Probe Data Analytics User Group Web Meeting
December 14, 2017

Agenda:

#	Topic	Speaker
1	Welcome & Coalition Update	Joanna Reagle, KMJ Consulting Jesse Buerk, DVRPC Denise Markow, I-95 Corridor Coalition
2	Follow-ups from the Last Meeting	John Allen
3	PDA Suite: What's New / Coming Soon	John Allen
4	FDOT: Use of RITIS to Assess Traffic Impacts of Hurricane Irma Evacuation	Derek Vollmer, FDOT
5	BMC's Thanksgiving Travel Advisory Review	Ed Stylc, Baltimore Metropolitan Council
6	Agency Input Session	All Agencies
9	Wrap-up / Next Meeting	Denise Markow, I-95 Corridor Coalition
10	Instant Polls throughout	John Allen / Joanna Reagle

Next User Group Meeting: March 8, 2018, 10:30am – 12:00pm (EST)

Meeting Highlights:

- **Instant Poll Results:**

➢ **Poll 1: Would you benefit from an exclusive Bottleneck Ranking Focus Session?**
- Yes: 78% (25/32 responses)
- No: 22% (7/32 responses)

➢ **Poll 2: Would you like to have a walk-through of the new RITIS when it's released?**
- Yes, definitely: 86% (24/28 responses)
- I'd rather experiment on my own: 14% (4/28 responses)
- No: 0%

➢ **Poll 3: Has your agency begun to use PDA Suite tools for the MAP-21 measures?**
- Yes: 35% (7/20 responses)
- No, but we plan to: 45% (9/20 responses)
- No, don't plan to use these tools: 20% (4/20 responses)

➢ **Poll 4: Have you used RITIS/PDA Suite for an extreme weather event? (select all that apply)**
- Yes, for pre-event planning: 5 responses
- Yes, to manage traffic during the event: 3 responses
- Yes, for after actions reviews & reporting: 9 responses
- No, but would like to in the future: 15 responses
- No, don't have an interest: 3 responses

➢ **Poll 5: Did your agency prepare & send a Thanksgiving Travel Advisory this year?**
- Yes, we used PDA Suite tools to create the content: 37% (7/19 responses)
- Yes, we used other data to create the content: 10.5% (2/19 responses)
- No, but would like to in the future: 42% (8/19 responses)
- No, don't have an interest: 10.5% (2/19 responses)

- **Welcome & Coalition Update**:
  - Jesse Buerk (DVRPC) welcomed the group, thanked them for their participation and introduced the topics/speakers for the meeting.
  - Denise Markow reviewed five recent Coalition meetings that have taken place in an effort to keep all apprised of Coalition activities.
    - Denise described the Crowdsourcing Summit in September held in Philadelphia. There was a total of 70 participants in-person and via web. Six coalition agencies presented about how their agency is using Waze. The Corridor Coalition will take the information from the summit and explore how to deal with policy challenges, procurement issues, and fusion methodologies focusing on agencies use of crowdsourced data operational and planning. As part of the Coalition's current project, "Closing Real-Time data gaps" they will be working with the states to outline approaches, detect challenges, validate data, and visualize/archive data.
    - In October, a CAD Integration Webinar was held for a national audience (~90 participants). There were three speakers who discussed lessons they have learned from working to integrate a CAD system into an agency's ATMS, or working with a CAD system alone. A follow-up workshop is being planned for May 2018.
    - In November, a Volume & Turning Movement Steering Committee meeting was held via web. The technical team updated the steering committee on their results to date. Their mission is to develop ubiquitous volume data over an entire state network instead of having to rely on point data (ATRs) across the network. They are currently working with data sets from other states to determine whether the result accuracy can be repeated. A more formal update will be delivered in February 2018 at the next Steering Committee meeting.
    - There were two workshops held in December – The first workshop was a Heavy Towing Workshop for Maine that discussed how tow operators could be better integrated into incident management. There will be a follow-up meeting in March 2018. A Connected Autonomous Vehicle (CAV) workshop was also held with 40 attendees representing all of the Coalition member states. During the workshop, next steps agencies considering in preparation for CAV was discussed.
    - Denise mentioned an upcoming RITIS User Group Meeting (1/18/18) via web which will include updates on MAP-21 and the new NPMRDS.
    - She reminded everyone that the PDA Suite User Group Meetings will now meet once every four months.

- **Follow-ups from the Last Meeting**: John Allen reviewed three action items from the last PDA Suite User group meeting.
  - 1st Action Item: A request was made to add the day of the week to the date header in the trend map. This has now been deployed and is available for use.
  - 2nd Action Item: A request was made (from Kelly Wells, NCDOT) to have better capabilities in PDA Suite for arterial signal system analysis which is important for signal system prioritization and evaluation. John noted that PennDOT is now funding a project to build arterial performance measure capabilities in PDA Suite. This project will be approximately a nine-month effort once they receive a notice to proceed. Anticipated release for these tools is third or fourth quarter of 2018.
  - 3rd Action Item: A request was made to enable MPO boundaries in the MAP-21 Dashboard. This is now deployed and available for use.

- **PDA Suite: What's new / coming soon:** John Allen discussed new features that have recently been added to the PDA Suite and or will soon be available. Below is an overview of these features.
  - Ramps can now be selected in **Suite Tools**. John provided screenshots of the feature and discussed how it can be accessed. On the trend map, select region, then select a state and/or county, then select "interchange" in the road classes dropdown which will show all available interchange ramps once "+ add region" is clicked. Alternatively, choose the "map" tab, and choose "interchange" in the road classes dropdown which will allow a shape to be drawn to include desired interchanges directly from the map.
  - For **Performance Summaries**,
    - The "add another time range" button has been moved from the results page to the query page to streamline workflow.
    - Individual metrics tables are now combined into a single worksheet to improve readability.
  - Table changes have been made to **Bottleneck Ranking results page**. Results are now bracketed into three different groupings: Bottleneck Profile, Influences, and Base Impact. A base impact is the sum of queue lengths over the duration of the bottleneck. The Base Impact is then weighted by Speed Differential, Congestion, and Total Delay. This improvement was funded by PennDOT to provide additional performance measures that give more insight into bottlenecks. The CATT Lab is developing a new feature to toggle between values and ranking for these three new performance measures. John also mentioned that clicking on a column heading will re-sort the lists from greatest to least value, allowing users to better rank bottlenecks to the metrics that are important to their agency. External tool links have been added to provide Performance Charts and the User Delay Cost Analysis tables. John then gave a demonstration of drilling down into a bottleneck's impact via Performance Charts, User Delay Cost and Congestion Scan, using the I-95 at Girard Ave/Exit 23 bottleneck as an example.
    AN INSTANT POLL was conducted find out if users would be interested an exclusive Bottleneck Ranking Focus Session (via web). (see the results at the beginning of this document)
  - For the **Massive Data Downloader**, a border button has now been added as an option in the county list dropdown, for those states that have boarders with Canada or Mexico. This allows the user to access TMC segment data within five (5) miles of US border crossings.
  - **NPMRDS v2** now has a single resource link: https://npmrds.ritis.org/analytics/resources
  - John reviewed the major feature deploy status for CY 2017. He pointed out that PennDOT has funded custom graph formatting for exports of performance charts, and bottleneck ranking with new ranking measures. Currently, all Q1, Q2, and Q3 deploys have been completed. Q4 deploys are still in progress.
  - The deploy summary table for the third quarter has been updated and can be found under the "New Features" tab at: http://i95coalition.org/projects/probe-data-analytics/
  - Note: Since the CATT Lab deploys many minor, moderate and major features, functions and bug fixes every quarter, the Deploy Summary Table only includes those deploys most important for users
  - Since Q2 2106, 11 new features, 41 functional enhancements, and 15 significant bug fixes have been deployed.
  - **RITIS modernization** is in progress. It will have a new look, layout, and features with better integration and better targets user needs.

- New **MAP-21 Tool features** are being developed that include: an expanded graph timeline for multi-year comparisons, trend-line capabilities to aid in target-setting, and an "easy button" that immediately creates all files and deliverables for submission to FHWA which is pending final format release.
  INSTANT POLLS were conducted find out if users would be interested in a walk-through of the new RITIS when released and to determine if agencies are using/planning to use the PDA Suite tools for MAP-21 measures. (see the results at the beginning of this document)

- **Spotlight Presentation: Use of RITIS to Assess Traffic Impacts of Hurricane Irma Evacuation –** Derek Vollmer (FDOT's State ITS Software Engineer) discussed how RITIS was used to assess the traffic impacts of the Hurricane Irma Evacuation.
  - **Background:** In September 2017, Hurricane Irma was heading towards Florida, and due to it's size, Florida was placed in a state of emergency before landfall. It was originally predicted to hit the east coast of Florida which led to the evacuation of people from the east side of the state. As the storm approached, the path drifted west, and then people had to be evacuated from the western coast of Florida. Approximately 6.3 million people were ordered to evacuate due to the storm.
  - Emergency shoulder use (ESU) was implemented on I-75 from the Florida Turnpike to the Georgia state line, and from Tampa to west of Orlando on I-4.
    - On I-75, ESU was implemented from September 7 until September 9, 2017. Roadside Assistance helped 509 motorists with minor crashes, (no fatalities).
    - On I-4, ESU was only implemented for approximately five hours on September 9, 2017 Roadside Assistance helped 26 motorists, (no fatalities).
  - Emergency shoulder use was implemented instead of one-way evacuation for the following reasons:
    - Able to use the shoulders overnight
    - Allowed emergency vehicle access from the opposing direction
    - Allowed post storm response convoys to move into Florida before returning traffic began
  - Derek explained how FDOT used RITIS and the PDA Suite Tools to assess their ESU for Hurricane Irma.
    - RITIS stores FDOT's microwave vehicle detector data. For this analysis, data was recorded as 5-minute data. RITIS also stores their real time HERE Probe Data feeds, as well as all of their incidents from their SunGuide Transportation Management Software.
    - RITIS allows them access to the historical HERE probe data, which they use for data along I-75 (between Gainesville and the Georgia State line; and between Jacksonville and Tallahassee on I-10) where they do not have ITS devices.
    - FDOT's SunGuide Transportation Management Software is deployed in each district/region on a private ITS network. It is physically separate from their DOT network. In order to use this data without RITIS, they would have to request exports from each of their deployments, extract the data, and change it into a format they can use.
    - They now use the RITIS Detector Tool which makes it easy for them to select detectors they want to use for analysis. This tool exports the data and provides it in a CSV format that is easy to use.

  - Graphs showing volume data collected through RITIS were provided. Derek discussed graphs illustrating evacuation travel time during peak hours, off-peak hours, and 24-hour averages.
  - HERE probe data was used to assess speeds on I-75 from the Florida Turnpike to the Georgia State line. Derek showed a PDA Suite congestion scan and noted that data from ITS videos supported the information (accordion effect) shown in the congestion scans but did not show up in their ESU model. Based on their observations and the congestion scans, FDOT will be rerunning their models to try to account for this driver behavior.
  - Graphs of I-75 were presented illustrating historical average speeds and speeds during evacuations including impacts of the emergency shoulder use.
- In summary, FDOT uses RITIS to complete analyses where they do not have ITS device data. Detector Explorer makes it easier to retrieve ITS device data anywhere within the state. Congestion Scans show pockets of congestion and pockets of free flow traffic.
- John Allen noted that people who have access to RITIS also have access to the Detector tool, as long as their agency is having detector data fed into it.
- John commented that the CATT Lab is modernizing the interface and enhancing the functionality of the Detector Explorer interface to make it more user-friendly.
- John stated that there are use cases available at http://i95coalition.org/forum/ to show two different ways RITIS can be used for extreme weather events.

  AN INSTANT POLL was conducted find out if users have used RITIS/PDA Suite for an extreme weather event. (see the results at the beginning of this document)

- **Quick-hitter: Thanksgiving Weekend 2017 Travel Advisory –** Ed Stylc (BMC Planner Analyst) briefly summarized what the Baltimore Metropolitan Council did for their Thanksgiving Travel Advisory in regards to their website. Thanksgiving advisory includes more than coastal travel so there is more data for travelers to view.
  - They used tabs to organize the trend map results, so travelers don't have to scroll down the web page which is faster for the user.
  - They included static maps illustrating the worst travel hours at varying geographic levels including region, city, and corridor.
  - They included an animated Trend Map for folks to find their best route for traveling over Thanksgiving Weekend.
  - Ed coordinated with Maryland Transportation Authority (MDTA) on the best times to travel. Ed used the PDA Suite to corroborate the MDTA findings.
  - John asked Ed if they only used two days for the Thanksgiving Weekend analysis as compared to five days for the Labor Day analysis for better visuals. Ed responded that this was part of the reason, but he also read many articles about Thanksgiving travel that mostly focused on Tuesday and Wednesday departure. Ed also did an analysis for the return day because it is known as the worst travel day around Thanksgiving, so he will compare his to analyses to each other.
  - John asked Ed if he received feedback about the new website design. Ed responded that their number of hits has increased. The last time he did a Thanksgiving weekend analysis was when the Baltimore Sun interviewed them.
  - John commented that the CATT Lab created a process and a graphic based off of Waze's Thanksgiving week graphic. This can be found on the Probe Data Analytics Suite Forum

(http://i95coalition.org/forum/viewtopic.php?f=6&t=267&sid=3352c59185b361e056e74a5835c8921d).

- ***Ed commented that once the analysis format has been set up for each holiday, it becomes easier to use each year because the PDA Suite just needs to be re-run each year.***
- Denise asked Ed if they have thought about running a comparison between their results and Waze results. Ed responded that they have not done this yet, but would like to.

AN INSTANT POLL was conducted find out if users prepared & sent a Thanksgiving Travel Advisory this year. (see the results at the beginning of this document)

- **Agency Input Session**
  - Jesse Buerk (DVRPC) asked Derek if FDOT plans on using the analysis shared today to complete an assessment of how things went, and if he thinks this will change how they complete an evacuation in the future. FDOT noted that they will definitely employ the emergency shoulder use in the future. The state is currently doing an analysis to determine where/when they might employ additional emergency shoulder use in the future. They plan on running their VISSIM model for feasibility and calibrating with the RITIS/PDA Suite information for real world conditions.
  - Jesse Buerk (DVRPC) asked how people have used the PDA Suite Tools for MAP-21 performance measures.
    - Ed Stylc (BMC) answered that they have used it for Level of Travel Time Reliability (LOTTR), but they are not reporting any of it publicly yet.
    - Daivamani Sivasailam (MWCOG) responded that they have done similar work, but want to compare PDA Suite results with their own analysis. Jesse asked him to share this when it is completed, and he agreed. Jesse noted that it would be interesting to hear what analyses other states are doing and their results.
    - Kelly Wells & Nathan Webster (NCDOT) responded that they have pulled their 2017 results for Level of Travel Time Reliability (LOTTR) & Truck Travel Time Reliability (TTTR), and they want to pull 2012-2017 summary data to use in target setting. Kelly Wells (NCDOT) mentioned that she's been emailing with Michael Pack about this and he said it really just comes down to the easy button. Jesse (DVRPC) mentioned they had an FHWA workshop, where they discussed the easy button, and it appears that DOTs are especially really looking forward to the easy button.
    - Jessica VanDenBogaert (FDOT) mentioned that they are using consultant calculations, for 2014-2016, for all the states and MPOs. She also mentioned that the Non-Interstate Level of Travel Time Reliability (LOTTR) was highly variable from year to year.
    - Jesse offered that at a future meeting it would be interesting to hear what agencies are finding when they run their analyses. He also noted that targets may vary greatly within a state and that the PDA Suite tools would be helpful for calculating this information.
  - Jesse mentioned how easy it is to use the tools and run initial scans. He asked Kelly to discuss her experience. Kelly mentioned that right before Thanksgiving, she was asked, internally at NCDOT (regarding HPMS) for a large number of data elements and she was able to run three of the four different performance measures in only five minutes for a meeting. At the meeting they indicated that they need many more data

points. Kelly spoke to Michael Pack about this question and he reiterated the functionality of their easy button and noted that it will include all of the information agencies will need. Kelly noted that with the investment made in the PDA Suite, participating agencies will have the ability to use the easy button. Jesse noted that folks on the webinar should share the information about these tools to others within their agency that are not aware of them.

- John noted that if an agency has RITIS and PDA Suite, anyone within that agency can request a log-in. MPOs within your region/state are also able to use the data and consultants, working on behalf of an agency, would also be able access the tools. Each agency (and also consultants) will need to have executed a Data Use Agreement before using the data.
    - **Accessing RITIS** - https://www.ritis.org/register/
    - Note: If your agency purchases PDA Suite tools, you can also gain access through this link. (only one log-in is needed to access both sets of tools)

- **Wrap Up** – Denise Markow thanked the users for participating. The next PDA Suite User Group meeting is planned for March 8, 2018 from 10:30am – 12:00pm (EST).

CONTACT INFO:

PDA Suite and I-95 Corridor Coalition:	
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PDA Suite Technical Support:	
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Logistics:	
Joanna Reagle	610.228.0760 or jreagle@kmjinc.com

ACTION ITEMS:

#	Action Item	Whom	Status
1	Contact Denise to become a part of the Coalition effort, and receive personal assistance for the Closing Real Time Data Gaps project.	All Agencies	
2	Contact Denise if interested in participating on the Planning Committee for the CAD Integration Webinar follow-up workshop to be held in May.	All Agencies	
3	Contact CATT Lab to get detectors integrated to RITIS.	All Agencies	
4	Contact John to present a Quick-Hitter in a future meeting	All Agencies	
5	RITIS/PDA Suite users should share the information about these tools to others within their agency that are not aware of them.	All Agencies	

Participants:

User Group Participants:	
Joanie Appell	Anne Arundel County Fire Department
Katie Starr	Anne Arundel County Office of Emergency Management
Ed Stylc	Baltimore Metropolitan Council
Fred Eshraghi	City of Norwalk
Dipak Patel	DAD N Associates LLC
Jesse Buerk, Justin Neff	DVRPC
Kelli Raboy	District DOT
Derek Vollmer, Jessica VanDenBogaert, Jerry Scott	Florida DOT
Matt Glasser	Georgia DOT
Rakesh Sharma	HNTB
Azadeh Norouzi, L'Kiesha Markley	Maryland DOT-SHA
James Li, Daivamani Sivasailam, Patrick Zilliacus	MWCOG
Kody McCarthy	New Hampshire DOT - TSMO
Jonathan Martinez	New Jersey DOT
Christopher Jones	New York State Thruway Authority
Kelly Wells, Christopher Ricks, Zach Clark, David Keilson	North Carolina DOT
Harun Rashid	Northern Virginia Transportation Authority
Marcus LaManna, Scott Benedict, Steve Gault, Ted Lucas	Pennsylvania DOT
Christian Matthews	Rockingham Planning Commission
Diane Lackey, Jim Feda, Chad Amick	South Carolina DOT
Andrew Tracey	South Jersey Transportation Planning Organization
Ian Degutis, Robert White	Vermont Agency of Transportation
Heidi Mitter, Joshua Byrd	Virginia DOT
Skip Yeakel	Volvo Group North America
John Allen, Greg Jordan, Drew Lund	UMD CATT lab
Denise Markow, Patricia Hendren	I-95 Corridor Coalition
Joanna Reagle, Justin Ferri, Enam Fares	KMJ Consulting (Coalition Support)