Florida Travel-Demand Forecasting: Five-year Blueprint

Terry Corkery, FDOT Systems Planning Office
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History

- **Sept 2008**: New FDOT Modeling Manager Vidya Mysore and MTF tri-chairs direct all committees to develop short-term (3-yr) priority topics
- **Dec 2008**: Tri-chairs and committee chairs meet in Orlando to develop MTF priorities list
  - 50 focus areas
  - Consolidated down to 11 major topics
**History (cont’d)**

- **May 2009**: Survey of FL modeling community identifies 7 top priorities

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### May 2009 Survey Results

<table>
<thead>
<tr>
<th>Top Priorities</th>
<th>Private Sector</th>
<th>Public Sector</th>
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<tbody>
<tr>
<td>Advanced toll modeling addressing congestion pricing and HOT-lane issues</td>
<td>4</td>
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<td>Transportation networks (establish new standards based on new-Cube GIS geodatabase framework, etc.)</td>
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<td>Incorporate time-of-day modeling into the FSUTMS framework</td>
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<td>Speed data collection beyond the traditional data collection done by the statistics office (e.g., incorporating cell phone tower data, etc.)</td>
<td>6.5</td>
<td>7</td>
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<td>Research and potential implementation of activity-based modeling into the FSUTMS framework</td>
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Overall Top Seven Priorities

- Time-of-day Modeling
- Land Use/Transportation Model Integration
- Advanced Toll Modeling
- NHTS Data Processing and Analysis
- Transit Data & Analysis (New Starts Funding)
- Transportation Network Standards (GIS)
- Post-processing Tools (Air Quality and ITS)
Current Status

- **2010-2013** activity period
  - Research completed
  - Products developed
  - Work in progress
  - New focus areas in response to Florida’s needs

Progress Report

- Time-of-Day Modeling
- Land Use and Transportation Model Integration
- Advanced Toll Modeling
- National Household Travel Survey
- Transit Model Upgrade
- Transportation Networks/GIS Standards
- Post-processing Tools

<table>
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<th>REMAINDER OF TOP 11 PRIORITIES</th>
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• Time-of-Day Modeling
  – Time-of-Day Choice Model ✓
  – AB Model Development

• Land Use and Transportation Model Integration
  – Research (Cellular Automata, FSUTMS Land Use Model Framework) ✓
  – SWM implementation July 2013

• Advanced Toll Modeling
  – Multi-Server Queuing, Ramp-to-Ramp Tolling ✓
  – Open-road Tolling

• 2009 National Household Travel Survey
  – Results Distributed 2011 ✓
  – Data Analysis Research, Lessons Learned ✓
  – Florida Travel Survey Program

• Transit Model Upgrade
  – Developed with FTA assistance ✓
  – Guidance on conducting transit surveys ✓

• Transportation Networks/GIS Standards
  – MIXS database ✓

• Post-processing Tools
  – FITSEval ✓
  – Air Quality ✓

• Freight and Goods Movement
  – Supply-chain Statewide Freight Model
  – Transearch Commodity Flows
  – ATRI Truck Flows
Progress Report (cont’d)

• Activity-based models
  – SHRP 2 C10A (Jacksonville)
    • Integrated Advanced Travel Demand Model and Fine-Grained, Time-Sensitive Network
  – Regional AB model implementation
    • Northeast District 2
    • Tampa Bay District 7
    • Southeast District 4 & 6
    • Treasure Coast (AB Lite) District 4

• Speed Data and Analysis
  – Volume-Delay Function Research

• Dynamic Traffic Assignment
  – DTA Tool for Current Models Research

Major Emerging Topics

Over the next several years FDOT expects to focus on:
• Managed/Express Lanes – Improving mobility and capacity
• Future Corridors (tollled) – Long distance travel for business & tourists/visitors
• Freight & Urban Goods Movement – Improving mobility, connectedness and reliability

Other Needs:
  – Bicycle/Pedestrian Trips (AB models expected to help)
Next Steps

• Continue 2010-2012 work in progress
  – Land Use Models
  – Florida Travel Surveys Program
  – Advanced Model Development

• Begin New Blueprint Cycle: 2014-2018
  – Major Emerging Topics
    • Managed Lanes, Future Corridors, Freight
  – Committees to develop topics based on regional and state needs
  – MTF Leaders consolidate list to manageable size
  – Priorities Survey

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