

SunGuide Software

User’s Group

Meeting Minutes

**Date: January 7, 2021**

**Time: 2:30-3:30 EST**

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| Agenda: |  |
| Topic | **Led By:** |
| Item 1: SG-5349 FL511 not publishing correct lane blockage if an event has both the turn lane and travel lane blocked.Item 2: Release 8.0 Database Scripts and SunGuide DowntimeItem 3: SG-4209 – Use polyline instead of a single point for road closures | Tucker BrownTucker BrownTucker Brown |

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| Attendees: |  |
| Justin Merritt, D1Ray Mikol, D1Luis Hernandez, D1Jason Evans, D2Jason Summerfield, D2Kevin Mehaffy, D3David O’Roark, D3Greg Reynolds, D3Dee McTague, D4Jacques Dupuy, D4Shannon Watterson, D5Kyle Higgins, D5Eddie Grant, D5John Hope, D5Mark Laird, D6Alex Mirones, D6Mike Crawson, D7 | Cherie Phillips, FTEKelly Kinney, FTEJermaine Da Silva, FTEBrent Poole, CFXTucker Brown, SwRIChristine Shafik, COMark Dunthorn, COGregory Dudley, COAlex Brum, COJennifer Langford, COJuan Abreut, COKarthik Devarakonda, COMike Clark, CO |

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| Discussion: |  |

Christine Shafik: Welcome to the SSUG meeting, we have a few items to discuss today.

**Item 1: SG-5349 FL511 not publishing correct lane blockage if an event has both the turn lane and travel lane blocked.**

Tucker Brown: Right now, when we send lane blockage information, we use the Society of Automotive Engineers (SAE) codes to relay lane blockage information to FLATIS. That is how FL511 can tell what type of blockage is there. There is an entire list that you can use but the problem is that none of them would say left travel lane and turn lane blocked. So, we would have to duplicate all of the SAE codes to tell them about things like a travel lane plus a turn lane, a travel lane plus a turn lane plus a ramp. Every possible combination would have to be in the list of codes which is agreed upon between the SunGuide team and the FL511 Team. The problem is that those don’t exist on the SAE code side, so we are having trouble getting that information over to FL511. The proposed change here is dropping the SAE code in general and we will report the actual lane configuration. We will report what the event says the actual lane configuration is. FL511 will be able to get that same information and create the message accordingly on the website. This will not change anything to your operation, so you are still going to block lanes in the same way and publish the response plans. It is really a difference in how we report to them that information. These same slides were presented to the FL511 team in a monthly meeting we have with them. They agreed with this change and we wanted to run it by the SSUG prior to taking it to the CMB. Are there any questions or comments? Third parties will not be affected by this.

Kevin Mehaffy: Will this effect reporting at all?

Tucker Brown: Nothing internally to your SunGuide system would be affected. Only the messaging out to FL511 would be changed.

John Hope: Have we established the ordering of the lanes? CFX and District Five have lane one as the lane closest to the median.

Tucker Brown: Yes, in the direction of travel from left to right.

Jason Summerfield: So, there is nothing else that uses the SAE codes directly that we know of?

Tucker Brown: No, internally to SunGuide no.

Jason Summerfield: I thought CAV might have had some, but I has changed so much recently.

Tucker Brown: There are codes in that but not SAE.

**Item 2: Release 8.0 Database Scripts and SunGuide Downtime**

Tucker Brown: I sent out an email to get the Districts planned upgrade schedule and acceptable downtime. Essentially everyone responded with an ability to be down for less than 4 hours to complete the 8.0 upgrade. There were a couple that were a little less than that. 4 seems like a cap of where people are sitting. Based on the current testing, the 8.0 scripts take way longer to run. We will need to make changes on how these run. 90% of the script time is to change the time zone information, we will have to rewrite every single timetable in the database which is why it is taking so long to do it. We could run that after SunGuide comes back online and while the operations are running. This will affect the reporting until complete. May take a day or 2 to finish. In TERL testing it took 16-22 hours to run the full scripts, but by splitting them out we can still have operations going. With splitting out the scripts I think we can get you under the four-hour timeframe and have you up and running. This will mean that if you are trying to do reporting against the data, they will look weird. I would hold off running reports entirely until the 8.0 scripts are complete. Reports on pre-8.0 data will be weird. Anything post 8.0 like an event chronology would be fine. Once you get the scripts done, the reporting will turn back to normal. That is our plan to cut the scripts down to 4 hours. If you have already started running a test database to figure out how long it will take or running the scripts of how they are right now. If you go to that back up database, it is recommended that you turn it into a simple recovery mode. Due to the number of changes for timestamps, transaction logs are filling the drive as part of the upgrade. For test DBs, change the recovery mode to Simple and transaction logs will not be written. For production, after we make the change to the scripts, you will likely need to take frequent backups to clear the transaction log.

If you have less than four-hour downtime let SwRI and Central Office know so they can come up with a custom plan to help meet your need.

Mark Laird: If you having to run scripts it might take a few days.

Tucker Brown: Off hours is fine. It could take longer if we don’t get an entire day to run at once and we do partial hours. Essentially since the script is looking at everything and asking if we have the right time zone and change those. You can stop it at any point and the script will pick up where it left off.

Mark Laird: Do you know how frequently you will have to do the back ups to keep the logs down?

Tucker Brown: We will have to do some testing, so I don’t have an answer for that yet. It will depend on how much space you have for the transaction log to grow.

Mark Laird: It would be nice if you could run it each night for 6 hours and then stop and run it the next night.

Tucker Brown: If you are going 6-hour blocks, it might take more than one or two days.

John Hope: What database are you testing against?

Tucker Brown: On the TERL systems we did District Two and Six. On our internal systems we did District Five and Seven.

John Hope: District Five scripts finished for 8.0 on the test system but it took two full days.

Tucker Brown: The database back up that people are pushing up to the TERL FTP are full back ups, right?

John Hope: It should be.

Tucker Brown: District Two had a similar issue where it took a significantly long amount of time. Jason is that correct?

Jason Summerfield: It took about 50 hours, but I was running it on a shoebox. Our test system is our old stuff repurposed. I hope it would be somewhat faster.

Tucker Brown: That was one reason why being able to optimize the scripts went out the window. We still will do some of those to get the total database time down. There is no way we could run those completely.

John Hope: We will be in touch with you as we move forward.

**Item 3: SG-4209 – Use polyline instead of a single point for road closures**

Tucker Brown: We have talked about these two years and it’s kind of sat there a while. This issue has come up lately because Waze started dropping out all of the SunGuide events because there wasn’t a second point. That is one use case. There are several things we are trying to do. There is also an attempt to get them to show on the Waze closure feed which is different (long-term closures, construction closures, etc.). One of the things discussed at the SSUG is giving the operators the ability to put in an event but not have to put it at every single ramp. And would be able to report on a single event. We are in the process of doing a ConOps and today’s meeting will factor into that ConOps. Right now, the proposed change is an operator creates an event like they would now. Then have the option to turn it into a polyline event if it is a full road closure. The operator would set the start and end of the closure. The software would pick up and automatically select all locations between the start and end point. The operator would be allowed to view the list of midpoints and deselect locations they might not need to publish. They would have direct access to manage the location it is referring to. When they publish the event, instead of just publishing a single location, it would be a list of affected locations. The intent is to use these as closures so the system would look at that and the lane would the event locations lane blockages. There would be an assumption that if you are adding something like that.

Does anyone have any questions on the flow or how it would be used operationally?

Kevin Mehaffy: If you didn’t connect the polylines, would it still work?

Tucker Brown: I will cover that on the next slide.

Jason Evans: So, it would go in both directions and start at the event? I want to make sure we can go both directions.

Tucker Brown: You would still have an event location point and select the start and endpoint for the polyline. Maybe the start of that could be upstream of the current location or at the current location.

Jason Evans: Okay, I just wanted to make sure it would go both directions.

Ray Mikol: Is there a certain number of miles included in the polyline?

Tucker Brown: It depends on where they put the beginning and end points. There is no restriction on how short it could be.

Tucker Brown: There were two cases here:

* One for a single point location (not a closure over the roadway), we have already asked the FL511 team to create a second point within 50 meters in the direction of the event.
* If an event is multiple EM locations, we will ask the 511 team to provide a list of points between the start point and end point.

We thought about having an operator do this in SunGuide and it seemed like more work. The FL511 team is going to do it based on a GIS from the event location point. They are looking to do that before this enhancement is out. Central Office correct me if I am wrong.

Mark Dunthorn: Yes, they are looking for a solution, but it is only going to apply for single point incidents. Its not necessarily based on a GIS map but on the direction and the originating point. We are not sure if it will be a long term solution or not but we did ask for a quick turnaround on this because a lot of Districts have noticed that none of their events are hitting Waze right now. There are two actions – one is short term for the crashes that aren’t hitting Waze. Then the long-term solution is polylines.

Tucker Brown: There is still the need that for the points within the start and ends points, they have to be within 50 meters of each other.

Mark Dunthorn: That is right, and it will be based on the GIS map because we need to keep them on the roadway and 50 meters apart. We have decided if it will be done in FL511 or SunGuide. But now that we bring it up, let me ask a question. Is there a need to see that set of points? This is a second set of points not just connecting points but a bunch of points that are 50 meters apart. Is there a need in operations to see that line? The reason I am asking is if you need to see that line then we need to do it in SunGuide. If no one in operations is asking to see that line, then we can do it in either place.

Tucker Brown: The other option on the polyline is that we link that drawing of the line on the map.

Mark Dunthorn: We are certainly planning on drawing a line, but the question is that needed for operations?

Alex Mirones: I am a little concerned about adding more to our very robust map interface. Will this be clogging up TSS segments and other devices.

Mark Dunthorn: I would say this would be an attribute of the event. I don’t know where we would draw it, but I was envisioning it as something that would be requested to be drawn temporarily.

Tucker Brown: I saw it as a configuration on the top left and the severity is there, polylines could be one of those types. We would keep the icon but the ability to see the line would be controlled via user configurations.

Mark Dunthorn: I like it.

Mark Laird: It seems like the locations would be more useful.

Mark Dunthorn: So, EM locations is what operations would use.

Mark Laird: That is what the operator picked.

John Hope: Is the question whether it should be required of the operator?

Mark Dunthorn: No, it was if the operator would have any use for it. My feeling is that just connecting the EM locations should be sufficient for operations. Waze has been sensitive from an operations point of view. We wanted to make sure you were good with seeing the limited set of points. If you want to see what Waze is doing with it then you can go to the Waze map which a lot of you do. It just will be slightly different from what you see on the operator map.

Tucker Brown: Does anyone have any input on polylines in general?

Mark Laird: How does this effect performance measures reporting?

Tucker Brown: This will be covered in the ConOps as well. Let’s say you had a report that contains events that include a particular location. If any of those locations were chosen it would pick up the single event. It would only count that event once even since there are multiple locations in it. There are implications on how we store and do reporting. One option was to split out polyline events and other events. I don’t think that is helpful to operations in case they want to include them together. Ideally, we would be able to incorporate all of this into a single structure and we would be able to report on a single structure. That change will make us update how we retrieve locations. The event details and summary would have the header for the event chosen.

John Hope: District Five is indifferent to this.

Mark Laird: Do we know if there is any effect on performance measures?

Tucker Brown: The thought for now is to just track the same set of performance metrics. It would rely on the primary event location to pick it up.

Jason Evans: How will this effect DMS being pulled into response plans?

Tucker Brown: Anytime we pull DMS we have to start at a specific point. There would be a question there on if it should start at the primary event location or the start location if that was more upstream?

Jason Evans: I would say at the upstream location.

Tucker Brown: Potentially that would be a change that the polylines start their search where the start of the location is instead of the start of the event. These would be closure type events so the closure templates would still apply to them and branch out in the same way. No real significant change on how it selects and generates that messaging. There is a ConOps being generated for this. It will be sent to the Districts for comments so please comment on it and get it back to Central Office.

Christine Shafik: Thank you Tucker. Any other comments or questions from the team? Please make sure to keep Central Office in the loop when you have a plan to install 8.0. With that said I will give you back another 15 minutes to you.