SunGuide Software
User's Group
Meeting Minutes

Date: April 26, 2018

Time: 2:30pm-3:30pm EDT

Agenda:

Topic	Led By:
Item 1: Events Using Polylines	Derek Vollmer, CO
Item 2: Bridge Preemption	Tucker Brown, SwRI

Attendees:

Robbie Brown, D1
Jason Summerfield, D2
Tanesha Sibley, D2
Ryan Crist, D2
Aven Morgan, D3
Kevin Mehaffy, D3
Greg Reynolds, D3
John J. McFadden, COT
Jacques Dupuy, D4
Dee McTague, D4
Shayla Khalilahmadi, D4
Marlon Chin Shue, 595
Josh Sibley, D5
Shannon Watterson, D5

John Hope, D5-CFX
Alex Mirones, D6
Mark Laird, D6
Vinny Corazza, D7
Jared Roso, D7
Jessica Ogden, D7
Charles Keasler, D7
Tucker Brown, SwRI
Wang Lee, MDX
Derek Vollmer, CO
Mark Dunthorn, CO
Frances Ijeoma, CO
Karthik Devarakonda, CO
Jennifer Rich, CO

Discussion:

ITEM 1   Events Using Polylines

This meeting is being recorded for the purpose of taking meeting minutes.

Derek: Since we have Vinny on the line from D7, we had the results from the poll concerning the inclusion of a screen capture/image capture in the executive notifications. We had three yes and three no and two abstained. I abstained because I wanted to see what the District's opinions were. Afterwards, I went to speak to Trey about it; Vinny we are going to proceed with trying to add that concept into the executive notification automation. I just want to let you know that.

Events using Polylines - I'll give you some background on this. You should all know that we have a data sharing agreement with WAZE, and we share events through the third-party data feed. When they get an event that's from us, they'll have FDOT attribution for the event. You've probably seen them in their system before. They don't automate road closures from our feed and that is because they are expecting a polyline to be included showing the start and end points of the closure. They have WAZE volunteers who manually look at the information from FL511, Twitter, and other data sources to try to determine statewide where we might have a road closure and then they manually enter those road closures into Waze. I'd like to discuss adding a polyline which is multiple points that form a line or follow the roadway, as part of our events, at least for closures. We would have to provide the polyline to be able to get that automated in WAZE. We've talked to SwRI about it and we have come to the point where we want to reach out to the Districts to get some input on how we might actually do something like this. I'm going to turn this over to Tucker. We can go over these two slides. I'll probably bring some additional questions and we can all talk about it.

Tucker: It is more about brushing the topic and see what Districts think about this and how they might use it. As you are aware, in current events you have a single point for an event location. Yes, you can enter a head and tail for congestion and those could be kept a point within the system. What we are looking to do here is where the event is provide the point along the roadway. The use cases, like Derek said, would be road closure, for things like flooding or construction. The idea is to get a set of points instead of a single point for a location.

How do we think this should be implemented? What would operations be looking for? So, when we are talking about the points itself, there are a couple of options we can do, and how this should actually look:

1. Make the line on the map and the starting point would be a EM location, but every other point, including the mid-point, end-point would be a just random lat. / long. (latitude and longitude) on a map that the user would pick.

   a) We can have a Start Point at a EM location.

   b) We can have a Start Point and an End Point, as EM locations, all the points in the middle are recurring lat. long. Potentially we can have all points EM's location.

   c) All the points can be arbitrarily latitude and longitude, we are not tide to EM locations, that creates other problems, as how do we describe that, but we might be able to work around some of that stuff.

2. How does the user actually get that line on the map?

   a. I would like to select it and they pick the points directly on the map and they essentially draw the line.

   b. Here is a start and here is an end, now get some GIS files and look at the roadway and see what the geometry in that roadway is and pick points along that. So, we are kind of generating the mid-points automatically.

3. Should we allow just closures or does anyone here see a use case for general lane blockages for polylines?

4. How do we describe what this says? That would have to change, because normally right now we have X lane blockage, at this location, in this county, etc. This one would have to say something along the lines of, from here to here, at some point, and we would need to be able to describe that at least from users stand point but also for sending out email or listening to 511. We'll have to describe what that actually looks like.

5. Others are just some general topics. Does anyone have any ideas? Or have anything they'd like to talk about or things they thought of before? This is open for general discussion.

John: I have a general question about the polyline. Why are we being asked what point should be used? It sounds like it is a requirement of whom is using it. Derek, you mentioned that the entity was requesting this. What do they want to see? What do they need?

Derek: They want to see a start point, say it would be at an interchange, from interstate at least, when we do closures we are usually going from one interchange to another

interchange. They would like to see it, at least at one point, that kind of shows where we are making the closure, which could be at that interchange. The other point could be where that access picks up after that closure, I can never get up stream/drown stream correct, passed the crash, the next interchange that would allow traffic back on. They would like to see that point be the end point. We have also done something on 511, when we had those storms, when we were drawing the closures as a line on the 511, this is something that our GIS office is creating for us. I think 511 would still be interested in something like that, been able to post the closure as a line as well.

John: Yes, so this would potentially benefit the 511 website, that's what you are saying.

Derek: Yes, it would.

John: Yes, now I understand why you are asking.

Derek: My opinion is to try and keep it as similar to what we currently do, as we do now where we select a point:

      a. You have a crash

      b. Closes the roadway

      c. You select a point for where the crash is

      d. Separately, you select the start point and the end point, to where the closure would be

We'll still have our EM location where the crash is. I still don't know what people do for construction events. Where in a construction event would you put your point? I'm thinking it would be at the start of the construction. I'm not sure. I'm thinking this could impact other software.

Aven: Would there be a way for those areas that don't have as many EM locations or if it is in between EM's locations is there a way to put that the start point is here, and X number of miles beyond or something like that?

Tucker: So, not just the end point but the number of miles. We can use some GIS information to actually do something like miles down the road, but that would give you a start point. Know it would be just arbitrary lat. / long., which is a possibility. It just depends how we want this structure.

Mark L.: Derek, you are not really envisioning doing this for all crashes and all closures, right?

Derek: No, not all crashes. I was just thinking of just closures.

Mark L.: Okay.

Tucker: I was thinking this design should be done with the option that there will be the user to say this is a single point event or polyline event. So, if you didn't need them ever, you could basically ignore the fact that they are polyline events.

Mark L.: The effect would change over the life of the event, potentially if congestion is pretty bad, you can indicate that. So, you can keep lots of lines, Tucker and publish new update or something.

Tucker: Yes, and like you said it may change. You may go from a single point to a polyline; or a polyline to a single point; depending on how we implement this, and/or if anyone uses more of it for lane blockage vs for closures. Yes, you can go between them and modify them. Essentially, I'm setting the "location" of the event. As often as the location changes, you can change this.

Dee: So, in theory the whole highway is closed from the diversion point to the crash. So, keep that in mind during the implementation, too.

Derek: The sample that we have, District 2 is probably very familiar with this and maybe District 3 is familiar with it as well, when we had that ice storm this year we had a larger portion of I-10 closed somewhere from the Tallahassee area to I-75. Whenever things started to open up, every 10 - 30 minutes or so there was a big shift of where that closure started. So, they started to open it up and that closure kept moving towards I-75; shrinking at least in that direction.

Dee: If you really want to make the TMC happy, make it close all the entrance and exit ramps, in between too.

Derek: That is a good idea.

Dee: Because right now we have to create multiple events, but if you have an event that has three or four entrances and exit ramps closed, you are creating three or four events. If you can implement it in such a way that it would do all that for us, it would be great.

Ryan: I agree with Dee, that would be fantastic. Fantastic because it would be very hard to meet various needs for those extended closures.

Dee: There is no way to tie them together for 511. People call into 511 and they hear entrance from so and so is closed, and this is road is closed, instead of just hearing the highway is closed from here to here and all the exit and entrance ramps in between.

Derek: I like that idea.

Alex: Could this be event type specific? It sounds like there is a specific type of events that this would be helpful for, but I think a lot of other events would be find the way they are. Could this be like event type specific, like full closure detour event type?

Tucker: I was thinking along the line of, the option would be there for event type but, the default will still be to a single point for every event type. Because I feel this more deals with the closure type, as supposed to more of the event type.

Mark L.: I could also see just a lane blockage for range like when you are doing construction and closing one or two lanes from some point to another point, using this facility, this capability.

Tucker: Especially for pulling up ramps, if some how you are doing construction that blocks certain ramps, you can pull all of them into one event. They may have block the full roadway but, they block the ability to get on at certain points.

Derek: That might be a little tricky if we try to automate the ramp entrance/exit closures, for full closures, construction might not do that.

Dee: Even if you can automate it because it would be tricky, allow the operator the option what ramps are closing and just select them in the same event. The idea is to get them down into one event.

Derek: Manual selection. I like it.

Dee: Just pick the ones that are closed.

Tucker: So, potentially draw the line, and then be able to pick which EM locations will also be included, so you can pick those ramps type?

Dee: Now we are getting you guys thinking like operations.

Tucker: That is what we are here for.

Derek/Tucker: I like those ideas a lot.

Derek: Definitely some big changes but, they are good.

Tucker: Do you think it would be problematic for the operator to physically select points along the roadway? Do you think those need to be automatic pickup? Do you think those would be difficult for the operator to pick?

Dee: Clarify the question. Do you mean for the ramp or just for the actual location?

Tucker: If we are starting at a certain point, and you say we are staring here and let's say we have an ending point as well. Derek, you can correct me if I'm wrong but, I'm sure WAZE would like us to select points along the roadway. If you have 5 miles closure the odds that that road is going to turn in some way. So, selecting mid-points on that line along the roadway that semi follow the roadway.

Derek: They would like that because, it helps them map the closure to their map; since their map is so different than what we use. It does help them map that closure to their map. They would like it but, the specifications only call for having two points.

Alex: The other thing is, if we have an event, let's say we have a start point and an end point, how do I draw that on the operator's map? Other than drawing a point on those two lines, which may or may not follow the roadway.

Tucker: I like to visually illustrate to the operator that this is a polyline event as suppose to a point event.

Dee: How many people actually work off of the map to create the events vs working out of the screen to go with the other part, of the map. We don't create our events off of the map, we create our events from the event management system. If you present them with some type of a drop down and if they make it a polyline event, you give them additional options to store.

Tucker: Yes, to go and draw it. That is kind of the idea that they would have to go actually physically do that on the map somewhere. Whether is imbedded in that, where you select event location, or you have to go back the operator's map somewhere on the line. You have to do some additional steps when they are selecting an event for a polyline type event. The single location will remain unchanged.

Ryan: Tucker, could you use the affected area option for the head and tail? If it is one of these scenarios, you can pop out and select things that are within the sort order between that the head and tail of the affected area.

Tucker: And just use all of them essentially?

Ryan: It could be all of them or you can use check boxes.

Tucker: So, what the concept here then would be:

    a.   We still have a single event location and we use the congestion or affected area head and tail, as start and end point of what it is.

b. Then, there would be an option somewhere in there to look at a list of items where the sort order is between the head and tail and select which points they'll like to possibly include.

c. And use that as here is how you draw the polyline and here is what point been snap everywhere else as well.

Does that capture what you said?

Ryan: Correct. Does that work for you Dee?

Dee: Give options and select all. Give us select all option because in most cases if you got a start/end point is going to include everything in between and if you would select all that makes it still better that creating six events.

Tucker: The implication of that is every point in the polyline the star/the head, and mid-point all would be EM locations. Does anyone have a problem with that?

Dee: I don't because that is what we work with EM locations, all the time.

Tucker: I am good with that too. I am just making sure. There were contests for arbitrary longitude and latitude with no tides to EM locations and honestly forgive me if we use all EM locations because arbitrary lat/long aren't really concepts and we would have to pull them into the system. But, if there are uses for those we need to identify them. But, if it is all EM locations I'm good with that too.

Derek: I know we are mostly focus on the interstate but, also keep in mind this type of application for arterial roadways. I know we are going to start doing some arterial roadway as well in the future. Some Districts are already doing some. Make sure this solution works for that scenario as well.

Tucker: So, maybe the ability to add EM locations plus arbitrary mid-points?

Derek: Maybe.

Tucker: If EM locations are used the description comes much easier because we pull all that directly out.

Derek: That's true. We are going to go on to our next topic. I think we had a good discussion on this one and I want to make sure that Mark Laird could cover his topic before the end of the meeting.

ITEM 2   Bridge Preemption

Derek: Bridge Preemption this is something that was implemented as a hot fix for District 6.

Mark L.: The objective was to get the latest notifications out when a draw bridge opens and results in closing the roadway. We wanted to minimize operator's involvement in many of these events, ideally no operator involvement. The overview of the approach is:

a. We are getting data from traffic controllers.

b. We are getting it from Miami-Dade County through a web service that publishes this data from Waze; and we are stealing it. We did get a separate instance set up so, that we can customize it a little bit but mostly is whatever they got from Waze.

c. SwRI added a capability in EM that consumes the data from this website and it automatically creates the event, creates the response plan and publishes the event in FL-ATIS. Then, whenever the event disappears from the feed, they terminate the response plan and close the event and comes out from FL-ATIS.

Mark L.: This is what the data looks like coming from the county (slide7). It has this asset number that they use as an identifier and they built that into an ID which is two lines below that; which has that asset number which identify the intersection. The date time of the event that was created, a description of where the controller is, latitude and longitude of that intersection, which we match up to an EM location that we create. This data feed has a lot of different kinds of event types so, bridge preemption event type is the one we care about and distinguishes the one we care about.

Slide 7

Mark L.: The services that the county provides, it is a web service. We are consuming it as XML it can be published as JSON. The bridge preemption record when it is found triggers EM to go and look for a matching longitude and latitude in EM locations. If it finds the matching location, in the future, we'll check the ending time that is in this record and update it. Currently, it only sets the ending time at the time that first discovers this event. If it doesn't find the event already in EM, it creates a new unconfirmed event, a bridge up type with all lanes blocked. It creates and activates event response plan, which is the FL-ATIS published item. When it sees a bridge up event and the ID is already associated with an event and it is no longer in the data feed it automatic terminates the response plan and closes the event. It will not create a duplicate event. So, we have some case where the same ID comes back again after it ends, after it goes away. We have it designed so it will not create another one because this are very short duration events; they range from 5 minutes to occasionally 15-20 minutes it is usually more like around 8 minutes. By the time you have a little latency getting the event to us, get it created, and get it up on site, someone gets a message. If you close that and reopen another one that's likely to close again almost immediately. So, it does not make sense to create multiple events plus, flooding people's emails and their phones with messages will make it unusable. In addition, if we lose the data feed from the county, that ending time that was provided when this event was first loaded into SunGuide is the time in which the event will be ended if there is no data feed available. In addition, we had just a couple of cases in

the several months we have been running this, in which an event did not get closed because something weird happened and the operator can then close the events.

We have more of an issue with something not coming down off FL-ATIS than event not closing. I don't think we have seen event Failed/Closed since the first couple of weeks of this. We did have a couple of cases where apparently when FL-ATIS does their reset overnight, if you happened to hit just the right window in time you can get something where the closure gets missed. It's a minor raised condition and if that happens the operator can close the events. That has only happened three time in the months we've been running this. It's really not a problem.

We have to create two EM locations right now, we still don't have multidirectional; plus, because this gets located at an intersection currently, it tends to be beneficial to have two EM locations. Say we North/South roadways:

1. One at the intersection north of the bridge with southbound traffic
2. One at the intersection south of the bridge with northbound traffic

Then we get two events created, two of them in FL-ATIS, if you have a southbound trip in FL-ATIS it with pick the southbound preemption event and that is what will generate messages to you.

This is what FL-ATIS new event alert looks like for these events (Slide 10): Is an unconfirmed draw bridge in up position that's the SAE code for these events. It tells you your route name and when it was created.

Slide10

This is what the clearance message looks like similar thing (Slide11). Two issues here:

1. The event type is called draw bridge in up position – people have to understand that when it says cleared that is the event type. It could be that we can talk about it slightly different syntax for message in the future which identify type of event, rather than just burying in the sentence that might make this more clear. I don't know if we have other cases like that.

2. Still says all lane blocked – the reason for this is that this event doesn't get republished when it disappears from the feed. That will not be a normal behavior but we requested that and that is something we looked at separately. I think we even talked about it in another SUGG meeting. There are other types of things similar to this that might need to be republished before they get closed. So, that is been look into.

Slide11

Configuration – what you can take from this for SunGuide (Slide 13):

1. URL of web service

2. You can put in the description and it will appear in your message in your information

3. Polling interval and that's per source – So, if you have different intervals by data with different updates you can pull into different intervals

4. There is a retry limit whenever you are doing polling and beyond that is consider down and that can affect when event gets close automatically

5. You can specify the agency from the existing configure SunGuide Agency to associate with this preemption

6.   The contact from the SunGuide existing contact

7. You can set up a SunGuide mailing list to receive notifications when these events occur

Slide13

We have a few issues we are trying to resolve:

1. We have data problems, the data coming from the county right now we have the problem with:

    a. Bouncing – an event disappears from the feed and then reappears

    b. Duplication – an event disappears and when it comes back from the same location it has a different ID even though it is clearly the same event

    c. Delay - because it is such a short time from closure to open and because the other direction at the same time did not end and come back.

There is something that needs to be done there. We have talked a little bit about it but have not been able to come up with a big solution to clean the data yet. Not a SunGuide FL-ATIS issue, it is a county data issue.

2. We have the issue I mentioned earlier about unpublishing from FL-ATIS:

    a. We don't get a new lane blockage showing the lanes opened out to FL-ATIS before the event ends.

    b. "Clearance" message still says all lanes blocked

3. We have the issue about how the event type appears in the clearance message from FL-ATIS:

    a. Still says "…draw bridge in up position…"

Maybe we can come up with a different way of phrase all of those messages in FL-ATIS but I have not tried to work with them yet on that. It might say something about "we look clear to the event of type draw bridge in up position", something like that.

Any questions or thoughts?

Derek: So, Mark L. just going back to the whole "blockage information is not updated before", at least it is not republished prior to closing the event. This will impact more than just your event type, more than a bridge up event type. When we did talk about it was not at a SSUG meeting, it was at an internal meeting we had with you and SwRI. But that is a good thing we need to bring up because you might not have noticed it on FL511. How did you notice, was it an email from FL511 when we clear or was it like a Tweet?

Mark L.: I was looking at emails and text messages.

Derek: Emails and texts messages from the FL511 will send out that information. If the blockage information is not updated, if we closed it without republishing to FL511 with the new blockage information, they are going to use the old blockage information when they send out that clearance out. I do think we need to look at either:

1. When we go to close an event, we republished it with the new blockage. Maybe that can be done automatically or

2. You do your blockage clearances and you make sure you republished it to FL511 manually. It won't work in Mark's case because that is all automated.

3. We need to something in there to republish a new blockage information prior to closing the event.

Mark L.: I think it is not trivial because when you republished that, I don't think you can close it immediately or it might never get that update out there. I don't know about the interface through C2C and how FL-ATIS handles it.

Derek: That is interesting.

Mark L.: You know anything more about that Tucker?

Tucker: I was trying to debate that in my head. So, the operation is actually sending to FL-ATIS is synchronous/asynchronous call we make the call and whenever that comes back we will put something in the chronology indicating Success/Failure but, in this case we almost need to trigger the next action based on that. It needs to know one way or the other so it can be put in the chronology but, it needs to initiate immediate action right after that.

Mark L: It almost seems like we need to trigger off the update to the response plan or when you close the event you do that but you have to wait to get the response before closing and then you get into communications delay and it could get messy.

Tucker: Yes, we will have to look into that specifically to see how it is going to work. I don't see a reason why we can't make it work. Like you said is not as trivial as say, "open lane, clear lane blockage, published, closed, done" or "republished".

Mark L.: Yes, it might work but, I'm not sure that it does.

Tucker: Yes, in the perfect case yes that fine but, you are right in the case of self-failing is where it starts to get ugly.

Derek: Just refresh my memory Tucker, all this concept will be included in 7.1.2? Except the auto republishing.

Tucker: Yes, as listed, yes. It could be available before but, it would be a hotfix. But the official working version will be 7.1.2.

Derek: Does anyone else have draw bridges? I know they are not common.

Shayla: Actually, I noticed these messages on the FL511 system a couples of weeks back and I have reached out to Alex at District 6; because at District 4, specifically for the arterials we are trying to come up with some ways to report. Let's say that draw bridges, malfunction, or any type of situation where you may have lane blocked due to draw bridge. So, when I saw that this test was going on FL511 I was happy about it because I didn't know that it was possible. I know we still have a lot of work to do, like the districts communicating with the county but, it seems with at least Broward county specifically they are interested maybe try to see if they can run some test too. The only concern I have is that I don't know how we can get some of data from their end for preemption automated so we can produce these types of messages. I was wondering if it will be possible to maybe create a manual event, so like if we are able to say the operators can monitor the ATMS.now software from the county end and once they see that the preemption is triggered an operator can go ahead into SunGuide and create a manual event.

Tucker: So, the event type they are referring to, the bridge up, yes, it will be available for an operator to manually create something.

Shayla: I guess at least as far as trying to come up with some type of automated feature like what is going on with District 6, that would require more coordination with partnering county agencies?

Mark L.: If Broward county will talk to Miami-Dade County, maybe they will hand over the software they have. I'm not sure what traffic signal software is used in Miami-Dade and what's in Broward but, if it is the same or similar or has a comparable interphase you might be able to use that software.

Shayla: That will be great. Mark, is it okay if I reach out to you off line? Maybe for a contact.

Mark L.: Yes.

Derek: District 6 noticed that the ATIS severity was no longer auto-escalating and I didn't realize this was something that happened but, let's say a month ago I was contacted by our WAZE champ, volunteer Abigail, who noticed that she was no longer receiving Tweets from the FL511 for ramp closures for construction. After looking over with the FL511 team they noticed that those closures had a minor severity, and that they only Tweet for major severity. So, we were going to work with the FL511 team to Tweet things out like construction closures for all types of severity but, it looks like this was just something that recently came out with 7.0 to where this escalation of the severity no longer happens. So, I think if we look at some of the responses here:

1. ATIS severity – and there are some rules about percentages dealing with the blockage. So, if the road closes I think it goes to major severity. If a certain percentage of lane are blocked for some duration. Then this ATIS severity might change automatically. In the old dialog, there might have let know people that the severity was changing so, that if they wanted to them could manually adjusted back.

The question is: we are going to reimplement that since it kind of got dropped. So, does anyone have any preference on whether or not that warning message is somehow display to the operator that ATIS severity has been change automatically? I know District 6 says they don't need it. Anyone from District 2?

District 2: As long as it has been changed we don't need the message.

Derek: Okay

Mark L.: I think the original concept behind that message was if something is changing and you know that there is a delay getting this out to the public and public seen it and reacting to

it and it is going to change soon, that operators could choose not to do that if they thought the way it is been reported did not reflect the information you want to get to the public they could overwrite it. I really don't see operators doing that.

Derek: Okay. So, we are going to add this functionality back in without showing the warning message. If anyone has any concerns about that go head and speak up. Not hearing any. Does anyone have anything else to add?

Meeting adjourned around 3:25 PM

New Action Items:	
Action:	Responsible Person: