Executive Summary On-Line Course

Frequently Asked Questions

Q: What is a travel demand model?

A: A simulation of an area's transportation system and travel demand model characteristics. Models are used to predict traffic volumes based on expected changes to the infrastructure, including transportation and land use.

Q: What are travel demand models used for?

A. MPO Long Range Transportation Plan (LRTP) Updates, Comprehensive Plans, Strategic Intermodal System (SIS) Planning, Campus Master Plans, Concurrency Applications, Congestion Management Systems, corridor studies, Project Development & Environment (PD&E) Studies, Development of Regional Impacts (DRIs), Interchange Justification/Modification Reports (IJRs/IMRs), and toll feasibility studies.

Q: What are some of the applications of travel demand models?

A. Model applications include determining the impacts of specific transportation improvements or proposed developments, determining the types of trips being made in the region (trip purpose), and the provision of statistical comparisons between model years and or alternatives.

Q: What are the four steps in the traditional four-step modeling process:

A: 1.) Trip Generation (how many trips), 2.) Trip Distribution (where to), 3.) Mode Choice (by car or transit), and 4.) Trip Assignment (what route).

Q: What does FSUTMS stand for?

A: Florida Standard Urban Transportation Model Structure

Q: What types of FSUTMS models are there?

A: 1.) Highway Only (how many cars), 2.) Highway/Transit (how many cars and transit riders), and 3.) Freight/Truck (how many trucks).

Q: What is the required software for FSUTMS and how much does it cost?

A. FSUTMS/Voyager is the required software and is developed by Citilabs, Inc. It is free to public agencies. As of June 2008, for consultants, it costs $13,500 for the first copy and $10,125 for each additional copy. Maintenance costs $1,750 each year for the first copy for consultants and $1,250 each year for each additional copy.

Q: What are productions and attractions and what are the two basic data variables used to generate them?

A: A production is the home end of a home-based trip and is generated with household data. An attraction is the non-home end of a home-based trip and is generated with employment data.

Q: What data is typically free of charge?

A: Population, dwelling units, auto availability, hotel-motel units, employment, characteristics of roadway, transit, and toll facilities, and traffic counts already available.

Q: What data requires additional agency costs?

 A: External trips, trip production and attraction rates, mode choice constants and coefficients, and supplemental traffic counts.

Q: What is a TAZ?

 A. TAZ stands for Traffic Analysis Zone, which is a geographic unit of analysis used to aggregate socioeconomic data (household and employment data).

Q: What are the three common types of mode choice models?

 A. 1.) Auto Occupancy Model (converts person trips to vehicle trips), 2.) Binomial Logit Model (splits trips into auto and transit), and 3.) Nested Logit Model (splits trips among modes and submodes).

Q: Who develops and maintains models in Florida?

 A. 1.) Metropolitan Planning Organizations (MPOs), 2) Florida Department of Transportation (FDOT) District Offices, and 3) FDOT Central Office.

Q: What is the difference between model calibration and validation?

 A: Calibration is a process where models are adjusted to observed travel behavior, whereas validation is a process where models are adjusted to simulate new base year traffic counts.

Q: When is a model calibrated and validated?

 A: At the beginning of an LRTP update, when updating to a new base year, or when developing new models from scratch. After refining portions or all of a model, the model is also typically validated.

Q: Where can I find additional information on modeling in Florida, including FSUTMS standards and training?

 A: www.fsutmsonline.net