VPP Suite User Group

October 15, 2013
Meeting Requests

• Questions will be answered at the end of each presentation

• Ask your question verbally

• Give your name and agency before asking your question (at least the first time)

• Keep your phone muted until asking a question or speaking (press *6 to mute/unmute individual phone lines)

• Do not place call “on hold” as your hold music may be heard by the group

• Call 610-662-5569 for difficulties with the web or audio application.
## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
</tr>
</thead>
</table>
| 10:00am to 10:10am | Welcome and Introductions  
Purpose of the User Group/Webcast | George Schoener,  
I-95 Corridor Coalition,  
Executive Director |
| 10:10am to 10:15am | User Group Update                                                      | John Allen,  
New Jersey DOT &  
VPP Suite User Group Chair |
| 10:15am to 11:00am | New VPP Suite tools                                                   | Michael Pack, UMD/CATT Lab                                                                       |
| 11:00am to 11:15am | “Top Enhancements” – where we were & where we would like to go         | Michael Pack, UMD/CATT Lab                                                                       |
| 11:15am to 11:30am | Roundtable discussion with User Group members on what’s new.  
• New uses for the VPP Suite tools and new user-generated products  
• New ways the VPP Suite could help agencies further process their data | All |
| 11:30am to 11:45am | Next Steps and Meeting Wrap Up                                        | George Schoener,  
I-95 Corridor Coalition,  
Executive Director |
Welcome & Introductions

George Schoener
I-95 Corridor Coalition
User Group & Webcast Purpose

VPP Suite User Group

To provide a forum for developers of the VPP Suite and agencies using the tools to share information in an effort to improve the Suite for all member agencies.
User Group & Webcast Purpose

This Webcast

• To dig into new features and understand their functionality/use while providing the developers with valuable user input.

• To discuss possible future enhancements – do we want to make changes to the existing list?

• To learn how agencies are using the VPP Suite tools to improve their work.
User Group Update

John Allen
New Jersey DOT
VPP Suite User Group Structure

I-95 Corridor Coalition Steering Committee

Travel Information Services Program Track Committee

VPP Suite User Group Chair
John Allen, NJDOT

University of Maryland
CATT Lab

VPP Suite User Group

I-95 Corridor Coalition
George Schoener

TISPTC/VPP Project Program Support
KMJ Consulting, Inc.
User Group Activities

• **Year 2012**

  – **Conducted Survey** of all VPP Suite Users *(April – May)*

  – **Conducted Initial Meeting/Workshop** of VPP Suite User Group at UMD CATT Lab and via webcast *(May)*

  – **Conducted Survey of Participants** to prioritize requests for future improvements/ enhancements to VPP Suite *(May – June)*

  – **UMD Developed Cost/Time Estimates** for each enhancement and prioritized for available funding *(July - September)*

  – **VPP Suite Steering Committee** weighed available funding, innovation, and potential impact to further prioritize *(September)*
User Group Activities

• Year 2013

  – **New Features** Deployed! *(April)*
    o New Road Search, Dashboard, Massive Data Downloader, Congestion Scan, Historic Probe Data Explorer, Bottleneck Ranking

  – **MORE New Features/Enhancements** Deployed! *(Summer)*
    o User Delay Cost Analysis, Real-time and Historic Weather Radar layer on the dashboard, Deeper Congestion Scan URLs, Improved Road Search (Mileage) Interface, Data Export changes

  – **Conducting VPP Suite User Group webcast** to review new features and future enhancements *(October 15th)*

  – **Even MORE New Features** to be Deployed! *(Oct/Nov)*
User Group Activities

• Other considerations

  – **Coordination** with the *Partners Using Archived Operations Data* to confirm that the tools are addressing the “Shared Measures”

  – **Collaboration** with agencies – for example *New Jersey’s Test Corridors* effort (evaluating the *AASHTO Standing Committee On Performance Management (SCOPM)* MAP-21 performance measures using INRIX® archived operations data)

  – **Communication** of use of the *VPP Suite* back to the full *VPP Agency Project Team*, and suggestions/fixes and other improvements to the UMD CATT Lab
New VPP Suite Tools

Michael L. Pack
University of Maryland
New Tools (6/28/13)

- User Delay Cost
- Historical Weather Radar
- Mileage
- Coverage Map
- “Deep Linking”
A Request for the User Group

• Provide us with current and planned use-cases:
  – So we understand what you’re challenges are…
  – So we understand which features are most important…
  – So we can better focus our development…
  – Example:
    • A high level manager in your department just arrived at work and complained about an accident that occurred along his commute this morning around 7:00 AM. The media and some public officials are calling the office, too, to try to get more information about what happened. This manager wants you to find out the details about this incident, but specifically, to figure out how long the bottleneck got, and how long the delays lasted. Any additional info you can glean would make his day (which isn’t off to a good start.)
Details that help us out...

- What info did you find?
- How did you find it?
- How are you going to present it to the requestor?
- What worked?
- What didn’t work?
- What do you wish you could have done, but couldn’t?
New Tools Slated for Oct/Nov 2013
New Splash Screen

Vehicle Probe Project Suite

Vehicle Probe Project Suite Dashboard
Explore the impacts of and relationships between bottlenecks and traffic events in real-time and at previous points in the past.

Congestion Scan
Analyze the rise and fall of congested conditions on a stretch of road.

Performance Charting
Chart performance metrics over time.

Bottleneck Ranking
Rank bottlenecks and discover which ones have the greatest impact.

Massive Raw Data Downloader
Download raw probe data from our archive.

Trend Map
Create animated maps of roadway conditions.

Performance Summaries
Report on Buffer Time Index, Planning Time Index, and other performance metrics.

User Delay Cost Analysis
Put a dollar amount on how much a road’s performance impacts its users.

Sponsored by
I-95 Corridor Coalition

Welcome mvandani@umd.edu | Logout

Need to reach out to us? Tutorials Feedback | Support

www.I95Coalition.org

October 15, 2013
Standardized Road Selection for All Tools
Road Selection

Bottleneck Ranking

Choose a region, a class of roads, and a data range for which you want to analyze and rank bottlenecks.

The search can take a while. Analyzing a month long data range can take about five minutes while a three month long analysis could take up to a half hour.

1. Select one or more roads
   - Read
   - Region
   - List of TMC codes
   - Saved TMC Set
   - Directions
   - Northbound
   - Southbound
   - Limit road to endpoints
     - From: Intersection
     - To: Intersection
   - Length of selection: 55 miles
   - Report a problem with this road

2. Selected a date range
   - 09/07/2013
   - 09/30/2013
   - Submit
Region Selection

Bottleneck Ranking

Choose a region, a class of roads, and a date range for which you want to analyze and rank bottlenecks.

The search can take a while. Analyzing a month long date range can take about five minutes while a three month long analysis could take up to a half hour.

1. Select one or more roads
   - Road
   - Region
   - List of TMC codes
   - Saved TMC Set
   - States and counties
     - 1 selected
   - Directions
     - [ ] All
     - [ ] Georgia
     - [ ] Kentucky
   - [ ] Massachusetts
   - [ ] All Massachusetts
   - [ ] Done
   - Zip codes
     - [ ] All
     - [ ] Georgia
     - [ ] Kentucky
   - [ ] Massachusetts
     - All Massachusetts
   - [ ] Done
   - Road classes
     - [ ] All
     - [ ] Interstate
     - [ ] U.S.
     - [ ] Interstate
     - [ ] Highway
     - [ ] All
   - Your selected roads
     - [ ] All
     - [ ] Rhode Island
     - [ ] Massachusetts
     - [ ] Connecticut
     - [ ] New York
     - [ ] Maryland
     - [ ] Virginia
     - [ ] Delaware
     - [ ] All
   - [ ] Region
     - [ ] New York
     - [ ] New Jersey
     - [ ] Pennsylvania
     - [ ] Delaware
     - [ ] All
   - [ ] Done

2. Selected a date range
   - [ ] 10/01/2013
   - [ ] 10/11/2013

Submit
Choose a region, a class of roads, and a date range for which you want to analyze and rank bottlenecks.

The search can take a while. Analyzing a month long data range can take about five minutes while a three month long analysis could take up to a half hour.

1. Select one or more roads

<table>
<thead>
<tr>
<th>Road</th>
<th>Region</th>
<th>List of TMC codes</th>
<th>Saved TMC Set</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>110+04645,110+04645,110+04646</td>
<td></td>
</tr>
</tbody>
</table>

   Your selected roads: X Remove all

2. Selected a date range

   09/01/2013 - 09/30/2013

Submit
TMC Sets

Bottleneck Ranking

Choose a region, a class of roads, and a date range for which you want to analyze and rank bottlenecks.

The search can take a while. Analyzing a month long date range can take about five minutes while a three month long analysis could take up to a half hour.

1. Select one or more roads

<table>
<thead>
<tr>
<th>TMC Set</th>
<th>TMCs</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Beltway</td>
<td>176</td>
<td><a href="mailto:mvanlent@umd.edu">mvanlent@umd.edu</a></td>
</tr>
<tr>
<td>Baltimore Beltway</td>
<td>202</td>
<td><a href="mailto:mvanlent@umd.edu">mvanlent@umd.edu</a></td>
</tr>
<tr>
<td>NJ 35</td>
<td>180</td>
<td><a href="mailto:mvanlent@umd.edu">mvanlent@umd.edu</a></td>
</tr>
</tbody>
</table>

2. Selected a date range

10/11/2013 - 10/11/2013

Submit
Multiple Mapped Bottlenecks: Single Road
Multiple Mapped Bottlenecks: Statewide
“Top Enhancements”
Where we were & where we would like to go

Michael L. Pack
University of Maryland
The Process

1. VPP Suite User Group
   - Convened at UMD and via web to discuss current functionality & user needs (May 2012)
   - Defined 32 new features & improvements to the suite of tools.
   - Rated each suggested improvement.

2. UMD developed cost & time estimates for each enhancement. (Summer 2012)

3. VPP Suite Steering Committee weighed available funding, innovation, and potential impact to decide on priorities. (September 2012)
# Top 10 Enhancements

(2012 – 2013)

<table>
<thead>
<tr>
<th>Item</th>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>User-experienced Travel Time</td>
<td>Calculations To replace the current “snapshot” travel-time algorithms</td>
</tr>
<tr>
<td></td>
<td>Calculations</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>User Delay</td>
<td>To calculate the amount of time each user is delayed by traffic</td>
</tr>
<tr>
<td>3</td>
<td>User Delay Costs</td>
<td>To calculate the dollars wasted in traffic (broken down by passenger vehicles and commercial vehicles)</td>
</tr>
<tr>
<td>4</td>
<td>Enhanced Incident Integration</td>
<td>Make it easier for users to understand the relationship between construction and incidents on congestion</td>
</tr>
<tr>
<td>5</td>
<td>Multi-corridor Analysis</td>
<td>Allow users to “join” neighboring roadways for travel-time analysis and animated mapping</td>
</tr>
</tbody>
</table>
# Top 10 Enhancements (continued) (2012 – 2013)

<table>
<thead>
<tr>
<th>Item</th>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Extended Date Selections</td>
<td>Allow users to compare all seven days of the week in all graphs, tables, and output reports</td>
</tr>
<tr>
<td>7</td>
<td>Customizable Reports</td>
<td>Allow users to generate printable reports with multiple, customized graphics that can be tailored to individual needs and preferences.</td>
</tr>
<tr>
<td>8</td>
<td>Bottleneck Ranking Map</td>
<td>Provide users with a printable map that shows the top X-ranked bottlenecks at the same time.</td>
</tr>
<tr>
<td>9</td>
<td>Bottleneck Overlapping</td>
<td>Enhance the bottleneck generating algorithm to minimize overlapping bottlenecks.</td>
</tr>
<tr>
<td>10</td>
<td>Mileage Displays</td>
<td>Road selection tools and output graphics should display the total mileage of the roadway segments that have been chosen.</td>
</tr>
</tbody>
</table>
## Where do we stand

<table>
<thead>
<tr>
<th>Item</th>
<th>Feature</th>
<th>Status</th>
<th>In Suite</th>
<th>In Development</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>User-experienced Travel Time Calculations</td>
<td>Yes</td>
<td>Yes</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>User Delay</td>
<td>Yes</td>
<td>Yes</td>
<td>6/28/13</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>User Delay Costs</td>
<td>Yes</td>
<td>Yes</td>
<td>6/28/13</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Enhanced Incident Integration</td>
<td>Yes</td>
<td>Yes</td>
<td>TBD &amp; Varies</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Multi-corridor Analysis</td>
<td>Yes</td>
<td>Yes</td>
<td>Oct</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Extended Date Selections</td>
<td>Yes</td>
<td>Yes</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Customizable Reports</td>
<td>Yes</td>
<td>Yes</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Bottleneck Ranking Map</td>
<td>Yes</td>
<td>Yes</td>
<td>Oct</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Bottleneck Overlapping</td>
<td>Yes</td>
<td>Yes</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Mileage Displays</td>
<td>Yes</td>
<td>Yes</td>
<td>6/28/13</td>
<td></td>
</tr>
</tbody>
</table>
## Other Enhancements

<table>
<thead>
<tr>
<th>Tier 2 Enhancements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottleneck Treemaps</td>
<td>Allow congestion and bottleneck data to be displayed and explored interactively in treemap visualizations</td>
</tr>
<tr>
<td>County/Metro Area Selections</td>
<td>Allow users to select all roads in a county/metro area for analysis and download.</td>
</tr>
<tr>
<td>Fuel Consumption</td>
<td>Allow users to calculate the amount of excess fuel consumed in commercial or passenger vehicles along corridors as a result of congestion.</td>
</tr>
<tr>
<td>Bottleneck Ranking Date Extension</td>
<td>Allow users to select longer date ranges for the bottleneck ranking tool (up to 1-year).</td>
</tr>
<tr>
<td>Bottleneck Data Quality Filters</td>
<td>Develop new algorithms that allow users to ignore or filter out bottlenecks and congestion data that is derived from low-confidence data.</td>
</tr>
</tbody>
</table>
## Other Enhancements

<table>
<thead>
<tr>
<th>Tier 3 Enhancements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mile Marker Linking</td>
<td>Allow users to select roads based on mile-marker locations, not just TMC segments</td>
</tr>
<tr>
<td>Ranking comparison</td>
<td>Monthly bottleneck ranking report that allows the user to compare current ranking to previous rankings.</td>
</tr>
<tr>
<td>Geo-preferences</td>
<td>Allow users to save their geographic region of interested in a personal settings menu (instead of a cookie) so that settings would not be dependent on specific machine usage.</td>
</tr>
<tr>
<td>Saved Queries</td>
<td>Allow users to save queries to load at a later time or in other components of the tool</td>
</tr>
<tr>
<td>Data quality visualization</td>
<td>Data quality metrics should be displayed and/or filterable for all historical visualizations</td>
</tr>
</tbody>
</table>
Enhancement Questions

1. Is the current list still valid?

2. What Tier 2 or Tier 3 enhancements would you like advanced (if funding permits)?

3. What other future tools and/or enhancements would help you with your job?

4. Are any of these new enhancements or tools identified in question 3 more important than those listed on the right from Tier 2 or 3?

CURRENT LIST

- User Experiences Travel Times
- Customizable Reports
- Incident Integration
- Bottleneck Overlapping fixes
- Bottleneck Treemaps
- County/Metro Area Selections
- Fuel Consumption
- Date Extension for Bottleneck Rank
- MM Linking
- Ranking Trend Comparison
- Geo Preferences
- Saved Queries
- Data Quality Filters/Visualization
Roundtable discussion with User Group members on what’s new
Roundtable Discussion

• New uses for the VPP Suite tools and new user-generated products

• New ways the VPP Suite could help agencies further process their data
Next Steps & Meeting Wrap Up

George Schoener
I-95 Corridor Coalition
Contact Information

George Schoener, I-95 Corridor Coalition
703-389-9281
geschoener@comcast.net

Karen Jehanian, I-95 Corridor Coalition
610-228-0211
kjehanian@kmjinc.com

VPP Suite questions
vpp-support@ritis.org
Thank You