I-95 Corridor Coalition: RITIS-PDA Suite User Group Webinar

February 6, 2020

Question and Answer Summary

NOTE: Results from the Polling Questions asked during the webinar are provided at the end of this document.

Integrating RITIS-PDA Suite Analytics into Esri's ArcGIS Platform:

Q: Dana Magliola (NCDOT): Can you offer some insight on how you segment the freight/truck in your CMP? I'm interested in TTTR (truck travel time reliability).

A: Greta Ryan (Richmond Regional Transportation Planning Organization): We didn't cover those specifically or separate them out. We used the metric LOTTR (level of travel time reliability).

Q: Matt Glasser (GDOT): How has this changed the conversation with your folks internally and externally?

A: Greta Ryan (RRTPO): Now they can really see what's going on and what data is there so they can ask more meaningful questions. That's what happened at the policy board meeting. We started discussing different congestion and got the opportunity to go back and do more analysis.

Q: Jan-Mou Li (MWCOG): Can you shed some light on how you conflated the TMC network onto the Esri network?

A: Greta Ryan (RRTPO): We used the TMC network for all mapping. We did have to a little work ahead of time to say which roads the TMCs related to, but mapping is just on a TMC network.

Q: Michael Pack (UMD CATT Lab): Can you talk about how complicated it is to create a StoryMap? Is it free?

A: Greta Ryan (RRTPO): If you have an Esri license, it's part of that license. A StoryMap is very easy to create. You create a shapefile and put that shapefile into a .zip format and bring it into your StoryMap. Like any other map, you symbolize it, then you work on pop-ups in the data. I was creating a lot of data in excel to link to the shapefile, which I would then .zip and bring it into the StoryMap. To make the entire document, there are templates and simple instructions. This style is called cascade, which flows from one to the next. The sidebars are also easy to create and the entire thing is very intuitive.

A: Rick Ayers (UMD CATT): I've done similar work with Greta and it's very easy. If anyone attending this session would like to discuss how to integrate their PDA Suite data into an ArcGIS Online StoryMap, please email me at rayers@umd.edu.

Q: Christian Matthews (THERPC): Would you please share estimates of staff time to build the StoryMap?

A: Greta Ryan (RRTPO): I can't say exactly, but it was a similar effort to writing and formatting all the data in a report.

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TDADS Project Update:

Q: Denise Markow (I-95CC): Besides the one-minute data mark, do you have a sense of where the project is going to go in year two?

A: Mark Franz (UMD CATT Lab): Yes – the project has two main objectives. One is the deep-dive tool which I'll talk more about in a minute. The second is a similar analysis for other modes (rail, air, maritime). It seems like most of our stakeholders were leaning more toward the deep-dive on the highway analysis. This tool would allow our users to go in (in a very PDA-style query page where you can select specific roads and times) to create the pie chart for that selected range. We're in the process of scoping out the level of effort required so we can make sure the budget would align with what they had in mind for phase two.

Q: Matt Glasser (GDOT): When do you plan on finalizing that and getting the rest of the states' results pushed out to RITIS

A: Mark Franz (UMD CATT Lab): We're thinking this summer. We're still waiting on data from the rest of the states so it can be processed. Assuming that comes through within a month, we think it'll take three or four months to process and get it into the online interface. While we're waiting on that, the interface is still being developed, and we'll get MD and CO data up.

Q: Matt Glasser (GDOT): I'm curious about the methodology – how do you determine if it's traffic signal timing that's causing the problem on arterials rather than something else?

A: Mark Franz (UMD CATT Lab): We refine the label from traffic signal timing to traffic signals. We can't tell if it's timing or saturation beyond capacity. But in any case, we look at segments approaching signalized intersections from which locations we got from the OSM map. If it's near there we think that the signal had some contribution to that delay. It's possible there's a crash or a workzone there, in which case it would be labeled as a multi-factor cause. It's really based on TMCs approaching an intersection, which again, is another thing that needed to be modified. Traditionally we've been mapping incidents, which are one side of a roadway where one TMC is affected. When you look at an intersection, if it's a four-way intersection, there's eight TMC segments that have a start or endpoint there so we have to figure out a way to determine which ones are approaching the intersection, not which ones were leaving.

Q: Cornelius Okumu (LVPC): How reliable is this data from Waze?

A: Michael Pack (UMD CATT Lab): The Coalition conducted a separate study on Waze data that looks at the quality and usefulness of Waze. Even with its occasional issues, it's still better than anything else currently available at the national level, and it's certainly better than the 2004 modeled data.

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Q: Matt Glasser (GDOT): If you could get one piece of information from our partner agencies that would make this a lot better, what would it be?

A: Mark Franz (UMD CATT Lab): Right now, the Waze data is what we're using for workzones and incidents. It's pretty good and comprehensive, but with crowdsourced data there's always the question of redundancy and data quality. We've done our best to only take incidents that hit a threshold of confidence where we can reasonably say it's a real incident, but having more detailed data that comes from verified sources like a state police report or a traffic incident program at a national level, that would be tremendously helpful. Nacho agrees. We're using Waze for workzones too, so we're using crowdsourced data at a national level. Waze gives you point data, not full length of a lane closure – having those kinds of details would be great.

RITIS and PDA Suite Features – What's New and What's Coming:

Q: Kelly Wells (NCDOT): Where can I see the HERE subsegment data?

A: Michael Pack (UMD CATT Lab): It is just deployed – so if you turn on the HERE data, you'll see it. It's only visualized on the RITIS map. It is not yet available for selection through the probe data analytics screen.

Q: Benjamin Jacobs (RI Statewide Planning): What is the right format for submitting volume data? Does HPMS data work?

A: Michael Pack (UMD CATT Lab): It needs to be formatted in TMC format. We have documentation on our website in the help section that tells you what that format should be. Here's a link: https://pda.ritis.org/suite/help/#data-types_providing-your-volume-data We require this format for us to be able to do it for free. If you can't, we'll talk to you about what it might cost or we can find someone else who can help you.

Q: Kelly Wells (NCDOT): Is incident clearance time defined as incident duration (end time – start time) or a more sophisticated measure?

A: Michael Pack (UMD CATT Lab): There's two different ways it can be classified. It can be classified by road clearance time (when the road is cleared and back opened). I can also be classified by when all the responders leave and the agency closes it in their system. It's not for when travel times and metrics like that return to normal for time-of-day.

Q: Taruna Tayal (VHB): Is there a cost to use the trip data? How much?

A: Michael Pack (UMD CATT Lab): There is a cost – Massachusetts, Maryland, and a few others have purchased this data. Reach out to Denise Markow and she can hook you up with the data vendors to discuss pricing. Once the data is purchased, we take that and integrate it into our tools.

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Q: Catherine Johnson (AECOM): Did anyone use the following detector tools in the RITIS tool box? (1. Detector Profile, 2. Health Summary, 3. LaunchPad, 4. Road Profile)

A: Michael Pack (UMD CATT Lab): I think this is a question for the larger group, but FloridaDOT is the biggest user of this tool. We have a few researchers at universities that use it as well. It's slow and cumbersome right now, but you'll notice some improvements once we deploy the new one.

Q: Jan-Mou Li (MWCOG): Is there any plans to replace flash player?

A: Michael Pack (UMD CATT Lab): We've moved completely to HTML5 as of five or six months ago. Flash player is not necessary.

Q: Benjamin Jacobs (RI Statewide Planning): It would be nice to have map selection in more of the tools. Text selection can be very clunky.

A: Michael Pack (UMD CATT Lab): Yes – we can discuss this more, send me an email and we'll set up a call. There's a map selection today, but you draw a box around things and it's an all-or-nothing selection. Jan-Mou has seconded this, so we'll all get on a conference call with anyone else that would like this functionality.

Q: Catherine Tulley (SPC): Does RITIS have any plans to introduce an API for users to download data programmatically? A data dictionary would also be useful.

A: Michael Pack (UMD CATT Lab): Yes. There's an API called RITIS filter that agencies can get access to. It lets you subscribe to real-time data and ask for some archived data as well (from incidents). We also have an API for probe data that allows you to run almost all historic queries that you can run through the GUI programmatically. Send me an email and I'll put you in touch with the people that run that API and they can get you started. We also have a data dictionary.

Q: Chester Osbourne (MassDOT): We want to build a blackboard so that we have a large dashboard of more than 50 routes (too many for a TMC operator to look at) and when an event is detected (drop in speed), it would pop up an alarm.

A: Michael Pack (UMD CATT Lab): We are working with a different state that's not a part of the Coalition to do speed alerting. Maybe that is something we could share with Chester and the group. We can see if that's something that could work. The other state calls it speed threshold alerting. It requires the state to go in and configure alerts – but once alerted, it can send an email or a text to an operator. Send me an email and we'll share that information. We'll see if that's what you're looking for. If it's not we'll come back to the group and discuss it. The more people that want a tool, the easier it is to justify us building it.

Polling Results: