



**The Eastern Transportation  
RITIS User Group Web Meeting – July 28, 2022  
Question and Answer Summary**

*Note: Results from polling questions asked during this web meeting are at the bottom of the document.*

**Georgia DOT's use of RITIS for Safety Purposes**

**Q1: Jesse Buerk (DVRPC):** Can you expand on the intended audience for these graphics?

Sam Harris (Georgia DOT): The person that originally requested this information was our state traffic engineer, however, our first audience was our Commissioner and executive management. Parts of the presentation that I showed today were from the presentation used for the Commissioner. It is important to be able to have that information in a digestible form so that people can understand what you're talking about and move forward with it. We also met with other key stakeholders such as the City of Atlanta and MARTA (our main transit agency) as well as advocacy groups for pedestrians and bikes. These types of graphics were helpful particularly with the advocacy groups as they don't typically have an engineering background. By putting together colors and their meaning, it was easy for them to understand.

**Q2: Nathan Peck (Illinois DOT):** What tool/software was used to develop those congestion scan graphics?

A: Sam Harris (Georgia DOT): It's the congestion scan tool that came directly from RITIS. You can access it here: <https://pda.ritis.org/suite/cscan/>. It's an easy tool to use in my opinion. For Georgia, we have a lot of saved routes because we have a lot of different people use that application. You can pick the time frames and the data choices, and put the data into a report or presentation.

**Q3: Harunur Rashid (Northern Virginia Transportation Authority):** The latest edition of the Highway Capacity Manual talks about multimodal design standards. Is GDOT considering those recommendations? For crash data analyses, are any impacts studied related to COVID-19, such as lower volumes/higher speeds?

A: Sam Harris (Georgia DOT): Any new resources such as the Highway Capacity Manual and Highway Safety Manual were reviewed and continued to be reviewed within the program to ensure that we're doing our best based on new research and data.

Regarding crash data, a lot of states were in a similar position as Georgia during the pandemic. While crashes decreased, our fatalities increased. The higher severities were something that was not expected, at the very beginning. The data also presents opportunity areas as it highlights certain risk factors that may not have been labeled beforehand. We saw speeds go across up across the board in several different categories in terms of driver behavior. Unfortunately, we're also seeing that because of less police presence and fewer vehicles on the roadway, drivers got used to driving in certain ways and those behaviors have persisted even as traffic volumes have increased. This produces more chances for crashes.

We developed a weighted factor methodology for volumes during COVID; this was a strategic approach from our DOT. There was a memo providing guidance on growing



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traffic volumes for any project during the pandemic. For the most part, we're seeing everything return to normal, especially in our rural areas. In the metro areas that may not be the case and we may never see those volumes return due to the prominence of teleworking.

**Q4: Nathan Webster (North Carolina DOT):** Regarding injury crash density, would it also be useful to show per unit ped/bicycle mile traveled? For example, the places with high rates of bicycle/ped crashes may not necessarily be unsafe relative to other locations, they just have more bike/peds. Perhaps there are challenges estimating the ped/bike miles traveled.

A: Sam Harris (Georgia DOT): Pedestrian and bicycle data is a difficult data set to use in the first place. During this analysis, we were able to utilize the tools that we had to come up with those density charts. If I were to do this study again, I would have used a new application for the state of Georgia for safety analysis called "[Numetric](#)" which allows us to process crash data at a super-efficient rate. Everything I just showed took two months with the old method. I could have done that through the "Numetric" with a crash rate, an [EPDO \(Equivalent Property Damage Only\)](#), or just a frequency standpoint in days.

**Q5: Gil Grodzinsky (Georgia Environmental Protection Division):** Where does RITIS come into your study? Have you used RITIS truck/freight data? If so, how did you access the truck volume data?

A: Sam Harris (Georgia DOT): The probe data analytics, in the data archive, was used in RITIS. No, the safety group has not used the RITIS truck/freight data. I believe our Planning group has. You can reach out to me at [sharris@dot.ga.gov](mailto:sharris@dot.ga.gov) and I can follow up.

**Q6: Marco Gorini (DVRPC):** Was there a firm cutoff for LOS/congestion that could be tolerated or did crash frequency or other factors create more nuance?

A: Sam Harris (Georgia DOT): The way we approach that cut-off in our safety projects is if the proposed safety improvement will have a significant operational impact. The cut-off used for this study was: if the congestion scan showed a high congestion percentage, lane call methodology (borrowed from FDTO) call showed 0 or -1 lanes available, and the V/C was over 1. Honestly, it varies depending on location. For reference, the lane call methodology used looks at the total AADT and functional class for a given corridor. For each functional class, there is a table for a range of AADT. The range will dictate how many lanes might be available depending on the AADT found on a particular route.

No, the safety data was used to help justify the priority of a given corridor. For example, the corridor ranked in the middle for operations, however, ranked high in safety data was prioritized higher



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**Q7: Tom Edinger (DVRPC):** What criteria were used to define a corridor? How do you decide the length of the corridor; signal to signal, or multiple signals? Are corridors both limited or non-limited access?

A: Sam Harris (Georgia DOT): The only criteria used was the limits of the corridor inside the Atlanta Beltline. A lot of thought went into the size of corridors for analysis when we came up with the boundaries. There was no limit to the number of signals and all but one of the corridors is non-limited access.

### **Freight Rerouting For a 4-hour Closure of I-95 in Baltimore**

**Q8: Robert Pangborn (Maryland Transportation Authority):** What was the date of this incident?

A: Michael Pack (University of Maryland CATT Lab): Tuesday, January 19, 2021.

**Q9: Roxane Mukai (Maryland Transportation Authority):** Does RITIS have the data to see what if any route guidance was being provided by GPS Routing Systems and to analyze if motorists were more/less influenced by GPS routing systems as compared with DOT guidance?

A: Michael Pack (University of Maryland CATT Lab): We do not. We can only tell which routes people took. We have no idea why they took the route--whether it be local knowledge or a specific app telling them to do so. If there are sources for this data, we could consider integrating them.

**Q10: Sushant Darji (New Jersey DOT):** Is incident data taken into consideration when generating congestion ratings in the PDA suite?

A: Michael Pack (University of Maryland CATT Lab): Incident data can be automatically overlaid onto congestion scan and other graphics. We also have a way to provide attribution to different congestion events to tell you why we think there's non-recurring congestion in a region.

### **New RITIS Tools and Recent Enhancements**

**Q11: Arielle Ferber (Oregon DOT):** I'm unfamiliar with the trip analytics tool, where is it located?

A: Rick Ayers (University of Maryland CATT Lab): You can find it here: <https://trips.ritis.org/>. Trip Analytics is licensed separately from RITIS and Probe Data Analytics in that it requires waypoint-based CAV data to support the rich O/D analytics that you saw Michael demonstrate today.

A: Michael Pack (University of Maryland CATT Lab): Your agency's ability to access these tools is dependent on whether your agency has purchased the data required for these tools. For example, the trip analytics shown for the Smoky Mountains is a separate



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data set that you must buy. There are different companies you can buy this data from (INRIX, TomTom, HERE, etc.). Then once you have the data, we can put it into the tools and make it available to you.

The Coalition has done some great work in defining acceptable terms and conditions for sharing of data between agencies. There might be a way for you to get access to the tool, even if you're not the state that purchased the data. For example, Tennessee and North Carolina bought data, including trips that go from Tennessee and North Carolina into Virginia. Virginia can look at that data and see what's going on.

**Q12: Daniel Hulker (Kentucky Transportation Cabinet):** How far back are the new fields available for NPMRDS?

A: Doug Warner/Tom Jones (University of Maryland CATT Lab): They should be available in data from 2017. New exports only, of course. If you ran (or re-download) an export last year, you need to submit it again with the new option.

**Q13: James Li (MWCOCG):** In the Smoky Mountain example, I was wondering if "through traffic" was considered. Can you shed some light on that?

A: Michael Pack (University of Maryland CATT Lab): In the query setup, there is a way to define what type of traffic you want to include in these analytics. The checkboxes on the left allow you to filter the data. you can do other pass-through filters as well.

**Q14: Han Zheng (Arcadis):** For Trip Analytics, if one trip crosses the study boundary twice, is it recognized as one unique trip?

A: Michael Pack (University of Maryland CATT Lab): The trip must be continuous. If the trip didn't stop, it's just considered one trip. You can see sometimes if you draw out the routes, you might see circular routes. One of the powers of this RITIS tool is that it exposes things like that in the data. It's not just giving you an answer; it gives you the power to figure out if there's any weirdness in the data. RITIS can point that out and help check for errors.

**Q15: Matt Glasser (Arcadis):** Why do you use separate software for custom geographies as opposed to what we do with the rest of the PDA suite?

A: Michael Pack (University of Maryland CATT Lab): We haven't developed our software yet. That is the next thing we're working on.

**Q16: Jesse Buerk (DVRPC):** You mentioned integrating bike share information for DC, can you explain what that process looks like? In Philadelphia, we also have a bike share and the City might be interested in looking into that.

A: Michael Pack (University of Maryland CATT Lab): We're integrating the bike share in DC because northern Virginia going through a very interesting program - the [Regional Multi-Modal Mobility Program \(RM3P\)](#). It's like a giant integrated corridor management project for the entire northern Virginia region. It's will have predictive capabilities,



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decision support, and trip incentivization-type capabilities associated with it. RITIS is the data platform behind all that logic. We've had to ingest all this multi-modal data to help these other systems analyze trip patterns and make recommendations. We haven't figured out what to do with the bike share data in RITIS directly. Right now, it's just part of the APIs that run RITIS. If someone wants access to the bike share data through the RITIS API, they can get it. In the future, we might put it on the front end of RITIS or integrate it into some of these other tools. If you and your city are interested and have some ideas and needs let us know what they are.

**Q17: Jesse Buerk (DVRPC):** FHWA recently put out a notice of proposed rulemaking for greenhouse gas performance measures. I know that RITIS was investigating a way to integrate the ability to look at emissions data at the TMC segment level. I know that's another analysis that requires certain data sets. Can you explain what's required for that and where that tool stands at this point?

A: Michael Pack (University of Maryland CATT Lab): That is a functioning tool, but it requires special data. We received a couple of million dollars from the Department of Energy to specifically build out energy analytics. Those have been integrated into the Probe Data Analytics Suite - energy use and emissions matrix, charts, and trend map. Using the dashboard, you can configure it to tell you how much energy is being consumed and how much emissions are out there. It even predicts the next couple of hours. For this to work, we need vehicle ownership data (down to the zip code) including how many vehicles are of a certain engine type, such as electric plug-in hybrids. We aren't able to do the modeling and the analysis without that type/level of information. For the DOE pilot, we used the National Capital Region and the Columbus (Ohio) MPO as they were able to get us their vehicle ownership data. If others are interested in this tool and can get us vehicle ownership data, we can talk with you about what it's going to take to enable these tools. Otherwise, you're welcome to look at the tools and see how they work in those other geographies.

Some companies will sell vehicle ownership data and we investigated buying it for the entire United States but it was going to be close to \$300,000. We might ask for more DOE funds to make this available in the future.

**Q18: Robert Pangborn (Maryland Transportation Authority):** How do we navigate to the crash reporting and incident clustering explorer tool?

A: Michael Pack (University of Maryland CATT Lab): We only have a true crash reporting tool for the state of Maryland. However, they're not sending us their crash data anymore. We archived all the ATMS crash data, events, and work zone data. Navigate to the data archive, then the event query tool where you will find a list of states and their data sources. For example, in Maryland, we have the Howard County period dispatch feed and Maryland DOT's ATMS platform. There are filters for types of crashes or incidents and date ranges. The tool will give you tables that you can export to excel. It will also give you other filtering and mapping hotspot analysis capabilities as well, but it's not the



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traditional crash analytics that people want. We do have a cost estimate for what it would take to build out that crash reporting tool for the entire country. That is one thing that the Product Enhancement Working Group voted on last quarter.

The incident clustering explorer tool no longer exists. That was decommissioned seven or eight years ago. We have the event query tool which does a lot of the same things; I would start there.

### Other Questions

**Q19: Patrick Zilliagus (MWCOCG):** What is Waypoint data?

A: Michael Pack (University of Maryland CATT Lab): Waypoint is a synonym for breadcrumb trail data obtained from the tracking of connected vehicles. It's the more detailed data used for understanding routing and/or evaluating signal performance measures.

**Note: David Heller (SJTPO):** Can you repost the weblinks to the major RITIS tools again?

A: Esther Kleit (KMJ Consulting): Here are the resources Michael mentioned:

- RITIS Tools Catalog: <https://ritis.org/tools>
- PDA Suite: <https://pda.ritis.org/suite/>
- Trips Analytics: <https://trips.ritis.org/>

