Vehicle Probe Project

Project Team Status Update
September 25, 2013
Meeting Requests

All Participants

– Please hold questions until the end of each presentation

– Please give your name and agency before asking your question (at least the first time)

– 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

Additional Webcast & Audio Information

– Please call 302-331-1646 for difficulties with the web or audio application.
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<th>Speaker</th>
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<td>George Schoener, I-95 Corridor Coalition</td>
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<td>2 Funding &amp; Contract Issues</td>
<td>Kathy Frankle, University of Maryland</td>
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<td>3 INRIX Update</td>
<td>Rick Schuman, INRIX</td>
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<td>Stan Young, University of Maryland</td>
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<td>Zoe Neaderland, DVRPC</td>
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<td>• Shared Measures Brochure</td>
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<tr>
<td>9 Agency Updates on VPP and VPP Suite</td>
<td>All</td>
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<td>10 Communication Update</td>
<td>All</td>
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</table>
Coalition Activity Update

George Schoener
I-95 Corridor Coalition

• Coalition Funding and Work Plan
• NPMRDS – Federal Archived Data
Coalition Funding and Work Plan

- MCOM2 (Multistate Corridor Operations & Management Program)
  - Received funding through MCOM2 for projects including VPP
- Current Coalition Work Plan includes many VPP projects
NPMRDS

• NPMRDS (National Performance Management Research Data Sets provided by FHWA)
  – Working with MdSHA to obtain a data set for review
  – Coalition will prepare a document comparing VPP archived data to the NPMRDS
Funding & Contract Issues

Kathy Frankle
University of Maryland

- Funding and Contract Information
- DUA Status
- VPP Re-compete Process
Funding and Contract Info

• Funding the Coalition received for the VPP from MCOM2 is currently being processed.

• Any contract questions, please contact Kathy
Complete list of agencies and consultants with executed DUAs is available here on the Coalition website.
VPP Re-compete Process

✓ First Strawman RFP – May 22, 2013
✓ Establish Committee – Initiated July, 8 2013
✓ Draft RFP, Committee Meeting – July, 25 2013
✓ RFI to industry, Meeting to discuss – September 2013
  o Finalize RFP, last minute details – October 2013
  o Issue RFP – October 2013
  o RFP Deadline – November 2013
  o Evaluation and Award/s – January/February 2014
  o Pre-production data – April 2014
  o Go Live – July 2014
INRIX Update

Rick Schuman
INRIX

• Project Statistics
• NJ All-in Expansion
• Support Contacts Reminder
• Map Update Preparations
Project Statistics

- Availability (99% Contract Requirement)
  - August 2013: 99.93%
  - July 2013: 99.99%
  - June 2013: 99.71%
  - Year to Date: 99.86%
  - Project to Date: 99.89%

- Users (as of 9/11/13)
  - Monitoring Site – 781
  - Data Feed – 46
  - Archive requests – 1168 since launch
New Jersey All-in Expansion

- Added ~5,000 miles of arterials from July 1
- Available in Data Feed and VPP Suite
- Joins SC, NC, VA, MD, DC, RI as “all-in” VPP states
VPP Support Reminder

- Monitoring Site
  - Support@inrix.com
- Data Feeds/Integration
  - I95support@inrix.com
- VPP Suite
  - vpp-support@ritis.org
Map Update Preparations

• Anticipate map update late 2013/early 2014
• Initial preparations underway
• Myca Craven outreaching to API users
  – Secondary goal: understand breadth of API uses
• Looking to simplify TMC Sets – many legacy Sets likely no longer in use
Data Validation/Projects Update

Stan Young

- Status and Schedule
- GA Validation Results – May 2013
- MCOMP I Projects
  - Volume and O/D Data RFI
  - TMC code issues and updates
# Status and Schedule

<table>
<thead>
<tr>
<th>Month and Year</th>
<th>State</th>
<th>Ground Truth Data Collection</th>
<th>Status</th>
<th>Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb-13</td>
<td>MD</td>
<td>Feb 11 - 25</td>
<td>Published</td>
<td>freeways (workzones)</td>
</tr>
<tr>
<td>Apr-13</td>
<td>NC</td>
<td>Apr 30 - May13</td>
<td>Processed</td>
<td>arterials</td>
</tr>
<tr>
<td>May-13</td>
<td>GA</td>
<td>May 20-30</td>
<td>Being Finalized</td>
<td>freeway</td>
</tr>
<tr>
<td>Jul-13</td>
<td>MD</td>
<td>8-Jul-13</td>
<td>Being Processed</td>
<td>arterials</td>
</tr>
<tr>
<td>Sep-13</td>
<td>NJ</td>
<td>11-Sep-13</td>
<td>Deployed</td>
<td>arterials</td>
</tr>
<tr>
<td>Oct-13</td>
<td>PA</td>
<td>Oct 2013</td>
<td></td>
<td>arterials</td>
</tr>
</tbody>
</table>

- **May 2013**: Georgia Collection – Data processed
- **July 2013**: Maryland Data Collection – Arterials Only
- **August/September 2013**: NJ & PA – Arterials
GA Validation - May 20-30, 2013

- I-20 East of Atlanta
  - 16 Segments
  - 31.3 miles
- Data collection
  - 2251 total hours
  - 4.9 hrs 0-30 mph
  - 4.3 hrs 30-45 mph
- AASE (10 mph spec)
  - 4.7 mph 0-30 mph
  - 10.1 mph 30-45 mph
## GA Validation - May 2013

### GA Evaluation Summary

<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>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Comparison w/ SEM Band</td>
<td>Comparison w/ Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-30 MPH</td>
<td>4.70</td>
<td>6.80</td>
<td>59</td>
<td>4.9</td>
</tr>
<tr>
<td>30-45 MPH</td>
<td>10.10</td>
<td>14.40</td>
<td>51</td>
<td>4.3</td>
</tr>
<tr>
<td>45-60 MPH</td>
<td>3.70</td>
<td>8.40</td>
<td>776</td>
<td>64.7</td>
</tr>
<tr>
<td>&gt; 60 MPH</td>
<td>0.90</td>
<td>3.10</td>
<td>26127</td>
<td>2177.3</td>
</tr>
<tr>
<td>All Speeds</td>
<td>1.01</td>
<td>3.28</td>
<td>27013</td>
<td>2251.1</td>
</tr>
</tbody>
</table>

Based upon data collected from May 20, 2013 through May 30, 2013 across 31.3 miles of roadway. For more information please visit i95coalition.org.

- Minimal Congestion Found
- Acceptable results
Arterial Validation Work

• In Progress
  – Data collection complete - NC, MD & NJ
  – Analysis complete - NC & MD
  – Data collection planned - PA, VA, & NJ

• Later this year
  – Full update next project team meeting
  – Early analysis results indicate continual progression – not revolutionary breakthrough
Volume and O/D Data RFI

• Use case scenarios:

*Real-Time Volume and Origin-Destination Data for Operations: Concepts, Definitions and Use Case Scenarios*

https://app.box.com/s/dn01lzyyc4a2mc1twgb

• Folding into VPP re-compete
TMC Code Issues/Updates

• Objectives / Motivation of Study
  – Adequacy / granularity of TMCs
  – Proprietary natures, availability of map layers
  – Latency of updates

• Takeaways
  – TMCs adequate for freeways
  – Required for long term archives
  – Flexibility needed on new road, arterials, & apps

• Addressed in Re-compete specification
VPP Suite Tools and Enhancements

Michael Pack
University of Maryland – CATT Lab

- Usage Stats
- Updates on Development/New Functionality
Usage Stats

• As of Sept. 1, 2013
  – 1422 users have access to the VPP Suite
  – 61.4 Billion records have been downloaded from the massive data downloader (doubled since May of 2013)
  • This does not include stats for the use of individual tools, so these numbers are actually significantly lower than they should be.
User Delay Cost Analysis

- UMD introduced “User Delay Cost Analysis” on June 28th
- A new tool to estimate the cost of delay experienced by drivers as a result of congestion
- Combines probe speed data with volume data provided by the TTI
Real-time and Historic Weather Radar

• The Dashboard now includes a "Weather Radar" layer.
• When looking at real-time data, the weather radar layer is refreshed every 3 minutes. Historic weather radar is available consistently from March 2013 onward with additional data available as far back and December 2012 though significant gaps exist.
• From "Weather" layer drop down menu, a slider is available that can be used to adjust the opacity of the weather overlay.
Deeper Congestion Scan URLs

- The Congestion Scan now includes a button that will generate a "deep link".
- A deep link is a URL that you can visit (or share with others users) that will recall the Congestion Scan you were looking at, including how much you have zoomed in on the road or any time range filters you've applied.
Mileage

• The road search interface now includes the length of the road selected.

• As you adjust the TMC codes that bound your selection, the mileage displayed will be updated accordingly.

![Image of road search interface with length of selection displayed: 17.427 miles]
Data Exports: -1s replaced by NULL

- Prior to this release, data exports would include "-1" as an indicator of issues within certain fields.
- This "-1" value created problems for some users who were attempting mathematical calculations within spreadsheets.
- The June 28 release replaces that "-1" marker with "NULL".
- If you are using Excel to analyze your raw data exports, this will allow you to use Excel's built-in aggregate functions (SUM, AVG, etc.) to get proper results.
Next Deploy

• 18x faster UDC reports (hot-deployed)
• Late October/early November
  – More speed improvements
  – Easier access to visualizations
  – TMC selection uniformity
  – Multiple ranked bottlenecks on a single map
  – Trend map movie exports (animated Gifs)
  – Multiple queues in data downloaders (short vs. long duration queues)
  – Speed threshold alerting
Additional Information

• http://vpp.ritis.org/suite/updates/
• Documentation on UDC Calculations: http://vpp.ritis.org/static/delay_analysis/docs/DelayCalculations.pdf
• Want to improve the UDC report for your area? https://vpp.ritis.org/static/delay_analysis/docs/PreferredVolumeFormat.pdf
VPP Suite User Group

Michael Pack
University of Maryland – CATT Lab
Next VPP Suite User Group Meeting

• Meeting Information
  – October 15, 2013
  – Being held via webcast
  – Topics:
    • New VPP Suite tools
    • Discussion on “Top Enhancements” as decided by the VPP Suite User Group
    • Spotlight presentations by members on user Suite-generated products
Enhanced Performance Measures – State/MPO Outreach

Michael Pack
University of Maryland – CATT Lab
State/MPO Outreach Status

• Scheduled State/MPO Outreach Meetings
  – Connecticut – August 19, 2013
  – Rhode Island – September 19, 2013
  – South Carolina – October 2, 2013
  – Massachusetts – November 14, 2013 - after TISPTC meeting

• Planning for MPO Outreach Meetings
  – Richmond MPO & Virginia DOT
Partners Using Archived Operations Data Group

Zoe Neaderland
Delaware Valley Regional Planning Commission (DVRPC)
The Template is Available!
Partners Using Operations Data for Planning

Vehicle Probe Project Webcast
September 25, 2013
Effective Use of Measures

- Partners Using Archived Operations Data agreed on a few measures to all incorporate on a voluntary basis to communicate and have as much effect as possible
  - Cost of delay (hours, $)
  - Travel time
  - Duration of congestion (recurring)
  - Reliability Index or Planning Time Index (non-recurring)
Progress Report

- First use of shared measures brochure published
- Template distributed to Partners – please try using it and let us know your experience
- Presentation at MASITE
MASITE Presentation Take-Aways

• Consider what decision-makers care about, such as:
  – Brief understandable description to the decision-maker
  – Effectiveness and efficiency of investment
  – Relevance to current high-visibility topics
  – Is it linked to something that person cares about?

• Thinking about the end effort when selecting performance measures will help your effectiveness
Would you rather be in the top photo or the others? – Tell a story

$1,000 per traveler?! – Educate: Cost of delay

Sitting in traffic again?

We all have better things to do...

Inside:
New tools and what you can do to reduce congestion

This Edition:
I-295 in the

Congestion costs each traveler in this three-mile section $1,000 per year!
Tell a story

Educate

- Duration
- Travel time
- Reliability

Justify and educate
Application (3 of 3)

What Can We Do?

Decision-Makers
We can no longer just build our way out of congestion. Transportation investments must be spent on maintaining the existing system and improving operations to reduce congestion.

When possible, find dedicated, additional funding for transportation.

Planners, Engineers, and Other Partners
- Consider operations strategies, such as Safety Service Patrol, incident management, traffic signal coordination, and intersection improvements.
- Incorporate Transportation Demand Management (TDM), for example, by making it more desirable to live near jobs and more convenient to walk, bicycle, and take transit; we need to address demand as well as supply of transportation.
- In addition to reducing congestion, review other ways to help freight move reliably.

All of Us
- Check conditions before departing to consider mode (such as taking transit), route, and least-congested time to travel if you have flexibility.
- Don’t cause crashes—drive safely.
- Learn about and participate in transportation planning.

Agencies at Work
Delaware Valley Regional Planning Commission (DVRPC) builds consensus among transportation agencies in the Philadelphia metropolitan region of New Jersey and Pennsylvania. www.dvrpc.org

NJDOT uses its Capital Investment Strategy (CIS) to evaluate efficient ways to invest the limited funds it has available. The current Direct Connect project will help the I-295 corridor. www.state.nj.us/transportation

New Jersey Transit uses surveys, real-time data, and traffic signal prioritization to get people where they want to go. www.njtransit.com

Everyday Resources
NJ 511 - www.nj511.org

NJ Turnpike Safe Trip NJ App - http://www.state.nj.us/tturnpike/safeTrip_info.html

Hang up! Just drive! www.njdrive4life.com

NJ Pedestrian Safety - www.nj.gov/dfs/pedestrian.html

Alternative Conestion is getting harder to manage, but tools to analyze and cost-effective measures are getting better. This is the first in a series of bulletins using archived operations data to understand the causes of congestion and what can be done about it. Focus on solutions for shorter commutes and real-time adjustments. DVRPC is developing web-based tools to help congestion is more widely applicable.

The Delaware Valley Regional Planning Commission is dedicated to understanding the region’s elected officials, planning professionals, and others with the common mission of making a greater region even greater. We serve a diverse region of nine counties: Burlington, Chester, Delaware, Montgomery, and Philadelphia Counties; and Burlington, Camden, Gloucester, and Mercer Counties.

Photo Credits: Front cover image with dog: Keith Hufleit/Reisterstown, PA; Others, DVRPC

Publication Number: 16.2013-13

Staff Contact: Dan Hennigan, Manager, Office of Transportation Safety

Organization Management: 223-1.2013-13

DVRPC at: DVRPC.org

www.dvrpc.org

September 25, 2013
Try an Elevator Speech

You will probably have a few minutes with a high-level decision-maker at some point.

Trying out what you would say is great preparation for your version of the shared measures brochure.
Next Steps

• Looking for a few Partners to try using the template
• Provide comments to FHWA so MAP-21 performance measures incorporate as much advance real-world experience as possible
• Possible meeting/webcast to develop comments
For more information, please contact:

Zoe Neaderland AICP CTP  
Manager, Office of Transportation Safety and Congestion Management  
(215) 238-2839  
zneaderland@dvrpc.org  
www.dvrpc.org/CongestionManagement
Agency Updates on VPP and VPP Suite use

All Agencies are welcome to participate

Karen Jehanian, facilitator
Communications Update

Karen Jehanian
KMJ Consulting
## Information Provided to Project Team

### Coalition Website Postings

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<th>DATE POSTED</th>
<th>LOCATION ON WEBSITE</th>
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<tr>
<td>Validation Methodology for Arterials</td>
<td>June 20, 2013</td>
<td>Vehicle Probe “Feature” page and VPP “Data Validation” tab</td>
</tr>
<tr>
<td>Data Validation Report – Maryland – April 2013</td>
<td>June 20, 2013</td>
<td>Vehicle Probe “Feature” page and VPP “Data Validation” tab</td>
</tr>
<tr>
<td>June 6, 2013 TISPTC Meeting – Agenda, Presentation, Agency Updates, and Meeting Participants</td>
<td>June 19, 2013</td>
<td>Travel Info PTC page (far right column under “Latest Meeting Minutes”</td>
</tr>
<tr>
<td>June 6, 2013 VPP Team Webcast – Agenda, Presentation, Meeting Minutes and Meeting Participants</td>
<td>June 19, 2013</td>
<td>Vehicle Probe “Feature” page and VPP “Project Presentations” tab</td>
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**Note:** Emails were sent to VPP Team members when these documents were posted.
# Upcoming Meetings/Webcasts

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<tr>
<th>DATE</th>
<th>MEETING</th>
</tr>
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<tbody>
<tr>
<td>Tuesday, October 15, 2013 10:00 am – 11:30 am</td>
<td>VPP Suite User Group Webcast</td>
</tr>
<tr>
<td>Thursday, November 14, 2013</td>
<td>TISPTC Meeting/Webcast – in Boston, MA (Closing the Information Gaps across jurisdictions Workshop will be held after meeting)</td>
</tr>
<tr>
<td>Thursday, December 5, 2013 10:30am – 11:30am</td>
<td>VPP Team Webcast</td>
</tr>
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</table>
Contact Information

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Karen Jehanian, KMJ Consulting, Inc.
Work: 610-228-0211
Email: kjehanian@kmjinc.com
Thank You