TPB Version 2.3 Travel Model:
Status report and final documentation

Presentation to the TPB Travel Forecasting Subcommittee

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Version 2.3 Discussion Topics

(Items #2 – #5. on today's agenda)

- Status of Model and Documentation (Milone)
- Consultant assisted model refinement activities (Moran, Seifu)
- TPB staff's review of consultant-generated recommendations from past 6 years (Moran)

Version 2.3 status

- Version 2.3 is adopted
  - Has been used in the AQ analysis of the 2011 CLRP
  - Being used to support SIP planning
  - Minor refinements have been implemented (discussed later)
- Version 2.3 is in active use by local agencies
  - Virginia (I-66 MM Study, TransAction 2040,Dulles Toll Road)
  - MDOT (Veirs Mill/ MD 586 BRT study)
  - Fairfax County, Loudoun County, M-NCPPC (Mtg.)

Staff observations so far

- TPB staff is still learning some details about applying the model, for example:

  - Current station-level mode of access summaries for Metrorail distinguish among PNR, KNR, and Other (but walk-access and bus-access trips are not distinguished)

  - The AEMS mode choice application program may be used to process and "trace" inputs/outputs of individual i/js (SELI, SELJ, Procsel, Trace)

Staff observations so far

- Summary programs
  - Many summary programs are now included with the model, and are listed on p. 1-35 of the user's guide
  - Future work: TPB is addressing Version 2.3-based accessibility routines
- The preservation of a Version 2.2-type application has facilitated the adoption of the Version 2.3
- Version 2.3 will continue to evolve

Model Refinements

- Model "build" presented in November:
  Version 2.3.36

- Current "build" formulated since November:
  Version 2.3.38

- As per fundamental modeling output results, there are _no differences_ between V2.3.36 and V2.3.38,
  - V2.3.38 includes:
    - Script, batch file refinements, corrections (see page 1-2 of the user's guide for details)

Documentation

- The calibration report and user's guide have been <u>finalized</u> and are being released today.

- The calibration report has been updated to:

  1. reflect the latest model release information; and

  2. reflect suggestions comments received.

- The user's guide includes more extensive discussion of batch and script files used for each model step

- "Draft stamp" is removed

Documentation:
New in the latest user's guide

- Quick start to running the model (p. 1-22)
- How to set Windows PATH environment variable (p. 1-20)
  - Eliminates the need to start Cube Voyager or Cube Cluster manually, since the batch file will do this if the PATH environment variable is set correctly
- How to run the model both with and without Cube Cluster (p. 1-25)
- What to do when the model run crashes: Tips for debugging (p. 1-27)
- Utility for converting DBF files to CSV files, so that one can more easily compare model folders with Windiff, WinMerge and other similar tools (p. 1-35)

Calibration report contents

- **List of Chapters**
  - Introduction
  - Inputs to the Travel Model
  - Demographic Models
  - Trip Generation
  - Trip Distribution
  - Mode Choice
  - Time-of-Day Model
  - Traffic Assignment/Feedback
  - Validation

- **List of Appendices**
  - A. Model Adjustment Factors
  - B. Year-2007 Jurisdictional trip summary by mode (Est. and Obs.)
  - C. Year-2007 mode choice est. vs. target totals by market segment

User's guide contents

- List of Chapters
  - Introduction
  - Set-Up Programs and Highway Network Building
  - Highway Skim File Development
  - Pre-Transit Network Processing
  - Transit Skim File Development
  - Transit Fare Development
  - Demographic Submodels
  - Trip Generation
  - Trip Distribution
  - Mode Choice
  - Time-of-Day Processing
  - Traffic Assignment
  - Transit Assignment

- List of Appendices
  - A. Flowcharts
  - B. Batch Files
  - C. Cube Voyager Scripts
  - D. AEMS and LINESUM Fortran Control Files

Final Comments

- We appreciate feedback from users
- Sections of the COG web site addressing travel modeling will be updated in the coming weeks
  - Ver. 2.2 references will be updated with appropriate Ver. 2.3 references
- TPB staff has met with Citilabs, Inc. in December to discuss emerging opportunities in the area of Cube Cloud Services (CCS). Staff position at this time is to stay informed, but not to act at this time