



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

October 25, 2018

Question and Answer Summary:

General Questions:

Q1: James Li (MWCOCG): We found TMCs changed over time. The VPP Suite might remind that certain saved TMCs did not exist. Any suggestions to resolve this issue?

A: Michael Pack (UMD CATT Lab): TMCs (and road network representation in general) are difficult. The mapping and data providers need to make updates to their maps-- which theoretically makes all of the data much better (finer granularity), but it does mess up the saved TMC sets. It's a constant fight to wrestle with progress of the road network vs. stability of the road network. We've been experimenting with ways to handle this automatically, but it is VERY difficult. We are working on some basic metadata management solutions that would at least give you more information about what changed and how it might impact you, but that won't solve the root cause. As of now, working with support is still your best option when you see these things happen.

Q2: Kelly Wells (North Carolina DOT): So, does a reminder or popup appear if there's a new TMC in your saved set?

A: Michael Pack (UMD CATT Lab): No, there is no reminder. TMCs may have been retired or new TMCs can be introduced. We don't have an automated solution yet, but we are definitely working on one.

Q3: Patrick C Zilliacus (MWCOCG): Michael Pack is correct. I have found significant changes with TMCs especially when compared with older datasets. The analyst has to be on the lookout for TMC network changes. I found that a large part of U.S. 29 in Northern Virginia simply disappeared recently. U.S. 29 has since returned with new TMC network codes.

A: Michael Pack (UMD CATT Lab): PDA support is there to help you if something does not look correct. Support can be reached at: support@ritis.org or pda-support@ritis.org

Q4: Enock Mtoi (AECOM for Florida DOT): Is there going to be a coordination with vendors to notify us on the changes of TMCs?

A: Michael Pack (UMD CATT Lab): We do make updates to our "What's New" section when we update the map. We've avoided blasting bulk emails out to folks as it is not the preferred way users want to receive updates. If you have suggestions on how you would like to be notified, please send us a note and we will see if we can do it.



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Q5: Kelly Wells (North Carolina DOT): You said that vendors make updates quarterly. Do you automatically ingest those updates each quarter?

A: Michael Pack (UMD CATT Lab): It depends on the vendor, as each does it a bit differently. Sometimes it is done automatically, while some vendors ask us to wait for various reasons. Waiting, however, means you may not always have the most recent TMCs available.

Presentation: "Terrible Traffic Tuesday" an Evaluation of Changes in Congestion after Labor Day (presenter: Taran Hutchinson, MATOC)

C1: Ed Styc (Baltimore Metropolitan Council): Good presentation. I've done a few of these holiday travel analysis reports. I liked seeing the use of User Delay Cost which I haven't utilized.

Q6: Michael Fitzpatrick (Mass DOT): 15% jump was travel time, not volume, correct?

A: Taran Hutchinson (MATOC): We looked at User Delay Cost in terms of vehicle-hours of delay as the specific metric.

Presentation: Delving into Winter Weather Performance Measures (presenter: John MacAdam, Ohio DOT)

Q7: David Heller (South Jersey Transportation Planning Organization): How are your RWIS stations powered--solar? And can they be used to detect other types of weather events--i.e., big rainstorms?

A: John MacAdam (Ohio DOT): They are a mix for power and communications. A number are solar powered and therefore not reliable, so we have had to build in a number of fail safes. If you lose weather data during an event, then the information is incomplete and cannot be counted against recovery and must be discarded. We put extra effort in to make sure that priority locations remain online for the duration of winter storms.

Yes, they can be used to detect other types of weather events. There's a forecasting system and our maintenance managers can use them to predict any sort of incoming weather.

Q8: Enock Mtoi (AECOM for Florida DOT/FTE): What tools (programming language) did you use to develop this application?

A: John MacAdam (Ohio DOT): We built this in house, mostly using VBA and a little of SQL queries to pull in data. We had it output HTML/CSS and update to a web portal.



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Q9: James Li (MWCOCG): John, how may your system report with missing speed data? Especially when a crash reported/involved.

A: John MacAdam (Ohio DOT): At the end of the year we put out a preventable failure and a non-preventable failures report. We may have had trucks down, an issue with maintenance resources, or perhaps a crash. We want to have record of any such information to know how it impacted traffic.

Q10: Ram Venkatanarayana (Virginia DOT/VTRC): Two questions: (1) Are route lengths taken into consideration? (2) Are holidays, delayed/early office/school openings/closings, etc. considered in determining "expected speed"?

A: John MacAdam (Ohio DOT): We will determine what segments are first priority and that is typically the entire route through the county. That ends up being multiple TMC segments. We analyze that collection of TMCs to determine largest to smallest speed drop from the typical travel speeds. We report the 85th percentile speed drop for the entire route. That determines the speed drop for the particular corridor for a particular timestamp.

A: Michael Pack (UMD CATT Lab): There are a couple of different ways to compute the historic average speed. Data providers will sometimes provide that directly in their feeds as a rolling two-year average. For some of our clients, we will do a rolling average once a month. We will recompute the historical average speed based on some date range that a client wants us to use. When the provider computes the "expected speed" it isn't clear if they include holidays or not. Because some providers can use up to two years of historical data to compute the expected speed, having a couple of holidays mixed in the average probably doesn't matter. They would probably have the same effect as an incident might have on the average.

Presentation: Multi-agency, Multi-state Response to the June 20 Woodrow Wilson Bridge Collision: An After Action Analysis of Operations Response (presenter: Taran Hutchinson, MATOC)

Q11: Kelly Wells (North Carolina DOT): Are there separate TMC codes for local and through lanes on WWB?

A: Michael Pack (UMD CATT Lab): Yes, there are separate TMC codes. There usually are separate codes when the lanes are separated (such as they are on the WW Bridge).

Q12: Richard Rabinowitz (New Jersey DOT): Please elaborate? When might there not be separate TMC codes for local and through lanes?

A: Michael Pack (UMD CATT Lab): It's hard to say. The TMC consortium (which seems to be coordinating less lately) doesn't provide a lot of reasoning for when/where/why



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they create TMCs. I have seen (years ago) semi-separated HOV lanes that didn't have TMC codes. It's not something I investigate regularly, though.

A: Kelly Wells (North Carolina DOT): They told me recently that if it is barrier separated there will be separated TMCs. We have hot lanes coming that we were told would not have separate TMCs because they are only separated by delineator posts.

Q13: Scott Cowherd (Virginia DOT): Who declared an event as a secondary accident?

A: Taran Hutchinson (MATOC): This is best answered by each of the specific DOTs. When we searched the RITIS Event Query Tool we noticed a notable increase in relatively minor incidents (disabled vehicles, property damage crashes, etc.) in the queue leading to the bridge incident. We also noticed more of these type of incidents on alternate routes as a result of drivers trying to get around the primary incident.

A: Michael Pack (UMD CATT Lab): Some agencies actually have a "secondary incident" button/flag in their ATMS that they will use. However, for this analysis, we are calling all of these additional incidents "secondary" because these incidents (frequency, location, type, volume) never happen in these locations; however, many happened today potentially due to the long queues, severe congestion, etc. that likely led to disabled vehicles and rear-end collisions.

Q14: Denise Markow (I-95 Corridor Coalition): This particular event made national news. How quickly have you had to turn around a user delay cost for any executive office that may need that information?

A: Taran Hutchinson (MATOC): We typically suggest to wait a complete day to let the entire day's congestion data set come in. News and media outlets will be calling as soon as possible, but I would advise you get the complete picture before responding. You can begin to get outputs in a few hours after you begin to enter data fields for user cost delay, if you have all the right data.

Q15: Richard Rabinowitz (New Jersey DOT): I see that the District of Columbia has a DDOT, Maryland has an MDOT, and there's a VDOT as well for VA. So, I was wondering whose DOT was involved on the WWB?

A: Michael Pack (UMD CATT Lab): This was a multi-agency response.

Q16: Virginia Lingham (Virginia DOT): I was stuck in gridlock conditions that day in Alexandria trying to go south. How were the localities involved? Were timing plans adjusted, etc.?

A: Ling Li (Virginia DOT): VDOT Signal Operations Center monitored and adjusted timing plans



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A: Michael Pack (UMD CATT Lab): MDOT and VDOT both responded significantly (we can see who responded through the Incident Timelines. I can't remember if DDOT responded or not.

A: Taran Hutchinson (MATOC): We did not have representatives from the local TMCs and signal shops at the after action review so we did get their perspective on the local response. That being said, we too experienced challenges leaving our training event in Alexandria that day. It was very difficult for many of us get from our facility to the surrounding highways. It was noted that once the area had become saturated, as it was, there is not much you can do.

Presentation: RITIS and PDA Suite Features

Q17: Monica Zhong (Florida DOT): Michael, how do we get access? Do I need to ask our state representative for access or data?

A: You can request access at <https://www.ritis.org/register/>

Q18: Enock Mtoi (AECOM for Florida DOT): Why was the interpolation option taken away in congestion scan app?

A: Michael Pack (UMD CATT Lab): Interpolation in the Congestion Scan was almost never used, and there were concerns over the accuracy of the interpolated results-- especially in how results could be misinterpreted when there is a mix of short and long segments. The interpolation produced "prettier" graphics, but they would sometimes "wash out" important data.

C2: Yousheng Mao (Arcadis): Historical clearance time sounds a very useful tool. Incidents almost always cause over-saturated situation, which is very difficult to predict the duration, delay and queues using other methods.

Q19: Richard Rabinowitz (New Jersey DOT): How come I don't see TMC segments from NJ? Has anyone done anything to make TMCs for NJ?

A: Michael Pack (UMD CATT Lab): Nothing has changed with NJ. Sounds like maybe your permissions have gotten messed up. Write to support@ritis.org, and someone will help you out.