



## **Ohio Travel Demand Model Users Group Summer Meeting**

The meeting was held on Friday, June 17, 2022, at Vern Riffe Center, 77 S High St #B-1, Columbus, OH 43215 on the 31<sup>st</sup> Floor in Room South B and commenced at approximately 10:00 AM. This was an in-person MUG meeting with optional Teams meeting link for virtual participation (see Appendix A for the virtual attendance list).

The OTDMUG chairman Rob Bostrom started the meeting with a welcome and round introduction. 23 people were in attendance (13 in person and 10 virtually).

Rob Bostrom made a motion to approve both December 2021 and March 2022's meeting minutes. Rebekah Anderson seconded. The motion passed.

Vince Bernardin motioned to accept two new members, Steve Tuttle - RSG, and David Souleyrette -KYTC. Greg Giaimo seconded. The motion passed.

Andrew Rohne stated the MUG website was up to date.

Vince Bernardin (Caliper) presented *Recent Innovations: Truck Route Choice, Machine Learning, Nested Destination Choice and More*. He first introduced a new truck assignment method - the path-size logit model for truck route choice. This method was applied to assign FAF5 truck volumes at national level. A national OD routable network was developed by Caliper for this work. ATRI data was used for the model calibration and validation. Vince then presented some new features in the TRM (Triangle Regional Model) of North Carolina. The model is a hybrid trip-based model. Iterative Proportional Updating (IPU) was used for the population synthesizer instead of the IPF method. Explainable Artificial Intelligence (XAI) was applied to trip generation. Destination choice model was implemented in a hierarchical way by first choosing districts then TAZs. Nested mode choice model separated auto to two categories: own and other (i.e., borrow or pay). Rebekah chimed in and claimed that ODOT survey was capturing the borrow/pay information for auto trips. Parking models were developed for downtown and campus area based on 2016 survey.

Rob Schiffer (Future Plan) presented *Integrating FAF within the Iowa Statewide Model Validation*. FAF4 data was used to update the TransCAD-based Iowa Travel Analysis Model (iTRAM). FAF 4 data was only disaggregated within iTRAM study area, from FAF zones to County level first, then to iTRAM TAZs. FAF tonnages were converted to trucks based on Quick Response Freight Methods third edition 2019. Annual trucks were converted to daily ones by using the annualization factor of 260. Greg asked what data the FAF-disaggregation regression model was based on. Rob would provide the report with more details.

Steve Tuttle (RSG) presented *Illinois Statewide Model Development*. Big data were used to develop Base Year OD patterns: including rMerge (RSG) for auto OD data, and ATRI for truck OD data. Geofencing around gas stations/truck stops was used to determine the fuel and food stops when processing truck data. There were four models: Passenger and Freight Trip Models, separately by Long and Short Distance.

Finally, Rob gave a summary on TRB Statewide Model (SWM) Peer Exchange. Rob started with a background on the SWM history in the US. The first SWM was developed in KY in 1976. According to the 2017 SWM Synthesis, about 40 states had SWM. Fourteen (14) states participated the peer exchange in Columbus Ohio this June. There were six interesting Federal presentations covering topics including FAF, CFS, VIUS, NHTS, NPMRDS, national long-distance model, etc. The peer exchange ended with a research topic brainstorming. A final report with future research recommendations will be produced this Fall.

In other business, Rebekah would update the status of the refreshment fund in a later time (\$37 was spent on refreshments, \$37 was donated at the meeting, leave a balance of \$75). Greg reiterated on the decennial 2020 model update. 2021-2024 traffic counts would be used for the 2020 model validation. Since the census data would be available early 2023, it's now a good time to update the model networks.

The meeting was adjourned at approximately 1 pm. The September meeting will be in person only at the Don Scott Airport on September 9, 2022.

## Appendix A: Virtual Attendance List

### Virtual attendees:

- Kathryn Beck (Michigan DOT)
- Samuel Granato (ODOT)
- Lisa Householder (TMACOG)
- Joshua Kieselbach (ODOT)
- David K Souleyrette (KYTC)
- Nino Brunello (ODOT)
- Steven Trevino (QK4)
- Adam Haunhorst (LACRPC)
- Gaurav Vyas (Bentley)
- Xinbo Mi (Evansville MPO)