

# Vehicle Probe Project Web Conference



## *Status Update*

September 20, 2011



# Call Courtesies

- 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
- Please call 610-662-5569 for difficulties with the web application

# Agenda

Topic		Speaker
1	Introductions and Welcome	George Schoener
2	Communications Update	Karen Jehanian
3	Funding Update	George Schoener
4	Contract Issues and Year 19 Update	Kathy Frankle
5	INRIX Update	Rick Schuman
6	Data Validation	Stan Young
7	Spotlight Presentation: VPP Suite (PM Tool) Update	Michael L. Pack
8	Agency Questions and Updates	All
9	Participation in Meetings/Conferences	Karen Jehanian
10	Review of Action Items from this call	Karen Jehanian
11	Selection of Date for Next Webcast	All

# Introductions and Welcome

***George Schoener***  
***I-95 Corridor Coalition***

# Communications Update

*Karen Jehanian*

- Team Correspondence/  
Coalition Website Postings

# Project Team Correspondence (page 1 of 2)

<b>Correspondence Sent to the VPP Team</b>		
<b>DOCUMENT</b>	<b>DATE SENT</b>	<b>METHOD</b>
Vehicle Probe Project Update for VPP Team members	September 19, 2011	Via email
June 23, 2011 VP Team Webcast – Presentation and Meeting Minutes	July 6, 2011	Via email
Data Use and Applications Guide – Final Version	June 30, 2011	Via email
Validation of INRIX Data – Monthly Report – North Carolina (dated June 2010)	June 27, 2011	Via email

# Project Team Correspondence (page 2 of 2)

<b>Coalition Website Postings</b>		
<b>DOCUMENT</b>	<b>DATE POSTED</b>	<b>LOCATION ON WEBSITE</b>
June 23, 2011 VP Team Webcast – Presentation and Meeting Minutes	July 6, 2011	On the Highlights page under “Project Presentations”
Data Use and Applications Guide – Final Version	June 30, 2011	On the Highlights page under “Technical Information”
Validation of INRIX Data – Monthly Report – North Carolina (dated June 2010)	June 27, 2011	On the Highlights page under “Data Validation”

# Funding Update

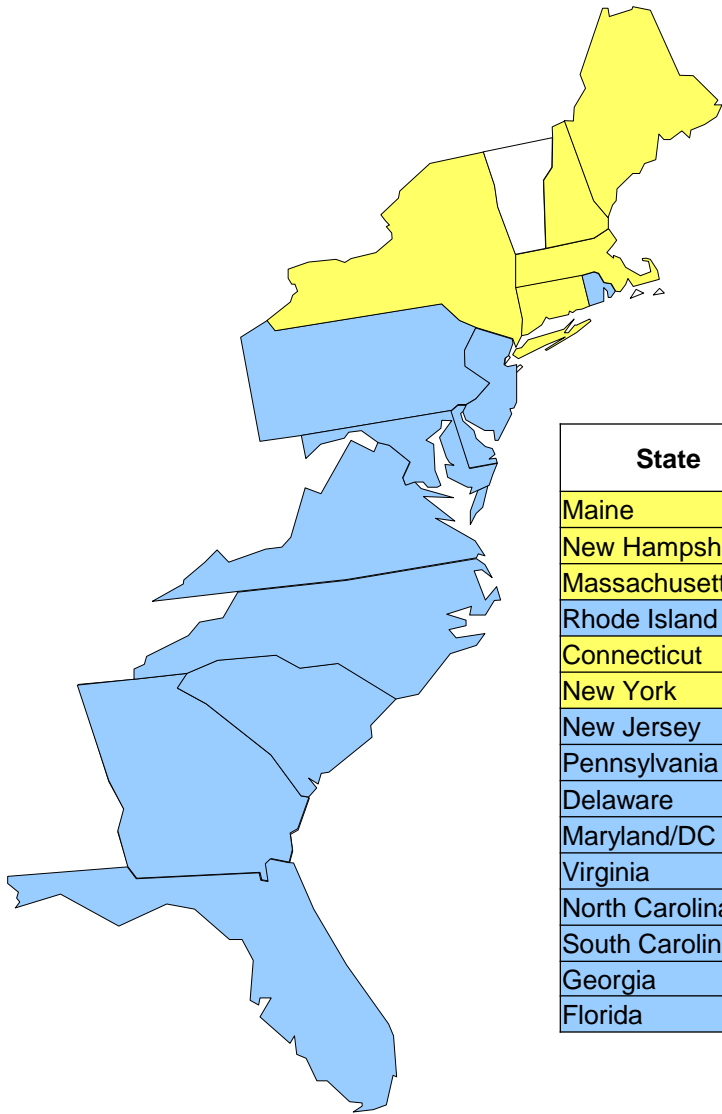
***George Schoener***  
***I-95 Corridor Coalition***

# Contract Issues & Year 19 Update

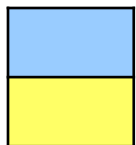
*Kathleen Frankle*

- Year 19 VPP Participation Status
- Pooled Fund Study Status

# Year 19 VPP Participation Status



State	Core Miles	Expansion Miles	Funding	Status
Maine	53	N/A	N/A	
New Hampshire	16	N/A	N/A	
Massachusetts	88	N/A	N/A	
Rhode Island	78	0	Pooled Fund	Committed to Pooled Fund Study
Connecticut	111	N/A	N/A	
New York	24	N/A	N/A	Transcom is reviewing vendors
New Jersey	471.7	423.6	UMD Contract	Contract modification completed
Pennsylvania	148.7	488	State Contract	State contract mod partially complete
Delaware	46	0	Pooled Fund	Committing to Pooled Fund Study in Oct
Maryland/DC	301.1	420.1	UMD Contract	Contract completed
Virginia	309.5	198	Pooled Fund	Committed to Pooled Fund Study
North Carolina	261.8	1,291.2	UMD Contract	Contract modification completed
South Carolina	220	980	UMD Contract	Contract modification completed
Georgia	139.1	0	Pooled Fund	Committed to Pooled Fund Study
Florida	728	533	UMD Contract	Contract modification completed



States Participating in VPP for Year 19

States not participating in VPP for Year 19

# Pooled Fund Study Status

- Vehicle Probe Project Pooled Fund - Solicitation #1304  
<http://www.pooledfund.org/projectdetails.asp?id=1304&status=1>
- Three states have committed: Virginia, Rhode Island, Georgia. Delaware will commit in October 2011.
- Pooled fund has been cleared.
- MdSHA set up a charge number in their system and are now in the process of sending out letters to the states to collect the funds.

# INRIX Update

***Rick Schuman***

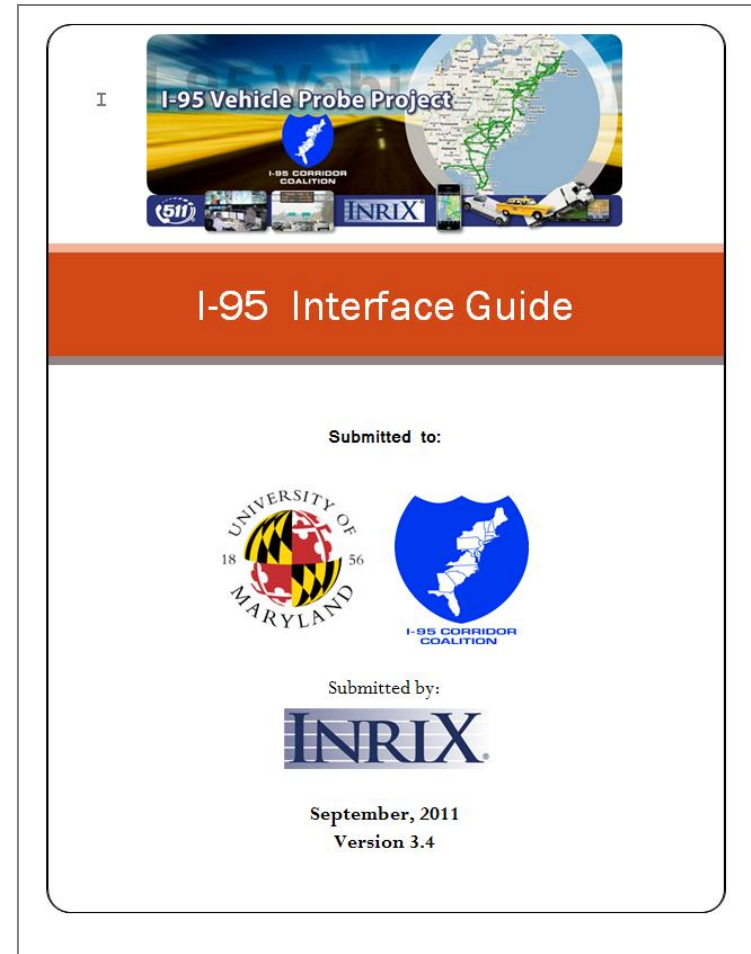
- Project Statistics
- Interface Guide Update

# Project Statistics

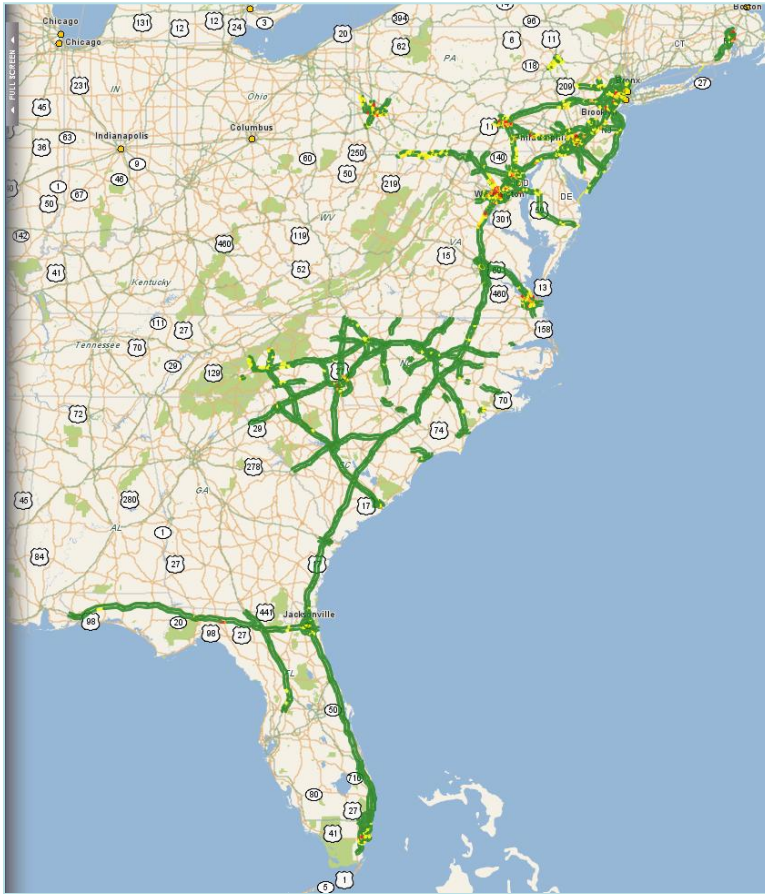
- Availability
  - 100% in July and August
    - 99% contract requirement
    - 99.88% in 2009; 99.94% in 2010; 99.95% YTD in 2011
- Users (as of 9/6/11)
  - Monitoring Site – 455
  - Data Feed – 42
  - Archive requests – 706 since launch
    - 72 between July 1 and Sept 6

# Project Interface Guide

- Version 3.4 in final review
- To be Posted in September
- Primary Updates:
  - Interchange ramp data access
  - Custom TMC Set/Coverage process

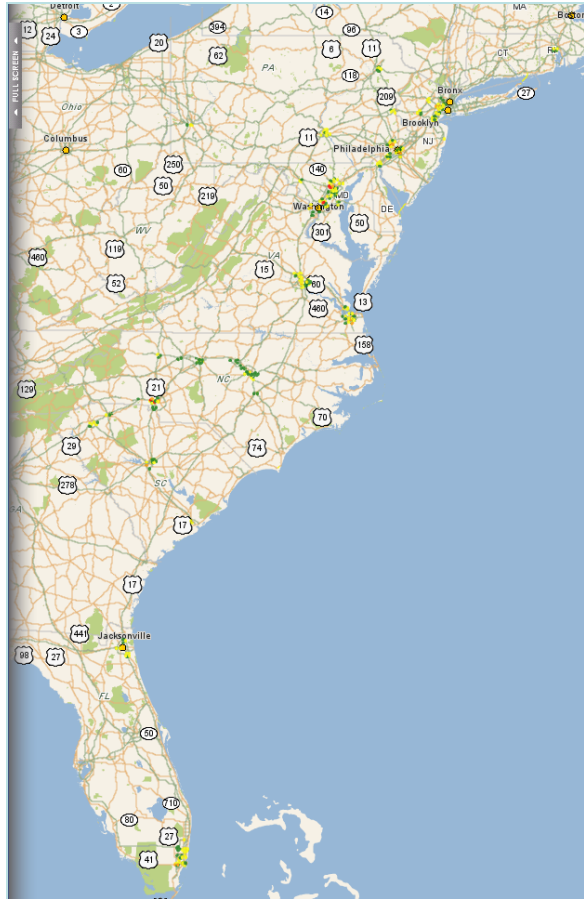


# Reminder: Current Contracted Coverage



State	"Freeway" Miles		
	Core	Expansions	Total
Maine	0	0	0
New Hampshire	0	0	0
Massachusetts	0	0	0
Rhode Island	78	0	78
Connecticut	0	0	0
New York	0	0	0
New Jersey	471.7	423.6	895.3
Pennsylvania	148.7	488	636.7
Delaware	46	0	46
Maryland/DC	301.1	445.1	746.2
Virginia	309.5	198.6	508.1
North Carolina	261.8	1291.2	1553
South Carolina	0	1200	1200
Georgia	139.1	0	139.1
Florida	728	533	1261
<b>Total</b>	<b>2483.9</b>	<b>4579.5</b>	<b>7063.4</b>

# Reminder: Current Interchange Coverage



State	Interchanges Covered
Rhode Island	5
New Jersey	21
Pennsylvania	22
Delaware	3
Maryland	24
Virginia	19
North Carolina	34
South Carolina	13
Georgia	0
Florida	18
<b>Total</b>	<b>159</b>

# Data Validation Update

***Stan Young***  
***University of Maryland***

- Status and Schedule
- April & May 2011 – New Jersey

# Data Validation Status

Month and Year	State	Ground Truth Data Collection [By mid-month]	Data Processed and Preliminary Results Ready for Review [By end of Month]	UMD Review	INRIX Review	State Review & Briefing [+ 2 weeks]	Publish [+ 2 weeks]
				[+ 2 weeks]			
Apr-11	NJ	<i>1-Apr-11</i>	<i>30-Jun-11</i>	<i>14-Jul-11</i>	<i>14-Jul-11</i>	14-Sep-11	28-Sep-11
May-11	NJ	<i>1-May-11</i>	<i>30-Jun-11</i>	30-Sep-11	30-Sep-11	16-Oct-11	30-Oct-11
Jun-11	DE	<i>26-Jun-11</i>	<i>20-Aug-11</i>	30-Sep-11	30-Sep-11	16-Oct-11	30-Oct-11
Jul-11	VA	<i>5-Aug-11</i>	14-Sep-11	30-Sep-11	30-Sep-11	16-Oct-11	30-Oct-11
Aug-11	PA	<i>28-Aug-11</i>	1-Sep-11	15-Sep-11	15-Sep-11	1-Oct-11	15-Oct-11
Sep-11	MD	9/25/2011	1-Oct-11	15-Oct-11	15-Oct-11	31-Oct-11	14-Nov-11

- **May 2011:** NJ – Targeted Arterials
- **June 2011:** DE – Traditional Validation
- **July 2011:** VA – I66 inside beltway, I-95 & arterials
- **Aug 2011:** PA – Near Harrisburg
- **Sep 2011 :** MD – I-695

# New Jersey

April 2011

## Freeway Summary

- Some Local/Express Lanes
- Minimal congestion

## Ramp Summary

- Ramps interconnecting I80/I95/Turnpike
- Local and Express ramps
- Toll booth



# NJ – April 2011

## NJ Evaluation Summary

Speed Bin	Absolute Speed Error (<10mph)		Speed Error Bias (<5mph)		Number of 5 Minute Samples	Hours of Data Collection
	Comparison with SEM Band	Comparison with Mean	Comparison with SEM Band	Comparison with Mean		
0-30 MPH	<b>2.60</b>	7.10	<b>0.60</b>	4.20	95	7.9
30-45 MPH	<b>3.30</b>	11.30	<b>2.60</b>	10.20	147	12.3
45-60 MPH	<b>0.90</b>	2.80	<b>0.40</b>	1.10	4246	353.8
> 60 MPH	<b>1.80</b>	4.20	<b>-1.50</b>	-3.30	10941	911.8
All Speeds	1.57	3.90	-0.93	-1.91	15429	1285.8

Based upon data collected from April 10, 2011 through April 29, 2011 across 16 miles of roadway. For more information please visit [i95coalition.org](http://i95coalition.org).

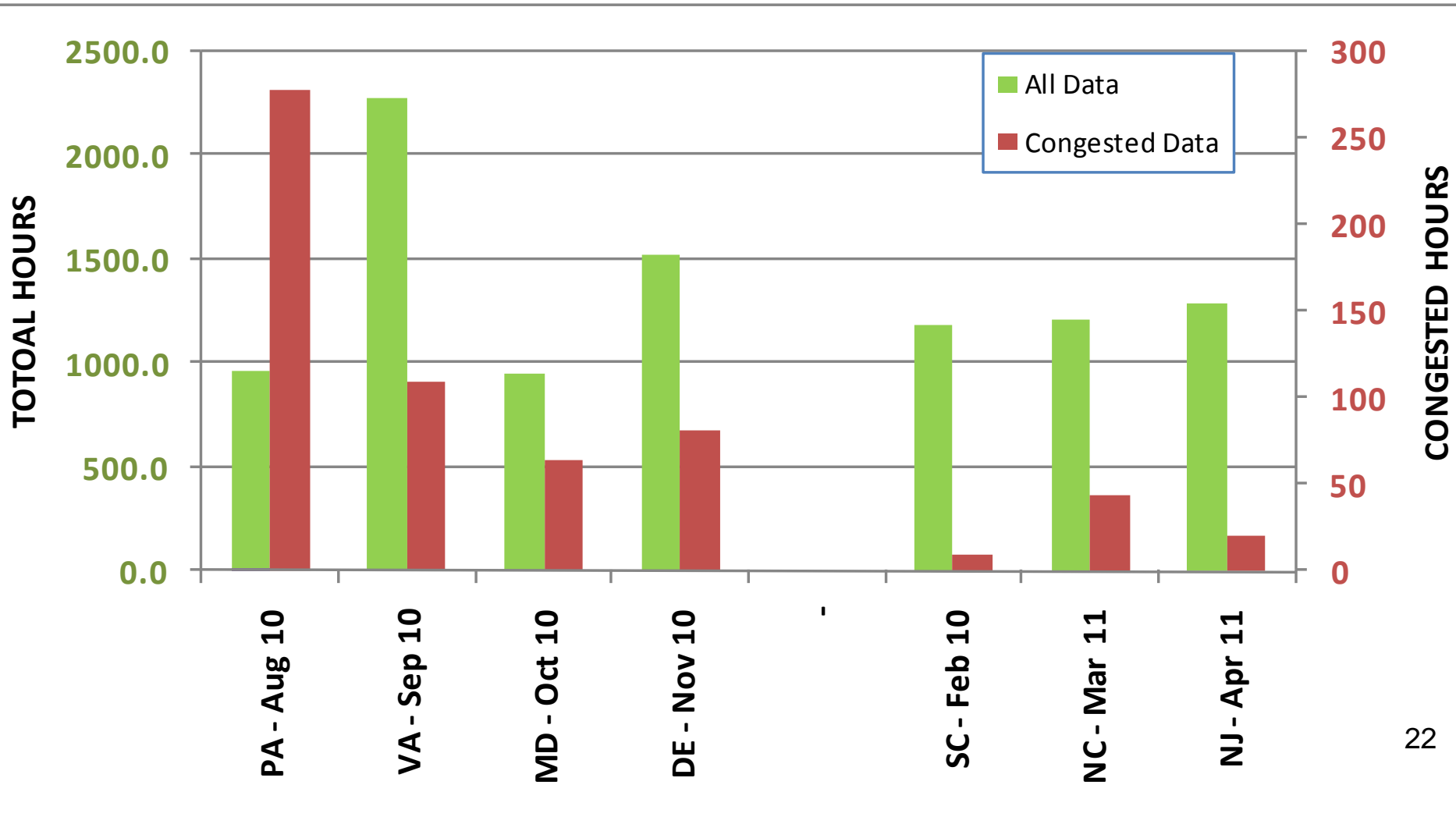
- Only 20.2 Hours of Congestion
- Local / Express lanes were prevalent

# NJ Cumulative

NJ - Cumulative to Date						
Speed Bin	Absolute Speed Error		Speed Error Bias		Number of 5 Minute Samples	Hours of Data Collection
	Comparison with SEM Band	Comparison with Mean	Comparison with SEM Band	Comparison with Mean		
0-30 MPH	<b>7.23</b>	8.43	<b>5.16</b>	5.74	2611	217.6
30-45 MPH	<b>7.71</b>	10.49	<b>4.67</b>	6.32	2173	181.1
45-60 MPH	<b>2.26</b>	4.44	<b>0.53</b>	1.45	17582	1465.2
> 60 MPH	<b>2.72</b>	5.20	<b>-2.40</b>	-4.26	114521	9543.4
All Speeds	2.83	5.24	-1.77	-3.17	136887	11407.3

- Eight Validations
- 180 miles, > 398 hrs of congestion
- **AASE of 7.23 / 7.71 in lower speed bins**

# Monthly Comparison Hours of Data Collection



# NJ Ramps – April 2011

## NJ Evaluation Summary - RAMPS

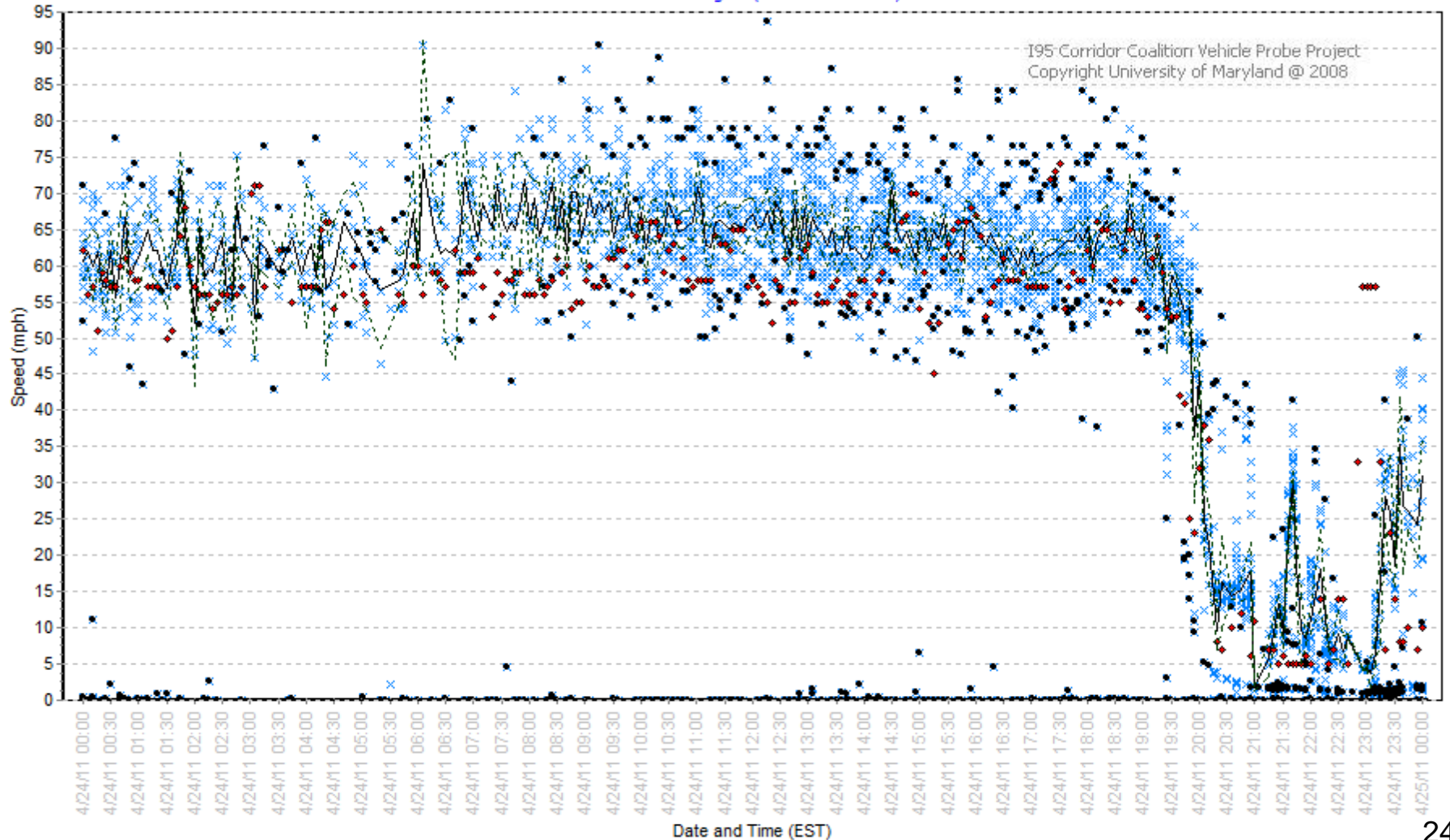
Speed Bin	Absolute Speed Error		Speed Error Bias		Number of 5 Minute Samples	Hours of Data Collection
	Comparison with SEM Band	Comparison with Mean	Comparison with SEM Band	Comparison with Mean		
0-30 MPH	<b>14.70</b>	18.50	<b>9.80</b>	10.70	106	8.8
30-45 MPH	<b>7.80</b>	12.90	<b>5.00</b>	8.80	111	9.3
45-60 MPH	<b>1.00</b>	3.00	<b>0.40</b>	0.80	9137	761.4
> 60 MPH	<b>2.40</b>	5.00	<b>-2.30</b>	-4.60	3786	315.5
All Speeds	1.57	3.78	-0.26	-0.61	13140	1095.0

Based upon data collected from April 10, 2011 through April 29, 2011 across 6 miles of roadway ramps.

- Only 18.1 Hours of Congestion
- Local / Express lanes were prevalent
- Majority of Severe Congestion during late night hours

# Ramp Sample – Local/Express

TMC:NJ08-0004  
NORTHBOUND ending at (1.35545982 miles)



× Bluetooth • Filtered bluetooth — Average bluetooth ◆ Inrix - - - - - Band low - - - - - Band high

# New Jersey Validation

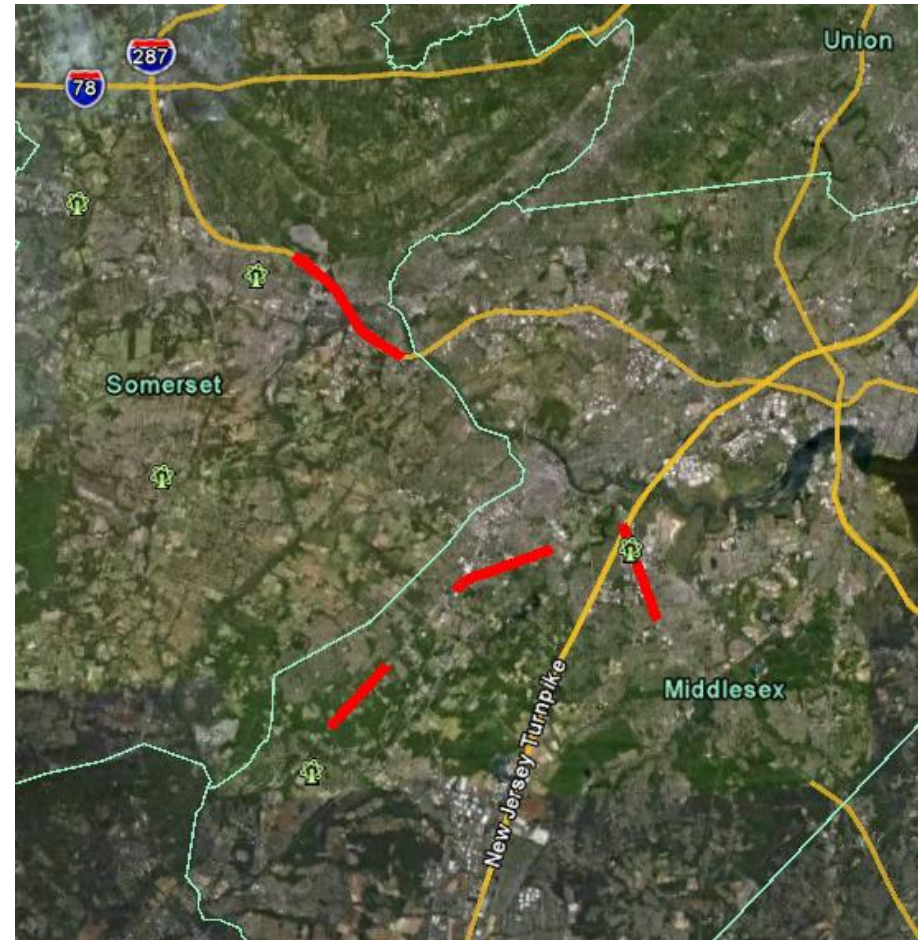
May 2011

## Freeway Summary

- 6 paths, 12 TMCs on I287
- May 19 – June 2, 2011
- 7.8 miles

## Arterial Summary

- 6 paths, 29 TMCs
- US 1, and NJ – 18
- 15.0 miles



# NJ – May 2011

## NJ Evaluation Summary

Speed Bin	Absolute Speed Error (<10mph)		Speed Error Bias (<5mph)		Number of 5 Minute Samples	Hours of Data Collection
	Comparison with SEM Band	Comparison with Mean	Comparison with SEM Band	Comparison with Mean		
0-30 MPH	<b>6.00</b>	8.20	<b>5.30</b>	6.90	211	17.6
30-45 MPH	<b>7.30</b>	9.80	<b>6.80</b>	8.80	425	35.4
45-60 MPH	<b>3.00</b>	5.90	<b>2.50</b>	5.00	1776	148.0
> 60 MPH	<b>1.10</b>	3.50	<b>-0.50</b>	-1.50	7418	618.2
All Speeds	1.82	4.31	0.48	0.30	9830	819.2

Based upon data collected from May 19, 2011 through June 2, 2011 across 7.8 miles of roadway. For more information please visit [i95coalition.org](http://i95coalition.org).

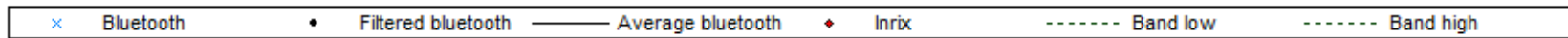
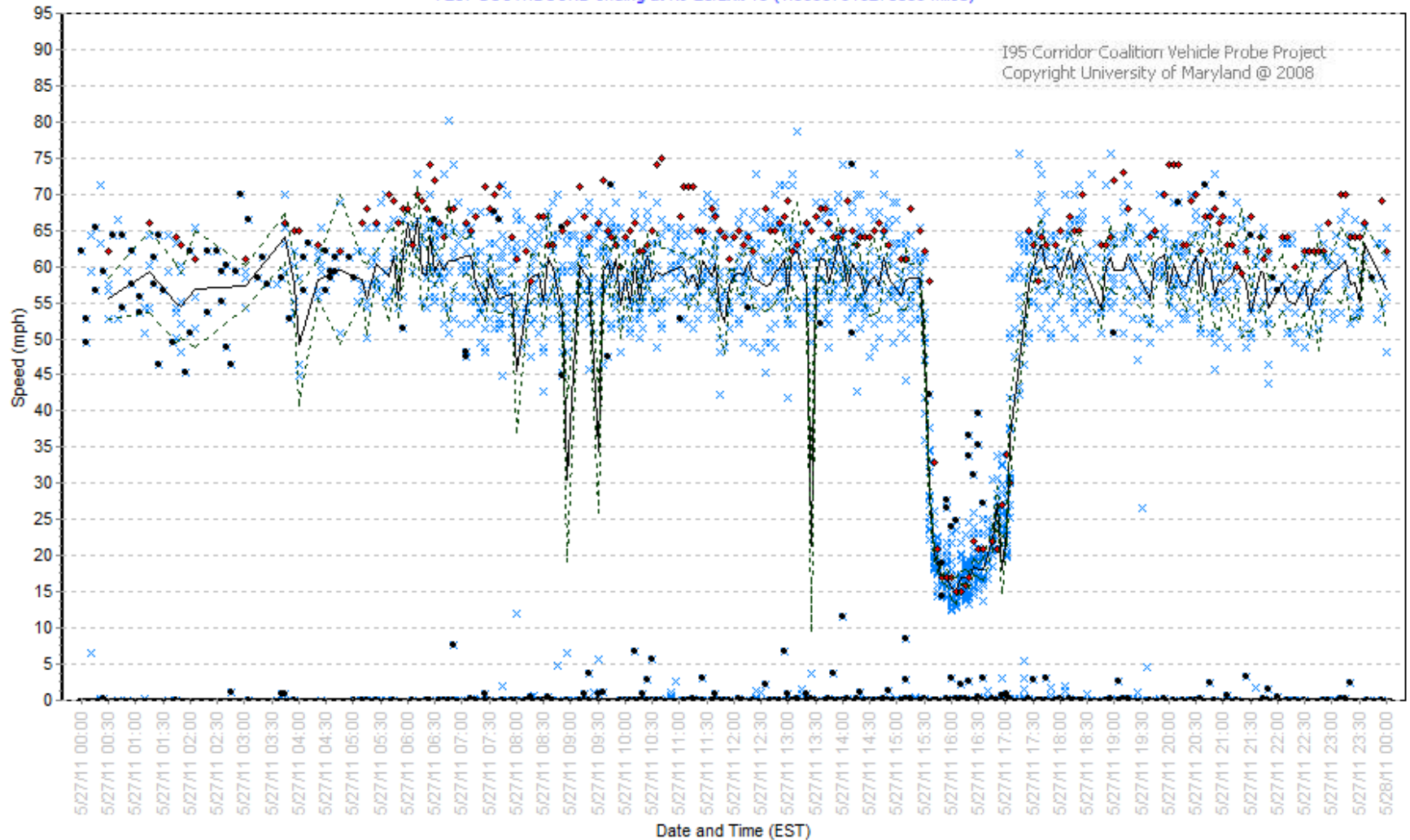
- Over 50 hours of Congestion
- Filtering problems increase AASE/SEB in lower speed bands – under review

# Example of Filtering Problems

TMC:NJ09-0003

I-287 SOUTHBOUND ending at NJ-28/Exit 13 (1.36937916278839 miles)

195-Corridor Coalition Vehicle Probe Project  
Copyright University of Maryland @ 2008



# Other Initiatives

Program	Paper
ITS World	Arterials
	Score & C-Value
	Real-Time Data
	Historical Data Perf.
Year 17	Application Guide
	Travel Time on Signs
	Special Use Lanes
White Papers	Arterials
	C-Value

# **Spotlight Presentation: VPP Suite (PM Tool) Update**

***Michael L. Pack  
University of Maryland***

# VPP Suite Update & Tutorial



Michael L. Pack  
September 20, 2011

# VPP Access

- **Training Videos & Overview:**

<http://vpp.ritis.org/suite/screencast/>

- **To Gain Access:**

**Step 1:** Make sure your agency has signed the VPP DUA by visiting: <http://vpp.ritis.org/suite/dua/>

**Step 2:** Once your agency has signed, send individual user requests to: [accounts@ritis.org](mailto:accounts@ritis.org) with the following information:

- ✓ First & Last Name
- ✓ Agency Affiliation
- ✓ Address
- ✓ Phone Number
- ✓ Email

**Step 3:** Receive an email with your login credentials & instructions

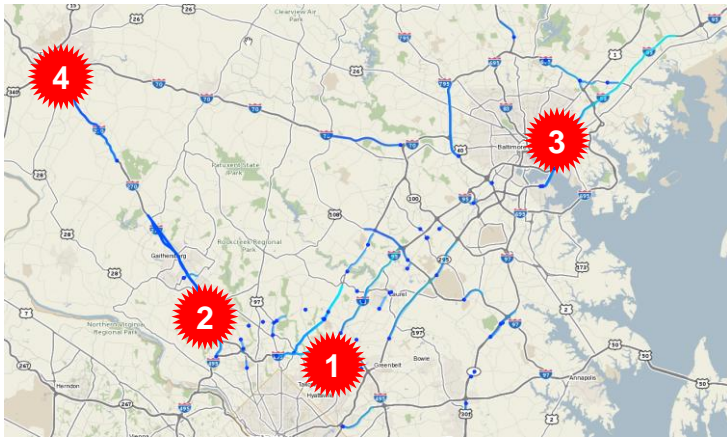
# Usage Stats

- As of September 19<sup>th</sup>, 2011
  - Over 8-Billion records downloaded
  - Over 300 users have access
  - Over 40 agencies have access

# Live Tutorial

# Functionality Being Added

- Bottleneck Ranking (Statewide & Corridor Wide)
- Enhanced chart & data table exports
- Integrating volume data



# For more information contact:

Michael L. Pack

[PackML@umd.edu](mailto:PackML@umd.edu)

301-405-0722



I-95 CORRIDOR  
COALITION



# Agency Updates and/or Questions for the Project Team

- Use of VPP Data During Recent Severe Weather Events

*All*

# Reminder

***Battelle Seattle Research Center,  
on behalf of FHWA,  
would like you to complete a survey on  
Road Weather Message Guidelines by  
September 30, 2011.***

**<http://www.surveymonkey.com/s/X72ZSZ5>**

# Participation in Meetings/Conferences

*Karen Jehanian*

# Meetings of Interest

## UPCOMING:

- I-95 CC IEF on using multiple data sources for planning and operations, Phila., PA and via web
  - October 5, 2011 – morning
- I-95 CC Travel Information Program Track Committee Meeting, Phila., PA and via web
  - October 5, 2011 – afternoon
- 2011 ITS World Congress, Orlando, FL
  - October 16 – 20, 2011

# ITS World Congress Participation

	Title	Session Information	Primary Author/contact	Additional Authors
1	An Interactive, Web-based, Mobility Performance Measures Application Utilizing Probe Data	<b>SESSION #: TS23</b> <b>Presentation in Incident Detection and Management Session - Oct 18, 2011, 8:30 AM-10:00 AM</b>	Michael Pack	
2	Probability of Real-Time Data as a Function of Hourly Volume, Assessment of the I-95 Vehicle Probe Project Data	<b>SESSION #: TS58</b> <b>Presentation in Vehicle Probe for Travel Time Analysis Session - Oct 18, 2011, 4:00 PM-5:30 PM</b>	Stan Young	Hadi Sadrsadat, UMD
3	Analysis of Level of Confidence Score within the I-95 Vehicle Probe Project	<b>SESSION #: TS58</b> <b>Presentation in Vehicle Probe for Travel Time Analysis Session - Oct 18, 2011, 4:00 PM-5:30 PM</b>	Stan Young	Nayel R. J. Urena Serulle, UMD
4	Validation of the Historical Vehicle Probe Project Speed by Using Bluetooth Speed as the Ground Truth	<b>SESSION #: TS80</b> <b>Presentation in Data Collection Using Bluetooth Session - Oct 19, 2011, 1:30 PM-3:00 PM</b>	Stan Young	Elham Sharifi, UMD
5	Challenges to Effective Arterial Traffic Monitoring: Lessons from the I-95 Corridor Coalition's Vehicle Probe Project	<b>SESSION #: TS103</b> <b>Presentation in Traffic Management Case Studies Using Vehicle Probe Data Session - Oct 20, 2011, 1:30 PM-3:00 PM</b>	Stan Young	George Schoener, I-95 Corridor Coalition, Karen Jehanian, KMJ Consulting, Inc., Nayel R. J. Urena Serulle, UMD
6	Data Use for Operations Performance and Planning	<b>SESSION #: AM25</b> <b>Session to be conducted - Wednesday, Oct. 19, 2011, 1:30 – 3:00 p.m.</b> This is an ICS session sponsored by FHWA. Other speakers include: Alex Estrella, San Diego Association of Governments and Koorosh Olyai, Dallas Area Rapid Transit. Brain Cronin for RITA will be the moderator.	Karen Jehanian	George Schoener, I-95 Corridor Coalition, Executive Director - Project overview and Regional benefit from probe data for operations and planning Michael Pack, UMD CATT Lab –Using data for Operations (RITIS) Andrew Meese, MWCOG – Metropolitan Area Transportation Operations Coordination (MATOC) – A Practical application

# Review of Action Items from this Webcast

# Selection of Date for Next Project Team Meeting

*Thursday, November 3, 2011*  
*10:30 AM*  
(proposed)

***All***

# Questions?

- Stan Young at 301-403-4593 or [seyoung@umd.edu](mailto:seyoung@umd.edu)
- Rick Schuman at 407-298-4346 or [rick@inrix.com](mailto:rick@inrix.com)
- Karen Jehanian at 610-228-0211 or [kjehanian@kmjinc.com](mailto:kjehanian@kmjinc.com)
- For contract expansion issues Kathy Frankle at 410-414-2925 or [kfrankle@umd.edu](mailto:kfrankle@umd.edu)

# Thank You



**I-95 CORRIDOR  
COALITION**