

**OREGON MODELING STEERING COMMITTEE  
MODELING PROGRAM COORDINATION SUBCOMMITTEE  
Mid-Willamette Valley Council of Governments, Salem, OR  
July 19, 2006  
9:00 a.m. – noon**

**MINUTES**

**ATTENDANCE**

Dick Walker, Metro, Chair  
Ray Jackson, Mid-Willamette Valley Council of Governments  
Bud Reiff, Lane Council of Governments  
Shinwon Kim, SW Washington Regional Transportation Council  
Bill Upton, Oregon Department of Transportation  
Michal Wert, MW Consulting

**Guests**

Becky Knudson, Oregon Department of Transportation  
Eric Moore, Oregon Employment Department

**MPO/STATEWIDE MODEL INTERFACE AND INTEGRATION**

Bill Upton stated that the draft report on model interface and integration, prepared by Keith Lawton and based on interviews with all MPOs, ODOT and others, should be ready for distribution to the MPC in August. Since there is no urgency for completing the report and results will not influence any models under development, it was agreed to continue the discussion to October instead of scheduling a special MPC meeting.

Dick Walker stated that it has been a long time since Metro conducted an external survey. Metro is debating whether to do one now, wait for the OHAS, or use the statewide model. It was noted that MetroScope has been validated and is running. Becky stated that the statewide model is being calibrated and should be available to use by the end of the year.

**HOME TO WORK O/D DATA FROM LOCAL EMPLOYMENT DYNAMICS  
(LED)**

Becky Knudson and Eric Moore gave a presentation on the U.S. Census Bureau Pilot Project: *On The Map* Commuter Origin-Destination Data. A copy of the handout material (slide show) accompanies these minutes. *On The Map* can be accessed at <http://lehd.dsd.census.gov/led/datatools/onthemap.html>.

This is a joint project between the US Census Bureau, 12 participating states, and Cornell University. More states are joining regularly. *On the Map* is an interactive mapping

application to show where people work and live with comparison reports on their age, earnings and industry distributions. Reports do not provide true data but are looking at synthesized data, which allows presenting information at the Census block level. The focus is on workers and jobs. There is interest in making this information useful for broader applications where the need is identified. For example, household information can be provided instead of just core information.

Eric is part of the pilot and has access to data used for the project. O-D data for Oregon is based on covered employment and wages, unemployment insurance wage file data from the OR Employment Department, and place of residence data is based on the Census Bureau's Statistical Administrative Records System. Eric stated that covered employment data does not include self-employed. A lot of work has been done with state populations but not as much with local government populations. Geocoding for payroll centers and headquarters data is not a problem because there are specific addresses. The data base does not include the address itself, just the Census block.

Bud Reiff stated that MPOs spend a lot of time allocating worker distribution and they should be used as a resource for this project. They can also provide suggestions on other data needs that may be available from this project.

Becky stated that the *Show Me the Oregon Data* ratios of LED mapping employment to GIS employment by Census Tract (see slideshow) appears to have no fundamental bias but the two data sources reveal that there are differences in comparison of LED and GIS data. Dick stated that, in comparing LED data to 2000 journey-to-work data, there seems to be on average 15 percent difference but this could allow tracking of tendencies over time. Eric expressed caution about comparing 2002 with 2004 but this will be looked at it in the future.

Dick noted that some of this information could be used to develop performance measures. Work trip per employee or vehicle miles traveled per worker are more useful than some performance measures that are being considered.

Bud stated that journey-to-work data is difficult to match with wage levels, etc. It is important to look at time distributions by wage level because models should be able to see if there are different wage levels for different travel patterns. A lot of Census data is suppressed and this program could make this information available.

Dick stated that this data will not be used as a validation statistic but it can be used as an indicator between surveys. As it becomes more viable it can be used for a lot more and the geocoding and GIS enhancements are important. This is intraregional data, between cities and between states.

Becky stated that the US Census is trying to get more use of the data they have. She requested all MPC members to access the *On The Map* site and give her feedback on how it can be most useful to Oregon. She will package the information to submit to FHWA as an Oregon response.

## **OR HOUSEHOLD ACTIVITY SURVEY**

Dick stated that construction in the transit mall in Portland will delay Metro's participation in the OR Household Activity Survey (OHAS) for about two years. It will not be able to begin surveying until the construction is complete and some 'settling down' time passes. Metro will revise its budget to make money available to participate in start-up costs and other MPOs and ODOT should be able to begin surveys as scheduled.

The OMSC MPC/OHAS Subcommittees met earlier in the week to talk about a strategy to keep the project moving forward. Becky Knudson will work with the consultants who conducted the pilot project to better define start-up costs. She will review the OHAS schedule and budget and suggest a revised approach for review by the subcommittee.

## **VISUM TRANSITION**

The purpose of this agenda item was for brief discussion on the status of transition to VISUM by the MPOs and ODOT.

Ray Jackson stated that MWVCOG is doing network coding and has a basic network somewhat complete. MWVCOG staff is very busy and has not spent much effort on VISUM but its consultant PTV is interested in using VISUM for the Salem River Crossing Project. PTV will code in transit as part of the Salem River crossing project. The R model works fine within EMME/2 but it is not clear how it works with VISUM.

Dick stated that Metro has had VISUM for about a year and is using the auto side of it. Staff has been busy with other projects and they are not using VISUM in the full demand model. Rather, they simply take EMME/2 trip tables and convert them to VISUM. There have been struggles, challenges and opportunities with VISUM. One example is the translation of the delay functions from EMME/2 to VISUM. The functions did not directly translate. However, it did provide an opportunity to develop an improved technique. There are also difficulties with transit - EMME/2 produces time per mile but VISUM does this by node. This is addressed in a later version of the software. PTV is in the Metro office for several days to resolve outstanding issues so that VISUM can be used in the full model suite.

Bud suggested that Metro could do an equilibrium assignment for turn capacity movements. Dick stated that VISUM works like EMME/2 and looks for other routes or delays - it is a function-weave design. The intent is not to do detailed intersection analysis for capacity; algorithms can provide approximations. However, for doing detailed study, the ability is there to be more precise if the time and data are available.

Shinwon Kim stated that RTC has coded transit into VISUM and this is very different than EMME/2. In EMME/2, a user can follow the mode with text file if the route and route numbers are known. This is difficult to do with VISUM. VISUM can do

interactive transit on the street which cannot be done with EMME/2. Scott Higgins at Metro has done transit assignment in VISUM and is a good contact person.

Dick stated that for the transit assignment, VISUM can do things more consistently and in the manner that the Federal Transit Administration (FTA) wants them done (i.e., mode choice parameters match path choice parameters). Currently, there is a model preference bias and this is generally represented in the model as a constant. This does not work for a short trip because the constant will be a higher percentage of the utility than for a longer trip. Dick did not feel that this made sense. The preference bias should be time- or distance-based.

When doing the transit assignment, VISUM allows putting coefficient parameters on the criteria for path choice which allows differentiation of the in-vehicle time for transit and premium mode. Matrices show how much time is on busses and how much is on premium mode. Different time coefficients can then be used on those time matrices in the mode choice model. This is theory and the approach has not yet been applied.

Dick suggested that RTC borrow coefficients from Metro when considering light rail, since there is no light rail in Vancouver now but it is planned for the future. This should be cleared with FTA if New Starts money is being used

Bill stated that ODOT had consistency problems earlier on and has not had time to work with VISUM. It has been set aside for now. The Corvallis and Bend MPO models are being developed in EMME/2 but there is discussion about doing a conversion to VISUM in Medford.

Dick stated that Metro keeps in contact with INRO because there are several studies in the Metro region that will go on for several years that need to continue in EMME/2. INRO gave a presentation to Metro staff on EMME-3 and Dynameq assignment. They have improved graphics to be more GIS-like but there are not a lot of functionality changes. It would be good for more people to ask about transit assignments to either push INRO to address the requirements for New Starts or to explain why their approach is acceptable. Dick stated that it is hard to move dynamic assignment from research to practical application. Dynameq costs \$ 10,000-12,000 which is very expensive. It is intended for a planning level analysis and is not as detailed or data intensive as VISUM. Metro has the EMME-3 Beta version and due to staff availability are having some difficulty in getting it started.

## **BRAINSTORMING ON FUTURE MPC TOPICS**

Dick stated that the MPC has two ways to determine agenda topics. One is to address topics of the day, which includes on-going projects. The other is to address issues proactively, such as developing a white paper on impacts of fuel price increases.

The members brainstormed on future meetings and topic sponsors:

1. Fuel price increase white paper (partner with UTC) – Dick Walker

2. Appropriate approach to land use modeling – Bud Reiff
3. Next generation model needs – Dick Walker
  - a. Scope model elements
  - b. Data needs
  - c. Practical tour-based/activity models
    - i. Peak spreading – Shinwon Kim
    - ii. Model Structures
4. Coordinate modeling updates/activities with UTC – Upton
5. VISUM dynamic assignments – applications and results – Walker
6. Project reports on technical tool applications - All
  - a. Salem Bridge crossing – Jackson
7. New Starts primer/applications – Walker/Kim
8. Host presentations appropriate to MPC – All
9. Misc. “topics of the day” - All

### **NEXT MEETING AGENDA**

The next meeting of the MPC is October 18, 2006 from 9-10 a.m. at the MWVCOG offices in Salem. The agenda will be dedicated to a discussion on Model Integration and other topics of the day will be discussed if time permits.

The meeting adjourned at 11:30 a.m.