now being peer reviewed. Final decisions on 2007-2008 projects should be made in October.

All projects must be matched 1:1 with non-federal funding. This can be a money match or in-kind that is not federally funded. Exceptions to non-federal funds are SPR, TCRP and NCHRP funds. MTIP funds are not eligible for match.

About \$3 million is available for the January 2008 solicitation. The process is to first submit an abstract which allows the peer reviewers to be identified. Following this, a full proposal is submitted. John Gliebe has submitted some modeling-related projects for the upcoming round.

Dick stated that the OMSC has several research ideas and suggested that OMSC make a list of projects, prioritize them and coordinate with OTREC. Jennifer stated that the principal investigator (PI) must be from an OTREC member university and must be

approved as a PI. She suggested that the OMSC coordinate with John to let him know what is important to the OMSC members. OMSC sponsorship for proposals would be favorably viewed because results are likely to be applied and not be just an academic exercise. There is also interest in having information shared at conferences, workshops, etc., and OMSC members do this routinely.

OTREC is a separate program from the Center for Transportation Studies at PSU. Rob Bertini is the Director of OTREC and Jennifer is the Director for the Center for Transportation Studies, which is more college-focused.

OMSC members wishing to receive OTREC newsletters can sign up at <https://www.lists.pdx.edu/lists/listinfo/otrec.news>.

2008 RESEARCH TOPICS

Jennifer expressed an interest in doing over sampling for GPS as part of the OHAS project. She suggested that OMSC look creatively at other foundations and other organizations that may have an interest in research topics. It is important that an interested PI be identified to sponsor OMSC proposals to OTREC.

OMSC members were encouraged to think about potential research topics for discussion at its October meeting.

OTHER ISSUES/AGENDA TOPICS

For the October meeting, Lei Zhang/Oregon State University will be invited to share his research topics and ideas with the OMSC. Members were asked to review the list of OTREC research topics to identify future speakers of interest.

There is continued interest in road tolling. Jim Whitty/ODOT was invited to address the OMSC but has not been available. Jim's discussion addresses the question: if we want to develop a toll road, how do we do it? A more important question perhaps is: what are the implications of toll roads and should OR even consider them? OMSC members were requested to consider who may be appropriate speakers for future OMSC meetings to address this latter question.

NEXT MEETING/AGENDA

The next quarterly OMSC meeting will be on Wednesday, October 17, 2007, from 1:00-4:00 p.m. in Salem. Agenda items include:

- Subcommittee Reports
 - Applications - Reiff
 - Modeling Program Coordination – Walker
 - Professional Development - Jackson
- Program Updates
 - Oregon Household Activity Survey – Upton

- Transitional Model – Upton
- Research Interests – Lei Zhang
- OMSC research interests and opportunities - All

The meeting adjourned at 4:00 p.m.

MEETING HANDOUTS/REFERENCES

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

- The TRB Special Report 288 - "Metropolitan Travel Forecasting: Current Practice and Future Direction" is available at:
http://www.trb.org/news/blurb_detail.asp?id=7821
- Jennifer Dill's slide presentation can be accessed on the OMSC website at
<http://www.oregon.gov/ODOT/TD/TP/OMSC.shtml>.
- The list of OTREC funded 2006-2007 research projects can be viewed at
http://www.otrec.us/main/2007_projects.php.
- OMSC members wishing to receive OTREC newsletters can sign up at
<https://www.lists.pdx.edu/lists/listinfo/otrec.news>.