Vehicle Probe Project II

Agency Project Team Webcast
October 8, 2014
Call Courtesies

- Please keep your phone muted until asking a question or speaking (press *6 to mute/unmute individual phone lines)
- Please do not place call “on hold” as your hold music may be heard by the group
- Please call 610-662-5569 for difficulties with the web application
<table>
<thead>
<tr>
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<th>Agency</th>
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<tr>
<td>Connecticut DOT</td>
<td>Tom Maziarz, Michael Connors, Stephanie Molden</td>
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<td>Rhode Island DOT</td>
<td>Bill Nordstrom (Jacobs), Dan Herstine (Jacobs)</td>
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<td>New Jersey DOT</td>
<td>John Allen, Sudhir Joshi, Dennis Motiani, Kelly McVeigh, Neha Galgali</td>
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<td>Pennsylvania DOT</td>
<td>Jay Sengoz</td>
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<tr>
<td>Washington DC DOT</td>
<td>Jason Tao</td>
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<td>Maryland SHA</td>
<td>Glenn McLaughlin</td>
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<td>Virginia DOT</td>
<td>Scott Cowherd, Rose Lawhorne, Mena Lockwood, Paul Szatkowski</td>
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<tr>
<td>North Carolina DOT</td>
<td>Kelly Wells</td>
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<tr>
<td>South Carolina DOT</td>
<td>Dipak Patel</td>
</tr>
<tr>
<td>Florida DOT</td>
<td>Gene Glotzbach, Derek Vollmer, JoAnn Oerter (Atkins)</td>
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<td>Agency</td>
<td>Project Team Members</td>
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<tr>
<td>-----------------------------------------------</td>
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<tr>
<td>FHWA</td>
<td>Vidya Mysore, Rich Taylor</td>
</tr>
<tr>
<td>Delaware Valley Reg. Planning Comm.</td>
<td>Jesse Buerk</td>
</tr>
<tr>
<td>MWCOG</td>
<td>Wenjing Pu, Andrew Meese</td>
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<tr>
<td>North Jersey Transp. Planning Authority</td>
<td>Keith Miller, Sutapa Bhattacharjee, Solomon Caviness</td>
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<tr>
<td>Richmond Reg. Planning District Comm.</td>
<td>Tiffany Dubinsky</td>
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## Agenda

|   | Introductions & Welcome | Karen Jehanian, KMJ  
|   |   | George Schoener, I-95 Corridor Coalition |
|   | VPPII Update | Stan Young, University of Maryland (UMD) |
|   | DUA Status and Contracting Issues | Kathy Frankle, UMD |
|   | VPP Suite  
|   | • Tools and Enhancements  
|   | • Working Groups  
|   | • User Group webcast (September 24, 2014)  
|   | • Funding of VPP Suite | Michael Pack, UMD CATT Lab  
|   |   | John Allen, New Jersey DOT  
|   |   | George Schoener, I-95 Corridor Coalition |
|   | Data Validation  
|   | • Arterial Validation Results  
|   | • VPPII Validation Program Moving Forward | Stan Young, UMD |
|   | Other VPPII Activities  
|   | • website changes,  
|   | • project documents,  
|   | • upcoming meetings/events | KMJ |
|   | Wrap up & Thank you | George Schoener, I-95 Corridor Coalition |
Introductions & Welcome

George Schoener, I-95 Corridor Coalition
Karen Jehanian, KMJ
VPPII Update

Stan Young, University of Maryland
DUA Status and Contracting Issues

Kathy Frankle, University of Maryland

- Contracts – All state contracts signed except two
- DUAs – Working to get new DUAs signed
  - getting ready to restrict access
# DUA Status - DOTs

<table>
<thead>
<tr>
<th>Organization Name</th>
<th>Date rec'd signed DUA</th>
<th>Organization Name</th>
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<tr>
<td>Connecticut DOT</td>
<td>7/30/2014</td>
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<td>New York State DOT</td>
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<td>7/18/2014</td>
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<td>Maryland SHA</td>
<td>7/29/2014</td>
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<td>New Hampshire DOT</td>
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VPP Suite

Michael Pack, UMD CATT Lab
John Allen, NJDOT
George Schoener, I-95 Corridor Coalition

- Tools and Enhancements
- Working Groups
- User Group webcast (September 24, 2014)
- Funding of VPP Suite
Tools & Enhancements

• Volume Displays & Downloads
25th/75th & 5th/95th Percentiles
25th/75th & 5th/95th Percentiles
Dashboard Percentiles

MD-295 NORTHBOUND @ I-495/I-95

Direction: Northbound

TMC Code: 110+04269  Length of segment: 1.82 miles
Current speed: 23 MPH
Reference speed: 63 MPH

Date Sep 21, 2014 8:17 PM
Speed: 37 MPH
Historic average speed: 60 MPH
Travel time index: 1.7
Travel time: 2m 57s
25/75%: 58 MPH - 61 MPH
5/95%: 51 MPH - 64 MPH

www.I95Coalition.org  I-95 Corridor Coalition Vehicle Probe Project

October 8, 2014
Dashboard Percentiles

- Date: Sep 17, 2014 8:26 AM
- Queue: 22 miles
- Average queue: 13 miles
- Travel Time Index: 2.23
- Bottleneck average TTI: 1.76
- Historic average TTI: 1.41
  - 5/95%: 0.98 - 2.88
  - 25/75%: 1.14 - 1.89

Queue over time:
- Queue started at 5:30 AM and ended at 9:12 AM.
Dashboard Percentiles

Travel Time Index: 1.39

Date Sep 17, 2014 9:02 AM
Queue: 12 miles
Average queue: 13 miles
Travel Time Index: 1.68
Bottleneck average TTI: 1.76
Historic average TTI: 1.16
5/95%: 0.96 - 2.43
25/75%: 1.02 - 1.45
Header Updates

The "Open report as" button has been renamed to "Switch to". It will allow you to switch to a different tool in the suite with the same data you are viewing in the current tool.

The "Share" button is replacing the "Hyperlink" button. It will open a menu with the shareable link and, in the case of Trend Map, an embed code. This allows you to share the data set you are viewing with others.

All save features -- exporting to excel, taking screenshots, and saving movies -- can now be found under the "Save as" button.
Trendmap Sharing & Embedding

- Meant for “press” releases and other collaboration.
- Required re-write of
  - Interface
  - Interactivity
  - Storage/hosting
  - Security
UDC Error Correction

• Identified by PennDOT & VDOT

• Two issues:
  – Zero Speed UDC (Fixed and deployed!)
  – Statewide or multi-corridor (very long road)
    UDC per-person costs
Remaining UDC Issue

• Population and per-person UDC for multi-corridor analysis
  – Will be turned into a working group.
  – 8 Faculty Researchers at UMD are working on this in coordination with TTI and other thought leaders.

• Remaining Issues will be resolved in a working group with UMD Faculty support
VPP Suite User Group Webcast
September 24, 2014

Participating Agencies

– Florida DOT
– New Jersey DOT
– Pennsylvania DOT
– Rhode Island DOT
– Virginia DOT
– VA Ctr. for Transp. Innovation & Research
– BMC
– DVRPC
– MWCOG
– NJTPA
VPP Suite User Group Webcast

Topics

– Review of VPP Suite Features/Tools/Timeline
– Working Group Update – Bottleneck Algorithm
– Agency Input Session (what is working & what needs some attention)
– Funding Discussion
VPP Suite Funding (1 OF 2)

• Member agencies are relying on the Suite for problem identification, before and after studies, MAP 21, performance measurement, operations, and many other analytical uses to enhance agency capabilities & the driver experience.

• Three elements of funding:
  – Daily operations and maintenance
  – User technical support
  – New features/enhancements
VPP Suite Funding (2 OF 2)

• The Coalition is committed to the VPP Suite

• MCOMP funding is expiring in January

• I-95 CC Funding and Finance Committee is investigating a more permanent and sustainable funding source
Data Validation Effort

Stan Young

• Status and Schedule
• VA Validation Results – May 2014
Status and Schedule

<table>
<thead>
<tr>
<th>Month and Year</th>
<th>Data Set Name</th>
<th>State</th>
<th>Ground Truth Data Collection</th>
<th>Status</th>
<th>Emphasis</th>
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<tr>
<td>Apr-14</td>
<td>VA-07</td>
<td>VA - 1</td>
<td>Apr 05 - 13</td>
<td>Processed</td>
<td>arterials</td>
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<tr>
<td>May-14</td>
<td>VA-08</td>
<td>VA - 2</td>
<td>May 08 - 16</td>
<td>Processed</td>
<td>arterials</td>
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<td>Jun-14</td>
<td>MD-08</td>
<td>MD</td>
<td>June 2014</td>
<td>Data Received</td>
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<td>Jul-14</td>
<td>PA-07</td>
<td>PA</td>
<td>July 2014</td>
<td>Data Received</td>
<td>Freeway - Multi-Vendor</td>
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<tr>
<td>Sep-14</td>
<td>PA-08</td>
<td>PA</td>
<td>Oct 2014</td>
<td>In Planning</td>
<td>Freeway - Latency</td>
</tr>
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</table>

- Nov & Dec 2014: Virginia Arterials
- Solicit interest for 2015 schedule
  - Coalition members interested in sponsoring validation please contact UMD (Stan Young)
VA-07 (Leesburg Pike)
April 5-13, 2014

• VA-07
  – 34 Segments
  – 35.1 miles

• Data collection
  – 3705 total hrs.
  – 101 hrs. 0-15
  – 443 hrs. 15-25

• AASE
  – 8.9 mph 0-15 mph
  – <5 mph all other ranges
# VA-07 Validation Summary

## April 2014

### ES Table 1 – Virginia Evaluation Summary for Arterial

<table>
<thead>
<tr>
<th>Speed Bin</th>
<th>Absolute Speed Error (&lt;10mph)</th>
<th>Speed Error Bias (&lt;5mph)</th>
<th>Number of 5 Minute Samples</th>
<th>Hours of Data Collection</th>
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<tbody>
<tr>
<td></td>
<td>Comparison with SEM Band</td>
<td>Comparison with Mean</td>
<td>Comparison with SEM Band</td>
<td>Comparison with Mean</td>
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<tr>
<td>0-15 MPH</td>
<td>8.9</td>
<td>11.9</td>
<td>8.9</td>
<td>11.9</td>
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<tr>
<td>15-25 MPH</td>
<td>4.2</td>
<td>7.4</td>
<td>4.1</td>
<td>6.8</td>
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<tr>
<td>25-35 MPH</td>
<td>2.7</td>
<td>6.8</td>
<td>2.2</td>
<td>4.9</td>
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<tr>
<td>&gt;35 MPH</td>
<td>2.2</td>
<td>6.2</td>
<td>-1.5</td>
<td>-3.3</td>
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<tr>
<td>All Speeds</td>
<td>2.7</td>
<td>6.6</td>
<td>0.0</td>
<td>-0.4</td>
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Based upon data collected from April 5, 2014 through April 16, 2014 across 35.12 miles of roadway.
## Sample Segment – VA07-01

<table>
<thead>
<tr>
<th>SEGMENT (Map Link)</th>
<th>GEOMETRIC DESCRIPTION</th>
<th>TMC CODES</th>
<th>Bluetooth Data</th>
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<tbody>
<tr>
<td></td>
<td>Crossroads</td>
<td>Lanes</td>
<td>AADT</td>
</tr>
<tr>
<td>Starting at</td>
<td>Min</td>
<td>Min</td>
<td>#</td>
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<tr>
<td>Ending at</td>
<td>Max</td>
<td>Max</td>
<td>Density</td>
</tr>
</tbody>
</table>

**VA-07 Westbound in Virginia, commonly known as Leesburg Pike**

| VA07-0001 | Lisle Ave | 3  | 45288 | 4 | 8 | Yes | 110+05695 | 1.19 | A | 1.11 |
| VA-123    | 3  | 59367 | 3.4  | 35 | 2 |     | 110P05697 | 6   | B | 6.72% |

All Lengths in Miles / Speeds in MPH
VA07-01 WB – Travel Time
Tuesday April 8, 2014  Callout B

![Travel Time Graph]

- VPP One Minute Data
- BTM Traversals

Tuesday April 08, 2014
VA07-01 WB – Travel Time
Fri April 11, 2014   Callout C (adjusted scale)
Conclusions for VA07-01

- VPP data effective
  - Tracks Bluetooth data
  - Identifies slowdowns
- Extent of slowdowns
  - Most delay is underestimated
  - During extreme delays, extent of delay can be significantly underestimated
Other VPPII Activities

Karen Jehanian, KMJ Consulting

- Website changes,
- Project documents,
- Upcoming meetings/events
Coalition Website Changes

• Documents have been reviewed and are being moved, updated, or removed as needed.
VPPII Project Documents being updated

- Project Interface Guides (from vendors)
- Quick Start Sheet
- One-pager
Upcoming Meetings/Events


- **October 23-24, 2014** - Florida Data Symposium, Orlando, Florida

- **November 19, 2014** - Ground Transportation Technology Symposium, New York, New York

- **November 20, 2014** – Coalition Board Meeting

- **January 7, 2015** – VPP Suite User Group webcast –(10:00am to 11:30am)
Wrap Up & Thank you

George Schoener, I-95 Corridor Coalition
Thank You