

SunGuide Software

Users Group

Meeting Minutes

**Date: February 10, 2022**

**Time: 1:30-2:30 EST**

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| Agenda: |  |
| Topic | **Led By:** |
| 1. SunGuide 8.1 Hotfix 2 Design Review - SG-5585 - CV Connected Vehicle App SunGuide Support Request (I-4 FRAME) 2. SunGuide 8.1 Hotfix 2 Design Review - SG-5994 - Update J2735Driver from "polygon(oldRegion)" to circle or lane. 3. SG-6078 – Add Last Login Timestamp to User Management Window 4. SG-5981 – Add “# of Items” column to SAS Schedule Table 5. Announcements | Tucker Brown  Tucker Brown  Tucker Brown  Tucker Brown  Christine Shafik |

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| Attendees: |  |  |
| Tom Arsenault, D1  Robbie Brown, D1  Jason Evans, D2  Jason Summerfield, D2  Robert Lacy, D2  Tanisha Sibley, D2  Derrick Odom, D2  JoAnna Hand, D2  Dee Dee Crews, D2  Greg Reynolds, D3  Kevin Mehaffy, D3  Robert Briscoe, D3  Clay Packard, D3  Jonathan Bailey, D3  Richard Heming, D3  Jackie De Bout, D3 | Dee McTague, D4  Jacques Dupuy, D4  Neena Soans, D4  Jeremy Dilmore, D5  Kyle Higgins, D5  Garrett Popovich, D5  Sheryl Bradley, D5  John Hope, D5  Eddie Grant, D5  Jovanny Varela, D5  Lauren Pearson, D5  Mark Laird, D6  Alex Mirones, D6  Yenia Morales, D6  Mike Crawson, D7  Megan Arasteh, D7 | Matt Mileto, D7  Sam Taylor, D7  Jermaine Da Silva, FTE  Cherie Phillips, FTE  Kelly Kinney, FTE  Michael Kerpen, FTE  Brent Poole, CFX  Wang Lee, MDX  Jennifer Dardes, MDX  Christine Shafik, CO  Mark Dunthorn, CO  Carla Holmes, CO  Tucker Brown, SwRI  A.J. Skillern, SwRI |

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| Discussion: |  |

Carla Holmes welcomed the attendees to the SSUG Meeting. Advised the meeting is being recorded for the purpose of taking notes. Asked attendees to put their names in the chat in addition to announcing themselves during Roll Call.

Christine Shafik: Today will be a Design Review for part of 8.1 Hot Fix 2. We will also have some other Jiras and announcements. Your input during the Design Review will help us finalize the exact user needs, and how you are expecting to see it in operation. I will turn it over to Tucker to begin the Design Review.

**Topic 1: SunGuide 8.1 Hotfix 2 Design Review - SG-5585 - CV Connected Vehicle App SunGuide Support Request (I-4 FRAME)**

Tucker Brown: The first one we’re going to walk through is the Connected Vehicle (CV) TAM dialog. I’m going to use TAM and TIM interchangeably. The dialog when it was created was called TAM. You’ll hear it more commonly referenced now as TIM Messages. Really those are the same thing. So, if I switch out between those, I apologize. But that’s the language we have in the dialog now.

The enhancement here is two things. One, we are going to add a message library to the TAM dialog. This will have similar functionality to the DMS Message Libraires, so you will be able to choose while it populates and change it from there. Similar structure to that. And the other side is to add a field to describe what type of messaging you are sending out. And usually that is going to be some kind of associated CV application, or whatever it would be. Because of the way this is being designed, and we’re trying to go smaller scale on this, the options are going to be configured in the database, and it’s not going to have its own GUI for configuration. But if you were to add one to the database and restart CV, you would have that available to you. So, there is an option to change it down-line if we need to that would only require a database addition and a restart. But there is not going to be a configuration dialog at this time for those. At a future time if people decide we need to be able to change those classifications on the fly more efficiently, those can always be added.

The next slide here is the initial set of data to be included and what kind of applications are there. Adding these would not be difficult, especially on the front end. We’re essentially just going to be doing a database script to add these right from the start. So, if there is something missing from this list, you can tell us now if you want to. Or you can review it and get back to Central Office and say what you might want to add in addition to this, we can include that in the initial release and you won’t have to do anything to it.

As far as the message library component, this screen is similar to what you would see if you were Add, Modify, or Delete your library message. At the top is the similar structure you would have for DMS, here is a master level folder and underneath that you can create your own folders. So New Library is the name of one, and you can add your folder structure under there. The one at the bottom that says New Message is the individual message in that library. There is a component of this where you can nest as many libraries down and folders as you want. You can put messages at any level underneath the folder. So, same structure as DMS. As far as the message goes, you are selecting the message, the classification that we’re going to add is also in there; the priority of the message; potentially an end time or duration; and then a presentation region. We’ll get into that in the next part. So, most of this is basically just adding library functionality to TAM messages.

Once you actually get into the TAM message dialog, you’ll have the ability to have that library on the left side. The top right of the red box, you will see something vertically that says Message Libraries. You can crush that in if you need to, or don’t want it. Or you can expand it; DMS has similar functionality. So you can show or hide that actual library dialog as part of this dialog itself. And then if you were to click on a message level library, it would populate all of the messaging, the attributes, the regions - everything that was in the library message. And then you’d be able to modify it and send it out from there.

The newer part of this under the Message Attributes box is the new Classification feature. Again, that would be populated based on those fields in the database, so it’s a dropdown list of the possible applications that could be there, and you just select whichever one you want. There is going to be a default for messages sent from Event Management. And I think that is the Traffic Incident Management one. (*That is correct.)* Essentially there will be a default for all messaging. Every message sent will have some type of Classification, and will be stored in the database and we can pull those out later and report on any single application that we need to.

Questions on that?

Clay Packard: It says “CV Application:” I think originally it was going to be where you could have a name value pair and pick a different name. Is this just going to be a single field and not a pair?

Tucker Brown: Yeah, you’re right Clay. This got generated before that change got made. If you go back two slides, the names here will be the names in the dialog.

Clay Packard: Perfect. Thank you.

Tucker Brown: Any other questions on that?

**Topic 2: SunGuide 8.1 Hotfix 2 Design Review - SG-5994 - Update J2735Driver from polygon(oldRegion)" to circle or lane.**

Tucker Brown: This is the same dialog. This one actually deals with the regions themselves and how they are being generated. Previously when you defined a presentation region, you were defining a polygon full of points, and it was just some arbitrarily defined area. The new spec has either a circle with a defined radius, or a line segment with a width. So, two options of how to define an area that we’re interested in. So, we need to update the dialog to account for that.

There will be two options here: One to add a path and one to add a circle. You can add multiple regions to a single message. So, it could be multiple circles, multiple paths, or a combination of paths and circles. We’re not going to limit it to one or the other in any sort of way. You limit that operationally. You may limit what people do or how things are generated, but the dialog itself will allow you to add that. The number of points, obviously the circle is just going to have one. The path could have two or more; it is going to have a start and an end. But you could also add a bunch of midpoints to it and tailor it to however you want that line to be.

And then you notice those last two columns. One is radius, so the radius for the circle. If anyone has any suggestions for what that unit should be, I’d be more than happy to put whatever we want there. And that applies specifically to the circle. If you notice, that is grayed out for the path one. The other one, the spec defines it as lane width, which is an interesting characteristic. We do not have an exact specification of how people are implementing that. But a single lane width doesn’t seem to be overly helpful. So, potentially that could mean the width of the path in general. So, maybe if I’m doing it over a roadway and I stick a point in the middle of the roadway, I’m interested in 4 lanes at 12’ per lane, so I’m really looking at 48’, 50’, 60’ of path there. And it depends on how the application interprets that, so we might have to send different types of numbers there based on whatever it is. But the number itself and the radius itself, we can always make that whatever we need. There is going to be a number sent as a radius or a number sent as a lane width; that’s just part of the spec. And we’ll have to figure out exactly how they’re interpreting that and we may have to change the units in the end. But that’s the idea behind it.

The directionals are still going to be there. So, even if you give it a path and it’s a north/south roadway - let’s say the lane width you put is 100’ and it covers the entire roadway up. You may still be able to limit that to northbound traffic only, or southbound traffic only, and still be able to get it to the users that you’re actually intending. Just the region itself is going to change.

Carla Holmes: Kyle had an interesting question he sent me about the lane width. Kyle did you want to bring that up?

Kyle Higgins: Yes. The question was that RSUs configured in SunGuide have a definition of how many lanes are configured per unit. The question was - I looked at that lane width to be a measurement of feet because the standard calls out drivable sections of roadway that not only contain vehicles, but pedestrians and bikes and others - bike lanes, train tracks, transit, etc. So, I was curious if the configured amount of lanes on the RSU is going to be taken into account to automatically build that lane width.

Tucker Brown: The problem with that is – if we’re going to go that route, and that means it wants to know a set lane width times number of lanes. So that is going to be different per RSU, and potentially this message is going to be sent to one or more RSUs. So, if that is the case, then we’d get rid of this field entirely because you can’t set a single value here and have it apply to multiple RSUs. Well you could, but it would apply to all of them. And then it would have to dynamically figure out that number based on the number of lanes. That’s possible, if that’s what is being expected on the RSU side. I think the biggest problem right now is that we don’t have what is expected. We don’t know what they are interpreting that as, or how they are going to use it.

You’re right, there is a number of lanes. The reason that’s there is purely on the TSS side, and putting links out – how many lanes are there. To this point that has not been correlated to anything TAM-related. Doesn’t mean it can’t, but we haven’t done that to this point. If we end up going that route, I don’t think that would be a big change to actually multiply the two together and move on, and use that. If that’s the case, then feet is the appropriate with there.

John Hope: Tucker, you brought up a good point in that every RSU is going to be at a different location, and there could be a different number of lanes at each location. So, it seems like this value should vary depending on the device, not on the message. So, if you sent a single message out to like five devices, each device could have different lane widths.

Tucker Brown: Should lane width be defined at the device level? We remove this one entirely, and then the value we send for the path is the number of lanes times lane width?

John Hope: Yes. It would seem more logical to have it based on the number of lanes at the device.

Jeremy Dilmore: I’m thinking about the use case for this. If it’s at the RSU, the RSU already has a map (?). So is the purpose of this is applying it to things like smart work zones where we may have a lane closure and we need to know the width at that point for incidents? When do we see this field being used?

Kyle Higgins: From my understanding to send a fully formed message, you need all of the regions defined. So, the RSU won’t even get the message to do anything with without a fully formed TIM message that is being sent out. And that is part of the region that is requested.

Jeremy Dilmore: Once we provide this to the RSU, what does the RSU do with it?

Kyle Higgins: … Broadcast it?

Tucker Brown: And if it’s going to broadcast that too, then what does the end user, the OBE, do with it then?

Kyle Higgins: That would be for the OBE to break it out and make it fit on the HMI I there’s a head-up display.

Jeremy Dilmore My concern is that as you were reading the definition, it looks like it also included pedestrian-ways. That adds a whole other set of complexities on top of it. This may be something where we need to look at the standard and see how this is going to be used. Because what you are showing here, Tucker, is showing a lane width for an individual lane. Kyle was talking about a traversable width for a path. So, if you are talking about a 6-lane section, that’s talking about 72’. But there’s the potential that you have an RSU that’s talking about things that includes a turn bay in some parts of its broadcast domain (I mean broadcast region), but it doesn’t include it in others, so you’d extend beyond the turn bay. So it may need to be 84’ in one location and 72’ in another part that would all receive the same TIM message. So, I think it is worth us looking at how this is utilized before we make a decision on direction.

John Hope: I think you’re right. One issue is the fact that on the screen here SwRI was originally associating that value with the message, but it should be associated with the RSU itself.

Jeremy Dilmore: More than likely.

Tucker Brown: But Jeremy brought an interesting use case there where it could be the same device and half its region would be 5-lane, and the other half be 4-lane. And that would be two different regions that you are defining in the message which have different total widths. So, if we make it at the device level, you would get one width across the entire broadcast region.

Jeremy Dilmore: My concern goes even further that this field may be there for a purpose that we’re not even thinking of. We may be able to set this to an arbitrarily large value and it just apples. It does what Kyle mentioned to provide a fully formed message. But I can’t think of a single application that would make use of this unless its for a work zone, and you have something that’s going on where you are restricting width. Because if you were trying to use this for a TIM message for left-turning vehicles only, but not for those that are going through or turning right, you’d not only have to know the width, but you would have to know the orientation – is it an inside lane, is it an outside lane, is it a center lane? Who are you sending that message to? It doesn’t seem like you have that level of granularity.

Tucker Brown: They call it a lane width, which to me is a weird term if you are talking about a total width. Go forward two slides. The way we are going to have to define a path here is similar to how you would define something like a geofence. In which case you would draw the line on the map to say this is the path I want. And you can put as many points here as you want. If you notice in the middle where the I-75 shield is? When we drew this we didn’t go right across the roadway; we probably should have put another point there if we wanted it to truly follow right along the top of that. If I am getting this message, and I say, here is the path I have and here are the points. As a vehicle, how do I know that that message belongs to me as I am travelling along I-75 in the northbound direction, as opposed to, I’m on the access road. Or maybe even, like we drew it off to the side a little bit, a side road that I’m travelling northbound. In my mind one of the ways to interpret this is, you’re still defining a region, but it has to be essentially a box formed between points, and the width of that box is defined by the “lane”. And in order to be in that region, you have to be pretty much along that line, but also within x number of feet of that time to actually be considered to be part of it.

That’s the other thing I don’t know, how are the end users interpreting a path, and how do they know when to display that message? I see the spec allows it; I just don’t know how they are using it.

Jeremy Dilmore: I think we have questions that involve the OBU vendors.

Tucker Brown: A lot of it has to do with lane width, and I think it’s not a huge lift to either do it on the message, or if we are going to stick it on the device. Honestly, those two wouldn’t be overly complicated to do. And I know we want to do the path part, and we want to do the circle part. So, I don’t think we are held up based on those questions. But we did intend to deliver HotFix 2 (to the TERL to start testing) a month from today. So, the sooner we can get an answer to that, the better.

Kyle Higgins: I’ll get to it.

Tucker Brown: This next slide shows a simple circle. We set the radius – I have it in miles right now. I don’t know if we want to put that in feet or miles. But you would select a single point and it would arbitrarily draw that based on the radius you set. So, two ways to draw it. If you were to click on one similar to how you have now. If you click on one of the regions it’s going to show up on the map for how large it is and what area it covers.

Jeremy Dilmore: Tucker, to make sure we are on the same page, the action item from the last one is that we’re going to have Kyle talk to the OBU vendors to figure out how they are going to use this information and relay that back to you so we have a direction on it? How are you presenting this to the operator if one of those is in feet and the other is in miles?

Tucker Brown: Once we decide exactly what that is, we’ll put the units on the column header.

Jeremy Dilmore: I’m thinking there may be some cases where we want feet, and some cases where we want miles.

Tucker Brown: The least confusing would be feet on both. But if we are talking about like a 5 mile radius, then that starts to get pretty large.

Mark Dunthorn: I’m looking at the standard, too, and lane width is in centimeters, so we obviously don’t want that. But I also notice that lane width is a property that applies to both the path and the circle. So, that makes me even more confused.

Tucker Brown: Yes, I don’t know how that would apply to a circle.

Kyle Higgin: Would it be possible for the operator to draw the circle from the center point and then have SunGuide do a conversion, like if we are getting down to the feet area of this, or if it’s like a half-mile, SunGuide would do the automatic calculation from actually drawing the circle? So you would essentially click on the map and then pull their mouse out how far they want to broadcast this?

Tucker Brown: So, you want them to physically draw the circle and then whatever units we decided on, have that happen?

Kyle Higgins: From an operational perspective, that would make the most sense. Or be the least confusing, that’s a better way to phrase it.

Tucker Brown: Going back to that, and this is not as relevant if we go that route, but would this number be in feet or miles when shown on the map?

Kyle Higgins: At that point, I don’t think it really matters, as long as they can see it.

Clay Packard: Could it be dynamic where if it was small enough you could use feet, but if it got large, you could use miles?

Tucker Brown: That would be confusing because we couldn’t put a header that would define the units. We could probably put it in the column, but changing units on them could get confusing very quickly.

Carla Holmes: Some applications may be more conducive to miles and some applications, like a curve warning may be better with feet. Could it be configurable based on the application?

Tucker Brown: I would not recommend doing that. Changing units on the operators, especially if they are unclear on what applications use what, would be highly confusing.

Mark Dunthorn: Tucker, one more question, and this is an easy one, I think. Today if a response plan creates a TAM, it’s using the old style polygon. What would it use with this enhancement to define the presentation region?

A.J. Skillern: Mark, we would switch it to suggest a path. Basically the way that it suggests a presentation region today is that it builds up a path and then builds a bounding box around it, like a fixed width away from it. I think it is a parameter in the config file. So we would just make it the raw path instead of building the bounding box around it.

Mark Dunthorn: Okay, that’s what I expected. I just don’t think we talked about that.

Tucker Brown: Yes, that is the intent.

So, we are pending a couple of answers, especially from the lane width side. And then, from the circle standpoint, users would like to be able to draw the circle by stretching out the radius, and at that point you can use feet or miles and it’s not as relevant. So, I think we are good on that side.

Any other questions on any of those? That was basically it for the Design Review.

**Topic 3: SG-6078 – Add Last Login Timestamp to User Management Window**

Tucker Brown: Right now, when you go to the User Management dialog, you can see all the users, but you can’t see the last time they logged in. All you know is that there is a whole set of users here. I know part of the directive, especially with the new release, and getting users in and out of the system, is making sure that you remove users that no longer use the system, or are not part of your organization anymore, and just keeping a consistent user base.

The request here goes along with that - to have a new value of the last login time for each user. That will give you a way to sort down people who have not logged into the system in x amount of time and be able to determine if they still need access and just haven’t logged in in a while, or if they should actually be removed. This is something that we can put in that user dialog so you can see it. The alternate option for accomplishing the same thing is that we would build a new Crystal Report that would show the last login time. You could run that manually or you could set it up to send to you on a configurable basis, so you can look at that list on some routine interval to make sure your users are staying current.

Any comment on that behavior? Or support for this one?

John Hope: District 5 likes the option of putting the date in the user configuration window so we can sort on it.

Richard Heming: District 3 likes that one, also.

Brent Poole: CFX is good with it.

Jason Summerfield: Having a report that you can run would also be helpful. The data is in the database if you’re going to hold onto it.

Carla Holmes: We can do both. Right, Tucker? It’s not an either/or?

Tucker Brown: Yes.

Jason Summerfield: One possible suggestion for the report if you do it. Is the possibility of having a number of days, or some sort of value in there where it gives you anyone who hasn’t logged in for a certain number of days?

Tucker Brown: Are you talking about on the report side?

Jason Summerfield: Yes, on the report side. That could be determined later. Exporting it and sorting it could work just as well, but… If we can make some poor person with Crystal Reports do the work for us, then why not, right?

Tucker Brown: Anything else on that one. Alright, we’ll jump to the next one.

**Topic 4: SG-5981 – Add “# of Items” column to SAS Schedule Table**

Tucker Brown: So, this came up with one of the latest releases. It has to do with the number of items in a SAS schedule. When we updated the ability for SAS schedules to deprecate their older items, and basically remove them. One of the districts found that eventually if you didn’t keep adding to a single schedule, it would remove all the items and you’d be stuck with this floating schedule that didn’t have anything in it. And the schedule could actually be removed. But there was no way to go look at it unless you jump into that schedule and move on.

The enhancement here is pretty small. It just adds the number of scheduled items within that schedule, and adds that where the schedules are configured along with the other items. So, if that number ever gets down to zero, you know there is nothing actually in that schedule and you can delete it and clean up your schedule list. Just the additional column. Not changeable or anything. Just a number that allows you to see how many items are in the schedule.

Any other comments on this one? Support?

Jason Evans: District 2 loves the idea.

Matt Mileto: D7 supports that.

Cherie Phillips: Turnpike would support.

Dee McTague: D4 supports.

Unidentified: D3 is okay with it.

John Hope: D5 supports it.

Brent Poole: CFX is good with it.

Unidentified: D1 is good.

Does anyone else want to weight in? Okay, that was the last one. I’ll turn it back over to Central Office.

**Announcements**

Christine Shafik: We are going to go over a couple of announcements.

As you know we released the map tiles last week, and it reflects the four quarters of 2021. If you have any issues installing them, please reach out to us. We’d be happy to help. We haven’t heard any issues so far.

We sent out a request for SunGuide databases yesterday or the day before and looking forward to getting all of those before the end of the month. We’ve already received a couple. And just a reminder, we really need the information up to February 1, 2022. Put this in your mind please when you are sending the databases over. And again, if you have any issues uploading it, please let us know. We’d be happy to help.

Any questions about the map tiles or the databases request?

Richard Heming: A while back you all sent out a questionnaire about Jira access and getting rid of the old people and getting new people access who needed it. Whatever happened to that?

Tucker Brown: So the older users, we have already deleted them out of the system. Well, we made them inactive, we didn’t actually delete them. That part has already happened. I have not seen new requests..?

Richard Heming: With that we also sent out new requests of who would be replacing those people to have access. Do I need to resubmit it?

Carla Holmes: I have that information, Richard. Tucker, I will get that sent to Christine for approval and get that sent to Tucker. In those information responses there were a few new accounts requested. We’ll get that taken care of, Richard.

Richard Heming: Thank you, Carla.

Christine Shafik: Any other questions or comments?

One last announcement that we announced the other day at CMB. As you all know, we have a long list of CMB-approved enhancements to be included in the next release. We can work on a certain number of enhancements to be released every year. So we would like your input on which ones are urgent for you; which ones you want to see this year, per your needs in your district. I’ll be sending out an email with the list of all CMB-approved enhancements for you to vote on your first 20 enhancements. Please work through them, study them, and send me your votes so we can get you what you need in 2022. Any questions?

Thank you for your time and your input. We will talk to you in two weeks. Thank you all.

**The meeting was adjourned.**