DISTRICT 4
NEW MODEL FEATURES
FDOT MODEL TASK FORCE
ORLANDO, FL

NOVEMBER 30, 2010

PRESENTATION
OUTLINE

- Part 1: SERPM6.5 SubArea Highway -Only Modeling Process
- Part 2: SERPM6.5 New Reporting Features
- Part 3: SERPM6.5 Analyst Adjustment Process
- Part 4: District 4 - New Initiatives
PART 1: SERPM 6.5 SUB AREA HIGHWAY-ONLY MODELING PROCESS

- SERPM65 Coverage and Existing Models
- Why Subarea Model
- Model Performance
- Model Run Times

FDOT District 4 and The Corradino Group

SERPM 6.5 COVERAGE

- South East Region:
  - Palm Beach,
  - Broward
  - Miami-Dade

- 2005 Population: 5.4 million
- 2005 Households: 2.0 million
- 4,284 TAZs
**WHY DO WE NEED A SUBAREA MODEL?**

- **SERPM 6.5 Time-of-Day** model takes a long time to run (12-14 hrs 4 Cores)

- Small scale studies require quick response - SERPM 6.5 SubArea (~4+hrs)

- **SERPM 6.5 Sub Area** provides consistent data and model assumptions regardless of scale for all Southeast Florida studies

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**SUB AREA CONCEPT: DYNAMIC TAZ DISTRICTING**

- **Subareas** are defined by user-specified polygons via the Cube network interface.

- **Outside** user-defined Sub Area trip matrices are aggregated to Districts

- **Inside** user-defined Sub Area the TAZ detail is maintained.
PART 2: SERPM 6.5
NEW REPORTING FEATURES

- Cube Voyager scripted HEVAL with Cube Reports
- **User-Specified Windows** for focused HEVAL reports
- Reports V/C for LOS C,D and E capacities
- Reports by area type and facility type groups:
  - Dollar value of travel time
  - Vehicle operating costs
  - District 4 Study on Road and Transit User Cost (Cambridge Systematics, Inc., 2008)
- Generates evaluation reports for the user-defined area of interest.
- Reports all metrics included in the standard HEVAL reports.
PART 3: SERPM 6.5
CUBE ANALYST
ADJUSTMENT PROCESS

✓ Cube Analyst Overview

✓ GTCRPM ANALYST SUMMARY

✓ Recent Application

CUBE ANALYST
OVERVIEW

✓ Minimizes model error in the base year.
  (count vs. volume)

✓ Provides a systematic traffic forecast
  adjustment process

✓ Produces a revised trip table for Hwy Assign.

✓ SERPM TOD, I-95 Corridor Project application
  reduced %RMSE from high 30’s to approx 20%.
GTCRPM ANALYST SUMMARY

NCHRP 255 Maximum Allowable Deviation in Total Screenline Vols.

GTCRPM3.3 Original Version	GTCRPM3.3 Analyst Version

Scatterplot of Assigned Volumes vs. Observed Counts

GTCRPM3.3 Original Version	GTCRPM3.3 Analyst Version

RECENT APPLICATIONS

✓ I-95 Corridor Planning Study (SERPM)

✓ Greater Treasure Coast Regional Planning Model (GTCRPM)
PART 4: DISTRICT 4 - NEW INITIATIVES

- SERPM Dynamic Traffic Assignment Subarea process utilizing mesoscopic refined OD Matrix Estimation
- SERPM 6.6 Transit Model Enhancements to meet FTA requirements
- SERPM Enhanced Usability Application
- Next Generation SERPM 7.0

THANK YOU!

Questions?

www.fstmsonline.net/index.php/?model_pages/modD44/index/